Basaveshwar Engineering College, Bagalkot

Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Artificial Intelligence and Machine Learning	UG	Principles of AI	UAI501C	5
		Machine Learning Algorithms	UAI502C	5
		Datbase Management Systems	UAI503C	5
		Computer Graphics with Open gl	UAI504C	5
		AI and Machine Learning Lab	UAI506L	5
		Database Lab	UAI507L	5
		Robotics Lab	UAI508L	5
		Advanced AI and ML	UAI601C	6
		Cloud Computing	UAI602C	6
		Computer Networks	UAI603C	6
		Advanced AI and ML Lab	UAI607L	6
		Web Programming Lab	UAI608L	6
Academic Year 2020-21				
Artificial Intelligence and Machine Learning	UG	Numerical Techniques and Integral Transforms	UMA391C	3
		Data Structures and Applications	UAI302C	3
		Embedded Systems	UAI303C	3
		Computer Organization	UAI304C	3
		AI and its Applications	UAI305C	3
		Problem Solving with Python Lab.	UAI306L	3
		Data Structures Lab.	UAI307L	3
		Embedded Systems Lab.	UAI308L	3
		Design and Analysis of Algorithms	UAI402C	4
		Operating Systems	UAI403C	4
		Introduction to Data Science	UAI404C	4
		OOPS with Java Programming	UAI405C	4
		Design and Analysis of Algorithms Lab	UAI406L	4
		Data Science Lab	UAI407L	4

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Biotechnology	UG	Food analysis technique lab	UBT717L	7
		Industrial Safety	UBT733N	7
		Innovation and Design Thinking	21UBE115L/21UBE215L	1
		Universal Human Values II	UHS004M	4
	PG	Food Product Development	PFB312E	3
		Food Industry by Product and Waste Management	PFB322E	3
		Quality Control in Food Biotechnology	PFB331E	3
Academic Year 2020-21				
Biotechnology	UG	Environmental technology	UBT632N	6
		Industrial Safety	UBT631N	7
		Nutraceuticals	UBT527E	5
	PG	Food Chemistry and Nutrition	PFB101C	1
		Food Microbiology and Spoilage	PFB102C	1
		Food Safety and Toxicology	PFB103C	1
		Nutraceuticals and Functional Foods	PFB104C	1
		Principles of Food Analysis and Food Laws	PFB105C	1
		Food Analysis Lab	PFB107L	1
		Nutraceuticals Lab	PFB108L	1
		Food Business Management and Bioentrepreneurship	PFB201C	2
		Food Processing and Preservation	PFB202C	2
		Research Methodology & IPR	PFB206C	2
		Food Processing & Product Development Lab	PFB208L	2
		Food Packaging and Storage Engineering	PFB213E	2
		Dairy Technology	PFB221E	2
		Biotechnology of Fermented Foods	PFB232E	2
Academic Year 2018-19				
Biotechnology	UG	Product Development	UBT834E	8
		Mini Project	UBT609P	6

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Computer Science and Engineering	UG	Machine Learning Using Python	UCS631N	6
		Blockchain Technology	UCS070E	8
		Artificial Inteligence and Robotics	UCS632N	6
		UI/ UX Design	UCS071E	8
		Internet of Things and Applications	UCS732N	7
		Cloud Computing and Application	UCS731N	7
		Universal Human Values II	UHS004M	4
Academic Year 2020-21				
Computer Science and Engineering	UG	Management Anad Enterprenurship	UCS654H	6
		Mini Project	UCS656P	6
		Data Science	UCS069E	8
		Software Project Management	UCS067E	6
		Python Application Programming	UCS659N	6
		Internship	UCS765I	6
Academic Year 2019-20				
Computer Science and Engineering	UG	Statistics and Probability Theory	UMA436C	4
Academic Year 2018-19				
Computer Science and Engineering	UG	Artificial Intelligence And Expet Systems	UCS041E	6
		Machine Learning	UCS044E	6
		Internet of Things	UCS066E	8
		Professional Communication and Ethics	UCS354H	3
	PG	Computing Lab-1(Advanced Algorithms)	PCS143L	1
		Machine Learning	PCS006E	1
		Wireless Ad-Hoc Networks	PCS037E	2
		Computing Lab-2(Advanced Computer Networks)	PCS244L	2
		Internship	PCS341I	3

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Academic Year 2017-18				
Computer Science and Engineering	UG	Python Application Programming	UCS065E	5
		Internet of Things	UCS066E	7
		Big Data Analytics	UCS063E	6
		Career planning and Professional Skills	UHS003N	6
		Advanced Quantitative Aptitude and Soft Skills	UHS002N	5

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Basaveshwar Engineering College, Bagalkot

Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Electrical and Electronics Engineering	UG	Industry Internship	UEE764I	7
Academic Year 2020-21				
Electrical and Electronics Engineering	UG	Internship	UEE764I	7
		Mini Project	UEE665P	6
		Advanced C Programming Laboratory	UCS659L	6
Academic Year 2019-20				
Electrical and Electronics Engineering	UG	Electrical Auto CAD and MiPower Laboratory	UEE662L	6
Academic Year 2018-19				
Electrical and Electronics Engineering	UG	Fundamentals of Quantitative Aptitude & Soft Skills	UHS001N	4
		Advanced Quantitative Aptitude and Soft Skills	UHS002N	5
		Career Planning and Professional Skills	UHS003N	6
		Environmental studies	UBT133C	1
Academic Year 2017-18				
Electrical and Electronics Engineering	UG	Testing and Commissioning of Electrical Equipment	UEE536E	5
	PG	Power Electronics Application to Energy System	PPE223C	2
		Sustainable Energy Technologies in Agricultural Engineering	PPE031E	2

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Electronics and Communication Engineering	UG	Machine Learning	UEC846E	8
		Project Management and Intellectual Property Rights	UEC841C	8
		Python Programming	21UEC308C	3
	PG	Systems and Warfare Platforms	PDT101C	1
		Warfare Simulations & Strategies	PDT102C	1
		Advanced Engineering Mathematics	PDT103C	1
		Research Methodology	PDT104C	1
		Systems and Platforms Lab	PDT105L	1
		Warfare Simulations & Strategies Lab	PDT106L	1
		Communication Technology	PDT107E	1
		Military Electronics Systems Engineering	PDT108E	1
		Seminar	PDT109S	1
		Radar Technologies	PDT201C	2
		Digital and Satellite Communication and Navigation from space	PDT202C	2
		Tactical Battlefield Communication and Electronic Warfare	PDT203C	2
		Radar Technologies Lab	PDT204L	2
		Digital and Satellite Communication and Navigation from space Lab	PDT205L	2
		Fundamentals of Telemetry, Tele command and Transponder	PDT206E	2
		Sensor Technology	PDT207E	2
		Seminar	PDT208S	2
		Project Dissertation-Phase I	PDT301P	3
		Seminar/Industrial Training	PDT302S	3
		Project Dissertation-Phase II	PDT401P	4
Academic Year 2020-21				
Electronics and Communication Engineering	UG	Verilog Programming	UEC543C	5
		Machine Learning	UEC846E	8
		Internship	UEC742I	7

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Academic Year 2019-20				
Electronics and Communication Engineering	UG	Embedded System	UEC644E	6
		Advanced C Programming Lab	UCS659L	6
Academic Year 2018-19				
Electronics and Communication Engineering	UG	Modeling and Simulation Lab	UEC752L	7
		Java Programming	UEC754E	7
		CMOS Digital VLSI Design	UEC643C	6
		OOPs with C++	UEC547E	5
Academic Year 2017-18				
Electronics and Communication Engineering	UG	Mini Project	UEC634P	6

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Basaveshwar Engineering College, Bagalkot

Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Mechanical Engineering	UG	Refrigeration & Air conditioning	UME729E	7
		Tool Design	UME728E	7
		Computational Fluid Dynamics	UME836E	8
		Engineering Economics and Financial Accounting	UME640C	6
		Non Conventional Energy resources	UME830E	8
		Reliability Engineering and Experimental Design.	UME829E	8
		Six Sigma	UME731E	7
		Supply Chain Management	UME831E	8
	PG	Reverse Engineering	PMD022E	1
Academic Year 2019-20				
Mechanical Engineering	UG	Piping Engineering (Teaching from Industry persons)	UME826E	8
Academic Year 2018-19				
Mechanical Engineering	UG	Naval Architecture and Marine Engineering (Teaching from Industry persons)	UME825E	8
		Aircraft Design and Manufacturing (Teaching from HAL)	UME005N	6

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2020-21				
Automobile Engineering	UG	Vehicular Systems	UAU641N	6
		Design of Power train and suspension systems	UAU532C	5
Academic Year 2019-20				
Automobile Engineering	UG	Automotive CAD Laboratory	UAU627L	6
		Theory of Machines	UAU433C	4
		Auxillary systems for automotive engines	UAU524C	5
Academic Year 2018-19				
Automobile Engineering	UG	Automotive Electrical Systems	UAU623C	6
		Vehicle testing and Scanning Lab	UAU618 L	6
		Automotive power train and Electrical Servicing Lab	UAU619L	6
		Automotive Reconditioning Lab	UAU716L	7
		Vehicle Dynamics	UAU712C	7
		Internship	UAU 708L	7

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Humanity and Science	UG	Scientific Foundations of Health	21UHS107C/21UHS207C	1
Academic Year 2018-19				
Humanity and Science	UG	Saamskrutika Kannada	UHS388C	3
		Vyavaharika Kannada	UHS389C	3
		Fundamentals of Quantitative Aptitude & Soft Skills	UHS001N	4
		Advanced Quantitative Aptitude and Soft Skills	UHS002N	5
		Career Planning and Professional Skills	UHS003N	6

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Master of Business Administration	PG	Business and Legal Environment	PBA232C	4

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Basaveshwar Engineering College, Bagalkot

Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2020-21				
Civil Engineering	UG	Alternative Building Materials	UCV452E	4
		Construction safety and management	UCV453E	4
		Hydrology	UCV454E	4
		Management and Entrepreneurship	UCV555H	5
		Hydrology for Engineers	UCV651N	6
		Project Management	UCV652N	6
		Occupational Health and Safety	UCV653N	6
		Design of irrigation structures	UCV652E	6
		Atmospheric Environmental Engineering	UCV742E	7
		Environmental transport Process	UCV743E	7
		Sediment transport engineering	UCV851E	8
		Design of industrial building	UCV853E	8
		Design of Bridges	UCV864E	8
	PG	Advanced atmospheric environmental engineering	PEV022E	2
		Biological Treatment of Wastewater	PEV016E	1
		Non – point sources of pollution and management	PEV020E	2
Academic Year 2019-20				
Civil Engineering	UG	Advanced Surveying	UCV451C	4
	PG	Dynamics of soils and foundation	PGT222C	2
		Advance Pavement Design	PGT004E	3
		Transport Process and modeling in aquatic systems	PEV003E	1
Academic Year 2018-19				
Civil Engineering	UG	Computational Methods for Civil Engineering	UMA331C	3
		Mathematical Methods for Civil Engineering	UMA431C	4
		Energy efficient buildings	UCV551E	5
		Environmental Impact Assessment	UCV552E	5
		Remote sensing and GIS	UCV553E	5

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Civil Engineering	UG	Masonry structures	UCV554E	5
		Traffic Engineering	UCV555E	5
		Numerical techniques	UCV651E	6
		Geographic Information System	UCV631E	6
		Ground Improvement Techniques	UCV653E	6
		Highway Geometric Design	UCV654E	6
		Remote Sensing and GIS	UCV632N	6
		Occupational Health and Safety	UCV653N	6
		Wastewater Treatment Engineering	UCV744C	7
		Green Building Technology	UCV751N	7
		Environmental Management	UCV752N	7
		Sustainable Materials	UCV753N	7
		Process Economics and Plant Design	UCV754N	7
		Disaster Management	UCV755N	7
	PG	Foundation Engineering	PSE011E	1
		Matrix methods of Structural analysis	PSE016E	2
		Pile foundation analysis and design	PGT023E	3
		Foundation Engineering	PGT113C	1
		Design of Earth retaining structutres	PGT020E	1
		Global warming and climate change	PEV021E	2
Academic Year 2017-18				
Civil Engineering	PG	Reinforced Earth structures and Geosynthetics	PGT106E	1
		Occupational Safety and Health	PEV011E	3
		Geotechnical earthquake engineering	PGT014E	2

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2019-20				
Electronics and Instrumentation Engineering	UG	Industrial safety and Communication	UEI821E	8
Academic Year 2018-19				
Electronics and Instrumentation Engineering	UG	Computational Methods for Electrical Science	UMA335C	3
		Statistical Methods for Electrical Science	UMA435C	4
		Electronic Circuit Analysis and Design	UEI341C	3
		Fundamentals of Quantitative Aptitude and Soft Skills	UHS001N	4
		Microcontroller and Peripherals	UEI541C	5
		Advanced Quantitative Aptitude and Soft Skills	UHS002N	5
		Python Programming	UEI513E	5
		Automotive Electronics	UEI522E	6
		Intelligent Instrumentation	UEI611E	6
		Internet of Things	UEI713E	7
		Industrial Buses and Data Networks	UEI831E	8
		Process Modeling	UEI833E	8
		Career Planning and Professional Skills	UHS003N	6
		Mini Project	UEI645P	6
		Advance C Programming	UCS659L	6
		Internship	UEI745I	7
		Artificial Intelligence and Machine Learning	UEI824E	8
		Advanced C Programming Lab	UCS559L	5
Academic Year 2017-18				
Electronics and Instrumentation Engineering	UG	Wireless Communication	UEI772E	7
		VLSI Design	UEI782E	7
		Data Acquisition and Converters	UEI452C	4
		Virtual Instrumentation	UEI654C	6
		Advanced Industrial Automation	UEI883E	8
		ARM Processor	UEI872E	8
		JAVA	UEI871E	8

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2020-21				
Industrial and Production Engineering	UG	Air craft industry and air craft systems	UIP033E	5
		Heuristics and Optimization Techniques	UIP032E	5
		Industry 4.0	UIP036E	7
		Internet of Things	UIP037E	7
Academic Year 2019-20				
Industrial and Production Engineering	UG	Advanced C+ Programming Laboratory	UCS659L	6
Academic Year 2017-18				
Industrial and Production Engineering	UG	Digital Design and Manufacturing	UIP640C	6
		Digital Manufacturing Laboratory	UIP642L	6

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Program wise list of new courses introduced of the total number of courses across all programmes offered during the last five years

Name of the Department	UG / PG	Name of the New Course Introduced	Course Code	Semester
Academic Year 2021-22				
Information Science and Engineering	UG	Advanced Data Structures and Algorithms	UIS037E	6
		Internship	UIS718I	7
Academic Year 2020-21				
Information Science and Engineering	UG	Data Science	UIS044E	5
		Advanced Quantitative Aptitude and Soft Skills	UHS002N	5
		Software Project Management	UIS068E	7
		Internship	UIS808I	8
		Career Planning and Professional Skills	UHS003N	6
Academic Year 2019-20				
Information Science and Engineering	UG	Internet of Things	UIS064E	7
		Advanced Algorithms	UIS042E	6
		Artificial Intelligence	UIS043E	6
		Distributed and Cloud Computing	UIS062E	8
		Career Planning and Professional Skills	UHS003N	6
		Virtual Reality	UIS065E	8
Academic Year 2018-19				
Information Science and Engineering	UG	Information Security	UIS059E	5
		Machine Learning	UIS060E	7
Academic Year 2017-18				
Information Science and Engineering	UG	Python	UIS054E	5
		Big Data and Analytics	UIS038E	8
		Real Time Operating System	UIS052E	5
		Linux Internals	UIS035E	7

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BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

BOARD OF STUDIES MEETING

Resolutions

Resolutions of the 1st Board of Studies (BoS) meeting of Artificial Intelligence and Machine Learning (AIML) Department, Basaveshwar Engineering College (Autonomous), Bagalkot conducted (through online mode) on 17.07.2021 at 10.30 am

Sub. (1)	:	To apprise of the college and the department
Res. (1)	:	Head of the department (HoD) Dr. A. D. Devangavi apprised about Basaveshwar Engineering College and Artificial Intelligence and Machine Learning (AI&ML) Department
Sub. (2)	:	To approve the Scheme (3rd to 8th semesters) for students taking admission to 1st year from academic year 2020-21 (175 credits) and for lateral entry students taking admission to 2nd year from academic year 2021-22
Res. (2)	:	HoD presented the scheme (3rd to 8th semesters) for students taking admission to 1st year from academic year 2020-21 (175 credits) and for lateral entry students taking admission to 2nd year from academic year 2021-22. The BoS members suggested to incorporate some of the changes in the scheme. After incorporating the suggestions it was resolved to approve the same.

Dr. A. D. Devangavi
HoD, AIML
BEC, Bagalkot

Dr. S. R. Mahadev Prasanna
Professor, Dean (R&D), IIT
Dharwad

Dr. Ravindra S. Hegadi
HoD, CSE, Central
University of Karnataka,
Kalaburgi

Dr. Annapurna D
Prof., PES University
& Head, CSE & ISE
PESIT, Bengaluru

Dr. Bharati Malakareddi
Prof. and Head, Dept. of
AIML, BMSIT, Bengaluru

Dr. V. B. Pagi
Prof. and Head, CSE,
BEC, Bagalkot

Dr. S. M. Hatture
Asso. Professor
CSE, BEC, Bagalkot

Prof. S. S. Yendigeri
Asso. Professor
CSE, BEC, Bagalkot

Dr. B. M. Reshmi
Asso. Professor, AIML
BEC, Bagalkot

Mr. Nandakishore Kulkarni
Data Analytics Specialist, Philips
India Ltd., Bengaluru

Dr. Manjula Sutagundar
Asso. Professor
EIE, BEC, Bagalkot

Sub. (3)	:	To approve the Scheme (3rd to 8th semesters) for students taking admission to 1st year from academic year 2021-22 (175 credits) and for lateral entry students taking admission to 2nd year from academic year 2022-23
Res. (3)	:	HoD presented the scheme (3rd to 8th semesters) for students taking admission to 1st year from academic year 2021-22 (175 credits) and for lateral entry students taking admission to 2nd year from academic year 2022-23. The BoS members suggested to incorporate some of the changes in the scheme. After incorporating the suggestions it was resolved to approve the same.
Sub. (4)	:	To approve the syllabus for the 3rd and 4th semester courses (2020-21 and 2021-22 schemes)
Res. (4)	:	HoD presented the detailed syllabus for the 3rd and 4th semester courses (2020-21 and 2021-22 schemes). The BoS members suggested to incorporate some of the changes in the scheme. After incorporating the suggestions it was resolved to approve the same.
Sub (5)	:	To approve the Vision and Mission statements of the department
Res. (5)	:	HoD presented the Vision and Mission statements of the department. It was resolved to approve the statements.
Sub (6)	:	To approve the panel of examiners for valuation and conduction of lab exams
Res. (6)	:	The tentative list of panel of examiners for valuation and conduction of lab exams for the academic year 2021-22 was presented by the HoD. The list was approved by the committee.
Sub (7)	:	Any other matters with the permission of the chair
Res. (7)	:	It was suggested to: 1) Offer Python programming in place of Advanced C programming during 3rd semester instead of 4th semester 2) Change the title of Microcontroller and Embedded Systems to Embedded systems

Dr. A. D. Devangavi
HoD, AIML
BEC, Bagalkot

Dr. S. R. Mahadev Prasanna
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PESIT, Bengaluru

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AIML, BMSIT, Bengaluru

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CSE, BEC, Bagalkot

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BEC, Bagalkot

Mr. Nandakishore Kulkarni
Data Analytics Specialist, Philips
India Ltd., Bengaluru

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Asso. Professor
EIE, BEC, Bagalkot

3) Change the title of the course, Introduction to AI and its applications
4) Introduce Data science lab using R or similar tools
5) Implement ADA lab assignments using Java
6) Introduce Proof of Concept lab to realize the ideas
7) Offer Cloud Computing as core subject instead of Web programming course
8) Offer web programming as a 2 credit course (Tutorial and lab)
9) Offer open ended experiments/assignments in some course
10) Offer Cyber security and Pattern Recognition as elective courses
11) Ensure for the following during the B.E. programming in AIML:

- Mathematical foundation courses: Statistics, Linear Algebra, Probability and Stochastic Processes, and Optimization;
- Core Courses: Introduction to AI & its applications, Artificial Intelligence (Theory & Lab), Machine Learning (Theory & Lab), and Deep learning (Theory & Lab);
- Advanced Courses: Cloud computing for AI/ML, Hardware accelerators for AI/ML and many elective courses that cover advanced concepts of AI/ML and applications of AI/ML like Speech Processing, Computer Vision, Natural Language Processing, Bioinformatics, AI in health Care and etc.;

The meeting concluded with a vote of thanks by Dr. A. D. Devangavi.

Dr. A. D. Devangavi
HoD, AIML
BEC, Bagalkot

Dr. S. R. Mahadev Prasanna
Professor, Dean (R&D), IIT Dharwad

Dr. Ravindra S. Hegadi
HoD, CSE, Central University of Karnataka, Kalaburgi

Dr. Annapurna D
Prof., PES University & Head, CSE & ISE
PESIT, Bengaluru

Dr. Bharati Malakareddi
Prof. and Head, Dept. of AIML, BMSIT, Bengaluru

Dr. V. B. Pagi
Prof. and Head, CSE,
BEC, Bagalkot

Dr. S. M. Hatture
Asso. Professor
CSE, BEC, Bagalkot

Prof. S. S. Yendigeri
Asso. Professor
CSE, BEC, Bagalkot

Dr. B. M. Reshmi
Asso. Professor, AIML
BEC, Bagalkot

Mr. Nandakishore Kulkarni
Data Analytics Specialist, Philips India Ltd., Bengaluru

Dr. Manjula Sutagundar
Asso. Professor
EIE, BEC, Bagalkot

B.V.V Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

BOARD OF STUDIES MEETING

Resolutions

Resolutions of the 2nd Board of Studies (BoS) meeting of Artificial Intelligence and Machine Learning (AIML) Department, Basaveshwar Engineering College (Autonomous), Bagalkot conducted (through online mode) on 12.10.2021 at 11.00 am

Sub. (1)	:	To approve the scheme (3rd to 8th semesters) as per NEP for students taking admission to 1st year from academic year 2021-22 (160 credits) and for lateral entry students taking admission to 2nd year from academic year 2022-23
Res. (1)	:	HoD presented the scheme for 3rd to 8th semesters (as per the guidelines of NEP) for students taking admission to 1st year from academic year 2021-22 (175 credits) and for lateral entry students taking admission to 2nd year from academic year 2021-22. The BoS members suggested to incorporate some of the changes in the scheme. After incorporating the suggestions it was resolved to approve the same.

Dr. A. D. Devangavi
HoD, AIML
BEC, Bagalkot

Dr. S. R. Mahadev Prasanna
Professor, Dean (R&D),
IIT, Dharwad

Dr. Ravindra S. Hegadi
HoD, CSE, Central University of Karnataka, Kalaburgi

Dr. Annapurna D
Prof., PES University & Head, CSE & ISE
PESIT, Bengaluru

Dr. Bharati Malakareddi
Prof. and Head, Dept. of AIML, BMSIT, Bengaluru

Dr. V. B. Pagi
Prof. and Head, CSE,
BEC, Bagalkot

Dr. S. M. Hatture
Asso. Professor, CSE
BEC, Bagalkot

Prof. S. S. Yendigeri
Asso. Professor, CSE
BEC, Bagalkot

Dr. B. M. Reshmi
Asso. Professor, AIML
BEC, Bagalkot

Mr. Nandakishore Kulkarni
Data Analytics Specialist,
Philips India Ltd.,
Bengaluru

Dr. Manjula Sutagundar
Asso. Professor
EIE, BEC, Bagalkot

Dr. V. C. Kagawade
Asso. Professor, AIML
BEC, BGK

Dr. R. S. Wadawadagi
Asst. Professor, AIML
BEC, BGK

Sub. (2)	:	To approve Programme Specific Outcomes (PSOs) for the department
Res. (2)	:	HoD presented the Programme Specific Outcomes (PSOs) for the department. The BoS members suggested to incorporate some of the changes in the statements. After incorporating the suggestions it was resolved to approve the same.It was resolved to approve the statements.
Sub. (3)	:	To approve the scheme for Minors to be offered to the students of other department
Res. (3)	:	HoD presented the scheme for Minors to be offered to the students of other department. It was resolved to approve the same.
Sub. (4)	:	Any other matters with the permission of the chair
Res. (4)	:	It was suggested to: 1) Offer atleast 6 choices in each of the 4 stream of professional electives 2) Either involve industry persons to handle internal internships or resource persons of other departments 3) Offer electives and open electives in consultation with CSE, ISE and ECE departments 4) Teach AEC courses with high spirit 5) Give 2/3rd % weightage to theory and 1/3rd % weightage to lab for the CIE assessment of integrated course The meeting concluded with a vote of thanks by Dr. A. D. Devangavi.

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B.V.V Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

3rd BOARD OF STUDIES MEETING

Resolutions

Resolutions of the 3rd Board of Studies (BoS) meeting of Artificial Intelligence and Machine Learning (AIML) Department, Basaveshwar Engineering College (Autonomous), Bagalkot conducted on 30.07.2022 at 10.30 am

Sub. (1)	:	To approve the scheme from 1st to 8th semesters (NEP) for students taking admission to 1st year from academic year 2022-23 (160 credits) and for lateral entry students taking admission to 2nd year from academic year 2023-24
Res. (1)	:	HOD presented the scheme from 1st to 8th semesters (NEP) for students taking admission to 1st year from academic year 2022-23 (160 credits) and for lateral entry students taking admission to 2nd year from academic year 2023-24. It was resolved to approve the same.
Sub. (2)	:	To approve the revised scheme from 3rd to 8th semesters (NEP) for students admitted to 1st year in the academic year 2021-22 (160 credits) and for lateral entry students taking admission to 2nd year from academic year

Dr. A. D. Devangavi
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BEC, Bagalkot

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Dharwad

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Prof. S. S. Yendigeri
Asso. Professor
CSE, BEC, Bagalkot

Dr. B. M. Beshmi
Asso. Professor, AIML BEC,
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Mr. Nandakishore Kulkarni
Data Analytics Specialist, Philips
India Ltd., Bengaluru

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EIE, BEC, Bagalkot

Dr. Vishwanath Kagawade
Asso. Professor, AIML BEC,
Bagalkot

Dr. R. S. Wadawadagi
Asst. Prof. AIML, BECBGK

Res. (2)	:	2022-23. HOD presented the revised scheme from 3rd to 8th semesters (NEP) for students admitted to 1st year in the academic year 2021-22 (160 credits) and for lateral entry students taking admission to 2nd year from academic year 2022-23. It was resolved to approve the same.
Sub. (3)	:	To approve the Syllabus for i) 3rd and 4th semester courses (2021-22 NEP scheme) ii) 5th and 6th semester courses (2020-21 scheme)
Res. (3)	:	HOD presented the syllabus for ii) 3rd and 4th semester courses (2021-22 NEP scheme) ii) 5th and 6th semester courses (2020-21 scheme) It was resolved to approve the same.
Sub. (4)	:	Ratification of the regulations governing the award of Minor at B.E. in AIML specified by VTU, Belagavi
Res. (4)	:	HOD presented the Ratification of the regulations governing the award of Minor at B.E. in AIML specified by VTU, Belagavi. It was resolved to approve the same.
Sub (5)	:	Ratification of the guidelines for Mandatory Internship specified by VTU, Belagavi.
Res. (5)	:	HOD presented Ratification of the guidelines for Mandatory Internship specified by VTU, Belagavi. It was resolved to approve the same.
Sub (6)	:	Postfacto approval of the resolutions of the internal BoS meeting held in the department on 25.04.2022.

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Res. (6)	:	HOD presented the resolutions of the internal BoS meeting held in the department on 25.04.2022. It was resolved to approve the same.
Sub (7) **Res(7)**	: :	To approve the panel of examiners for valuation and conduction of lab exams. HOD presented the panel of examiners for valuation and conduction of lab exams. It was resolved to approve the same.
Sub (8) **Res(8)**	: :	To approve the scheme for assessment of integrated courses. HOD presented the scheme for assessment of integrated courses. It was resolved to approve the same.
Sub (9) **Res(9)**	: :	Any other matters with the permission of the chair It was suggested: 1. To offer Computer Organization during 3rd semester and offer Embedded Systems during 4th semester 2. To involve industry experts in delivering AIML courses. 3. Procure GPU based sever in the Laboratory. The meeting concluded with a vote of thanks by Dr. A. D. Devangavi.

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BEC, Bagalkot

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BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF AUTOMOBILE ENGINEERING

The online Board of Studies (BoS) meeting conducted on 24-July-2021 at 11.00 am in department.

The minutes of meeting are as below:

Dr. V. G. Akkimardi presented the details of the meeting as per agenda.

Subject	Proposal	Resolution
Subject 1: The Chairman of Board of Studies Dr. V. G. Akkimardi, Head of the Department of Automobile Engineering, Basaveshwar Engineering College welcomed all the members of the BoS.		
Subject 2: Brief overview of last BoS meeting conducted on 11.07.2020	Chairman BoS, read the resolutions of previous BoS meeting held on 11.07.2020	No comments received **Enclosure - I**
Subject 2: Ratification of post approval resolutions of local BoS meeting conducted on 30/08/2020	Chairman BoS, read the resolutions of local BoS meeting held on 30/08/2020	The minutes of the local BoS meeting held on 30/08/2020. No comments received, hence resolutions accepted and approved by the Board. The minutes are as in the **Enclosure - II**

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Dr. C. M. Veerendrakumar		
Maheswari Math		Rahul Biradar	

Subject 3: Discussion and approval of scheme for batch admitted to academic year 2021-2022 from first to eight semesters with total of 175 credits	Chairman BoS, proposed the scheme for batch admitted to academic year 2021-2022 from first to eight semesters with total of 175 credits	Board after detailed discussion accepted the scheme for batch admitted to academic year 2021-2022 from first to eight semesters with total of 175 credits **Enclosure - III**

Subject 4: Any other matter relevant to curriculum

Further, the following observations were made and suggestions as given by the BoS members.

- List of Online Approved Subjects to be registered by the students for the Academic Year 2021-2022 Enclosure – IV
- Advancing of Samskruthika Kannada/Balake Kannada subject from III semester to I semester.
- Flexible system is to be adopted for choice of open electives.
- Revision of open elective in accordance with fundamentals of automotive technology.
- Revamping of department electives as per the streams is to be adopted.
- Enhancement of industrial based subjects for strengthening of curriculum.
- It is suggested to adopt scripting language Python as mandatory subject, but however, it is already included in open electives series.
- Reduction in number of subjects in IV semester is to be considered for revision.
- Tuning the structure and content of syllabus of last academic year 2019-2020.
- Adhering to the norms of AICTE for practical subjects in terms of credit assignment.

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Dr. C. M. Veerendrakumar		
Maheswari Math		Rahul Biradar	

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT-587103

DEPARTMENT OF AUTOMOBILE ENGINEERING

The online Board of Studies (BoS) meeting conducted on 11-July-2020 at 10.30 am in I & P.E. Conference hall, Basaveshwar Engineering College (Autonomous), Bagalkot.

The minutes of meeting are as below:

- The Chairman of Board of Studies Dr. V. G. Akkimardi, Head of the Department of Automobile Engineering, Basaveshwar Engineering College welcomed the members of the BoS.
- Dr. V. G. Akkimardi presented the details of the meeting as per agenda.

Subject	Proposal	Resolution
Subject 2: Brief overview of last BoS meeting conducted on 8/06/2019	Chairman BoS, read the resolutions of previous BoS meeting held on 8/06/2019	No comments received
Subject 3: Ratification of post approval resolutions of local BoS meeting conducted on 3/10/2019	Chairman BoS, read the resolutions of local BoS meeting held on 01/01/2019	The minutes of the local BoS meeting held on 01/01/2019. No comments received, hence resolutions accepted and approved by the Board. The minutes are as in the **Enclosure - I**

Dr. V. G. Akkimardi	**Dr. Somshekar Hiremath**	**Suryakant Mali**	**Kashinath Balabatti**
Dr. Niranjan Hiremath	**Dr. S. S. Hiremath**	**Prof. R. A. Patil**	**Prof. R. Nagaraj**
Dr. D. D. Chillal	**Prof. V. Umesh**	**Dr. C. M. Veerendrakumar**	
Omkar Basutkar		**Bhavani Biradar**	

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>Subject 4:
Discussion and approval of scheme for Academic Year 2018-2019 batch from fifth to eighth semester with total of 175 credits</td><td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted to first year in academic year 2018-2019</td><td>Board after detailed discussion accepted the scheme of teaching and examination for the students admitted to I year 2018-19 as below:
<table><tr><th>Sl. No</th><th>Semester</th><th>Total credits</th></tr><tr><td>1</td><td>I</td><td>20</td></tr><tr><td>2</td><td>II</td><td>20</td></tr><tr><td>3</td><td>III</td><td>22</td></tr><tr><td>4</td><td>IV</td><td>24</td></tr><tr><td>5</td><td>V</td><td>21</td></tr><tr><td>6</td><td>VI</td><td>23</td></tr><tr><td>7</td><td>VII</td><td>23</td></tr><tr><td>8</td><td>VIII</td><td>22</td></tr><tr><td colspan="2">Total</td><td>175</td></tr></table></td></tr>
<tr><td>Discussion and approval of syllabus of teaching for students admitted to I year 2018-19 batch and the students admitted to through lateral entry to III semester in academic year 2019-20 and onwards from V semester to VIII semester</td><td>Chairman proposed the detailed syllabus for V and VIII semester students (admitted in I semester in academic year 2018-19 and lateral entry to III semester in academic year 2019-20)</td><td></td></tr>
</table>

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Prof. V. Umesh	Dr. C. M. Veerendrakumar	
Omkar Basutkar		Bhavani Biradar	

Subject	Proposal	Resolution
	1. Dr. Somshekar Hiremath, Dr. Niranjan Hiremath and Dr. S. S. Hiremath proposed to change title of the subject **Design of Machine Elements – II of 4** credit to **Design of Power Train and Suspension Systems** with **3** credit in **V** semester	Board decided to change title to "**Design of Power Train and Suspension Systems**" and faculty handling the subject are to modify the syllabus
	2. Dr. S. S. Hiremath and Prof. R. Nagaraj proposed to change the credit of laboratory **"Automotive Engine Servicing laboratory"** from **1** to **1.5** credit in V semester	Board accepted the proposal
	3. Prof. R. A. Patil and Prof. R. Nagaraj proposed to separate the **Automotive Scanning & Reconditioning Laboratory** with **1** credit in V semester to **Automotive Scanning Laboratory** with **1.5** credit in V semester and **Automotive Reconditioning Laboratory** with **1** credit in **VII** semester by replacing the **FEA** lab with **1** credit	Board accepted the proposal

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Prof. V. Umesh	Dr. C. M. Veerendrakumar	
Omkar Basutkar		Bhavani Biradar	

Subject	Proposal	Resolution
	4. Dr. Niranjan Hiremath, Dr. V.G. Akkimardi and Prof. R. Nagaraj proposed to shift subject **"Automotive Power Train and Electrical Servicing Laboratory" of 1 credit** from **V** to **VI** semester with **1.5** credit	Board accepted the proposal
	5. Dr. Somshekar Hiremath, Dr. Niranjan Hiremath and Dr. D. D. Chillal proposed to change the subject title **" Auto CAD laboratory to Automotive CAD laboratory"**	Board decided to change title to **Automotive CAD laboratory** and faculty handling the subject are to modify the syllabus
	6. Dr. S. S. Hiremath, Prof. R. Nagaraj and Prof. Umesh V proposed to shift Automotive **Power Train and Electrical servicing laboratory** with **1** credit from **V** semester to **VI** semester with **1.5** credit	Board accepted the proposal

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Prof. V. Umesh	Dr. C. M. Veerendrakumar	
Omkar Basutkar		Bhavani Biradar	

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td></td><td>7. Dr. Somshekar Hiremath, Prof. R. Nagaraj and Dr. C. M. Veerendrakumar proposed to change the title Automotive chassis to Automotive chassis and Control Systems in III semester for A.Y. 2020-21 batch</td><td>Board decided to change title to Automotive chassis and Control Systems and faculty handling the subject are to modify the syllabus</td></tr>
<tr><td>Subject 5:
Redefine the course outcomes of all subjects from third to eighth semester</td><td>BoS members decided to redefine the course outcomes of all subjects from III to VIII semester</td><td>Board accepted the proposal</td></tr>
<tr><td>Subject 6:
Discussion and approval of scheme for batch admitted to academic year 2020-2021 from first to eight semesters with total of 175 credits</td><td>Chairman BoS, proposed the scheme for batch admitted to academic year 2020-2021 from first to eight semesters with total of 175 credits</td><td>Credit distribution for batch admitted in A.Y. 2020-21
<table>
<tr><th>Sl. No</th><th>Particular</th><th>credits</th></tr>
<tr><td>1</td><td>HSS</td><td>09</td></tr>
<tr><td>2</td><td>BSc</td><td>25</td></tr>
<tr><td>3</td><td>ESc</td><td>21</td></tr>
<tr><td>4</td><td>Prof. Core</td><td>68</td></tr>
<tr><td>5</td><td>Prof. elective</td><td>20</td></tr>
<tr><td>6</td><td>Open elective</td><td>09</td></tr>
<tr><td>7</td><td>Mini-project, Main project, Seminar and Internship</td><td>20</td></tr>
<tr><td>8</td><td>Approved Online course like MOOC/SWAYAM etc</td><td>03</td></tr>
<tr><td colspan="2">Total</td><td>175</td></tr>
</table></td></tr>
</table>

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Prof. V. Umesh	Dr. C. M. Veerendrakumar	
Omkar Basutkar		Bhavani Biradar	

Subject	Proposal	Resolution
		Total credit distribution from I to VIII semester

Sl. No	Semester	Total credits
1	I	20
2	II	20
3	III	22
4	IV	24
5	V	21
6	VI	20
7	VII	21
8	VIII	24
Online course		03
	Total	175

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Prof. V. Umesh	Dr. C. M. Veerendrakumar	
Omkar Basutkar		Bhavani Biradar	

SCHEME OF TEACHING FOR ACADEMIC YEAR 2020-2021 BATCH

Sem	HSS	Basic Science	Engineering Science	Professional core	Professional Elective	Open Elective	MOOCs /SWAYAM	Mini project / Project / Seminar / Internship	Total
I		9.5	10.5						20
II		9.5	10.5						20
III		3		19					22
IV	1	3		20					24
V	4			11	3	3			21
VI	4			08	3	3		2MP	20
VII				10	3	3		2I+3P	21
VIII					11			12P+1S	24
Online course MOOCs							3*		03
Total	9	25	21	68	20	9	3*	20	175

* Mandatory credits to be earned through MOOCs from any semesters (preferably 4th semester onwards)

Credit equivalence for online NPTEL/ SWAYAM/MOOCS and other online course shall be assigned in below table

Online course duration	Assigned credits
04 weeks	01
08 weeks	02
12weeks	03

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Prof. V. Umesh	Dr. C. M. Veerendrakumar	
Omkar Basutkar		Bhavani Biradar	

Subject 7:
Discussion and approval of assessment rubrics for Technical seminar, Internship, Mini project and Project phase I & II.

Resolution: Common format of the rubrics for assessment of Technical seminar, Internship, Mini project and Project phase I & II is followed at Institute level.

Subject 8:
Discussion and approval of online mode teaching from Academic Year 2020-21.

Resolution: As per the directions at the Institute level, 20% online and 80% conventional (off-line) learning and teaching process to be adopted for all the courses.

Subject 9:
Discussion and approval of virtual experiments in laboratory courses.

Resolution: Exploring the virtual laboratory concept and opting in pedagogy, wherever applicable is discussed and approved.

Subject 10:
Any other matter relevant to curriculum.

- The members have suggested, deliberated and accepted the concept of entitling the subjects in general and content in particular relevant to the Automobile field.
- In context to the above, some of the subjects are re-titled as per the suggestions.
- In conclusion, the overall online meeting discussion turns out to be highly penetrative, brain storming with best of its outcomes for the stake holders.

- Prof. R. Nagaraj proposed the vote of thanks to all the BoS members for their continued unstinted support, cooperation and valuable inputs for curriculum.

No major changes were implemented in the BOS . Minor changes as course titles were implemented as per the BOS suggestions

Dr. V. G. Akkimardi	Dr. Somshekar Hiremath	Suryakant Mali	Kashinath Balabatti
Dr. Niranjan Hiremath	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
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B. V. V. Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

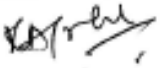
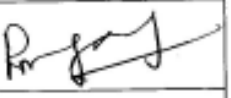
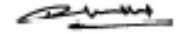
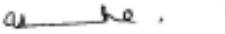
DEPARTMENT OF AUTOMOBILE ENGINEERING

Board of Studies Meeting on 08-06-2019 @ 10.00am

Agenda

1. Formal welcome by BoS Chairman.
2. Brief overview of last BoS conducted on 02/07/2018.
3. Ratification of post approval resolutions of local BoS meeting conducted on 01/01/2019.
4. Revision and discussion of scheme for 2018-2019 batch with total of 175 credits from the first to eighth semester.
5. Revision and discussion of syllabus for first year 2018-19 batch students from third to eighth semester.
6. Redefine the course outcomes of all subjects from third to eighth semester.
7. Any other matter relevant to curriculum.

Sl. No	Name of the BoS Members	Designation/Affiliation	Signature
1	**Dr. V. G. Akkimardi** Prof. and Head, Automobile Engg. Dept. BEC, Bagalkot	**Chairman BoS**, BEC, Bagalkot	8/6/19
2	**Dr. J. Venkatesh** Professor & Head Dept. of Automobile Engineering, P.E.S. C.E, Mandya - 571401	Professor & Head Dept. of Automobile Engineering, P.E.S. C.E, Mandya – 571401 **Member (VTU nominee)**	J.V
3	**Mr. Vinay Talikoti** Product Manager, PTC Software Ltd, Pune. Maharastra	PTC Software PVT ltd, Pune. Maharashtra Member **(Alumni)**	
4	**Suryakant Mali** M/S GLOBAL MANUFACTURING SOLUTIONS Bengaluru - 560 091.	M/s. Global Manufacturing Solutions #73/6, 19th, cross, Doddanna industrial area, Peenya 2nd stage, Bengaluru 560 091. **(Alumni)**	
5	**Kashinath Balabatti** S. K. Manufacturing and Sales. Bengaluru	S. K. Manufacturing and Sales. No.38, Andrahalli Main Road, Shiradi Sai Baba Layout, Bengaluru – 560091 **(Alumni)**	KashinathBB

6	**Dr. S. S. Hiremath** Professor, BEC Bagalkot	**Member BoS,** BEC Bagalkot	
7	**Prof. R. A. Patil** Associate Professor, BEC Bagalkot	**Member BoS**, BEC Bagalkot	
8	**Prof. R. Nagaraj** Associate Professor, BEC Bagalkot	**Dept. BoS Coordinator**, BEC Bagalkot	
9	Dr ~~Prof.~~ **D. D. Chillal** Associate Professor, BEC Bagalkot	**Member BoS,** BEC Bagalkot	
10	**Prof. Umesh V** Associate Professor, BEC Bagalkot	**Member BoS**, BEC Bagalkot	
11	**Prof. C. M. Veerendrakumar** Associate Professor, BEC Bagalkot	**Member BoS**, BEC Bagalkot	
12	**Prof. Pramod Bhajantri** Assistant Professor, BEC Bagalkot	**Member BoS**, BEC Bagalkot	
13	**Muttanna Pattanashetti**	**Student member BoS,** BEC Bagalkot	
14	**Omkar Basutkar**	**Student member BoS,** BEC Bagalkot	
15	**Bhavani Biradar**	**Student member BoS,** BEC Bagalkot	

The Board of Studies (BoS) meeting conducted on 08-June-2019 at 10.00 AM in I & P.E. conference hall, Basaveshwar Engineering College (Autonomous), Bagalkot.

The minutes of meeting are as below:

- The Chairman of Board of Studies Dr. V. G. Akkimardi, Head of the Department of Automobile Engineering, Basaveshwar Engineering College welcomed all the members of the BoS.
- Dr. V. G. Akkimardi presented the details of the meeting as per the agenda.

Subject	Proposal	Resolution
Subject 1: Overview of briefing on last BoS conducted on 02/07/2018.	Chairman BoS, read the resolutions of previous BoS meeting held on 02/07/2018.	There were no comments mentioned.
Subject 2: Ratification of post approval resolutions of local BoS meeting conducted on 01/01/2019.	Chairman BoS, read the resolutions of local BoS meeting held on 01/01/2019.	The minutes of the local BoS meeting held on 01/01/2019 circulated to all members. No comments received, hence resolutions accepted and approved by the Board. The minutes are as in the **Enclosure - I.**
Subject 3: Revision and discussion of scheme for 2018-2019 batch with total of 175 credits from I to VIII semester.	Chairman BoS, proposed the scheme of teaching and examination for the students admitted to first year in academic year 2018-2019.	Board after detailed discussion accepted the scheme of teaching and examination for the students admitted to I year 2018-19 as below:

Sl. No	Semester	Total credits
1	I	20
2	II	20
3	III	22
4	IV	24
5	V	21
6	VI	23
7	VII	23
8	VIII	22
	Total	175

<table>
<tr>
<td>Subject 4:
Revision and discussion of scheme for 2018-2019 batch with total of 135 credits from III to VIII semester.</td>
<td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted through lateral entry to III semester in academic year 2019-20 and onwards.</td>
<td>Board accepted the scheme of teachin and examination for the student admitted through lateral entry to III semester in academic year 2019-20 as below:
<table>
<tr><th>Sl. No</th><th>Semester</th><th>Total credits</th></tr>
<tr><td>1</td><td>III</td><td>22</td></tr>
<tr><td>2</td><td>IV</td><td>24</td></tr>
<tr><td>3</td><td>V</td><td>21</td></tr>
<tr><td>4</td><td>VI</td><td>23</td></tr>
<tr><td>5</td><td>VII</td><td>23</td></tr>
<tr><td>6</td><td>VIII</td><td>22</td></tr>
<tr><td></td><td>Total</td><td>135</td></tr>
</table>
</td>
</tr>
<tr>
<td>Subject 5:
Revision and discussion of syllabus of teaching for students admitted to I year 2018-19 batch and the students admitted to through lateral entry to III semester in academic year 2019-20 and onwards from III semester to IV semester.</td>
<td>Chairman proposed the detailed syllabus for III and IV semester students (admitted in I semester in academic year 2018-19 and lateral entry to III semester in academic year 2019-20).

1. Dr. J. Venkatesh, Prof. R. Nagaraj and Prof. C. M. Veerendrkumar, proposed to change title of the subject "Automotive Chassis and Control System" to "Automotive Chassis" and shifted from IV semester to III semester.

2. Dr. J. Venkatesh, Dr. V. G. Akkimardi and Prof. V. Umesh proposed to change the credit of subject "Fluid Mechanics" of IV semester from 4 to 3 credits.

3. Dr. J. Venkatesh, Dr. S. S. Hiremath and Prof. R. Nagaraj proposed to shift subject "Theory of Automotive Engines" from III to IV semester.

4. Dr. J. Venkatesh, Prof. R. A. Patil and Prof. R. Nagaraj proposed to shift the subject</td>
<td>

Board decided to change title to "Automotive Chassis" and faculty handling the subject are to modify the syllabus.

Board accepted the proposal an faculty handling the subject are to modify the syllabus.

Board accepted the proposal.

Board accepted the proposal.</td>
</tr>
</table>

	"Automotive Transmission Systems" from **V** semester to **IV** semester.	
	5. BoS members decided to incorporate the subject **"Fundamentals of Quantitative Aptitude & Soft Skills"** or **"Vehicular System Drawing lab – I"** in **IV** semester of **1** credit.	Board accepted the proposal and students can optionally take any one subject.
Subject 6: Revision and discussion of scheme for I year 2018-19 batch students from V to VIII semester.	1. Dr. S. S. Hiremath, Prof. C. M. Veerendrkumar proposed to change the credit of **"Design of Machine Elements - II"** of **V** semester from **4** credits to **3** credits.	Board accepted the proposal and faculty handling the subject are to modify the syllabus.
	2. Dr. J. Venkatesh, Dr. S. S. Hiremath and Prof. R. Nagaraj proposed to shift the subject **Auxiliary System for Automotive Engines"** from **IV** semester to **V** semester.	Board accepted the proposal.
	3. BoS members decided to incorporate the subject **"Fundamentals of Qualitative Aptitude & Soft Skills"** or **"Vehicular System Drawing lab - II"** in **V** semester of **1** credit.	Board accepted the proposal and students can optionally take any one subject.
	4. Dr. J. Venkatesh, Prof. R. Nagaraj and Prof. C. M. Veerendrkumar, proposed to shift the subject titled **"Automotive Power Train and Electrical Servicing Laboratory"** from **VI** semester to **V** semester.	Board accepted the proposal.
	5. Dr. J. Venkatesh and Dr. S. S. Hiremath proposed to change the credit of subject titled **"Automotive Engine Component Design"** from **4** to **3** credits in **VI** semester.	Board accepted the proposal and faculty handling the subject are to modify the syllabus.

	6. BoS members proposed to incorporate the subject **"Career Planning and Professional Skills"** or **"Seminar"** in **VI** semester of **1** credit.	Board accepted the proposal as students can optionally take any one subject.
	7. Dr. J. Venkatesh, Prof. R. A. Patil and Prof. C. M. Veerendrkumar, proposed to merge the **"Automotive Scanning Laboratory"** of V semester and **"Automotive Reconditioning Laboratory"** of **VII** semester to **"Automotive Scanning and Reconditioning Laboratory"** with **1** credit in **VI** semester.	Board accepted the proposal and faculty handling the subject are to modify the syllabus.
	8. Dr. J. Venkatesh, Dr. D. D. Chillal and Prof. C. M. Veerendrakumar proposed to introduce new laboratory titled **"Finite Element Analysis (FEA) laboratory"** in **VII** semester.	Board accepted the proposal and faculty handling the subject are to modify the syllabus.

- Dr. J. Venkatesh proposed suggestions related to the format of text books and references in the syllabus copy, starts with author's name, title of the book and publications with new editions etc.
- BoS members decided to redefine the course outcomes of all subjects from III to VIII semester.
- Prof. R. Nagaraj proposed the vote of thanks to all the BoS members for their continued support, cooperation and valuable inputs for curriculum.

About 30% of the course contents were modified with addition of new electives and updation of existing course contents

Dr. V. G. Akkimardi	Dr. J. Venkatesh	Mr. Vinayak Talikoti	Suryakant Mali
Kashinath Balabatti	Dr. S. S. Hiremath	Prof. R. A. Patil	Prof. R. Nagaraj
Dr. D. D. Chillal	Prof. V. Umesh	Prof. C. M. Veerendrakumar	Prof. Pramod Bhajantri
Muttanna Pattanashetti	Omkar Basutkar	Bhavani Biradar	

BASAVESHWAR ENGINEERING COLLEGE, AUTONOMOUS)BAGALKOT

DEPARTMENT OF AUTOMOBILE ENGINEERING

Board of Studies Meeting on 02-07-2018 @ 10.00am

Agenda

1. Formal welcome by BOS Chairman
2. Overview of briefing on Last BOS conducted on 18/03/2017
3. Discussion on scheme of teaching and examination for the students admitted to first year 2018-2019 with total of 175 credits from the first semester to eight semester.
4. Discussion on syllabus of teaching for students admitted to first year 2018-19 batch from third semester to fourth semester.
5. Any other matter relevant to curriculum.

Sl. No	Name of the BOS Members	Name of the Institute/Organization	Signature
1	**Dr. V. G. Akkimardi** Prof. and Head, Automobile Dept.BEC, Bagalkot	BEC, Bagalkot, Chairman	
2	**Dr. J. Venkatesh** Professor & Head Dept. of Automobile Engineering, P.E.S. College of Mandya - 571401	Professor & Head Dept. of Automobile Engineering, P.E.S. College of Mandya – 571401 Member **(VTU nominee)**	
3	**Mr. Vinay Talikoti** Product Manager, PTC Software Ltd, Pune. Maharastra	PTC Software PVT ltd, Pune. Maharashtra Member **(Alumni)**	
4	**Dr. S. S. Hiremath** Professor, BEC Bagalkot	BEC Bagalkot, Member	
5	**Prof. R. A. Patil** Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	
6	**Prof. R. Nagaraj** Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	
7	**Prof. D. D. Chillal** Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	
8	**Prof. Umesh V** Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	
9	**Prof. C. M. Veerendrakumar** Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	
10	**Prof. Pramod Bhajantri** Assistant Professor, BEC Bagalkot	BEC Bagalkot, Member	

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT-587103

DEPARTMENT OF AUTOMOBILE ENGINEERING

The Board of Studies (BoS) meeting was held on 02-July-2018 at 10.00 am in I & P.E. conference hall of Basaveshwar Engineering College (Autonomous), Bagalkot.

The minutes of meeting are as below:

- The Chairman of Board of Studies Dr. V. G. Akkimardi, Head of the Department of Automobile Engineering, Basaveshwar Engineering College welcomed all the members of the BoS.
- Dr. V. G. Akkimardi presented the details of the meeting as per the agenda.

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>Subject 1:
Overview of briefing on last BoS conducted on 18/03/2017</td><td>Chairman BoS, read the resolution of previous BoS meeting held on 18/03/2017</td><td>There were no comments mentioned.</td></tr>
<tr><td>Subject 2:
Discussion on scheme of teaching and examination for the students admitted to first year 2018-2019 with total of 175 credits from the first semester to eight semester.</td><td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted to first year in academic year 2018-2019.</td><td>Board after detailed discussion accepted the scheme of teaching and examination for the students admitted to first year 2018-19 as below:
<table>
<tr><th>Sl. No.</th><th>SEMESTER</th><th>TOTAL CREDITS</th></tr>
<tr><td>1</td><td>I</td><td>20</td></tr>
<tr><td>2</td><td>II</td><td>20</td></tr>
<tr><td>3</td><td>III</td><td>22</td></tr>
<tr><td>4</td><td>IV</td><td>24</td></tr>
<tr><td>5</td><td>V</td><td>21</td></tr>
<tr><td>6</td><td>VI</td><td>23</td></tr>
<tr><td>7</td><td>VII</td><td>23</td></tr>
<tr><td>8</td><td>VIII</td><td>22</td></tr>
<tr><td colspan="2">TOTAL</td><td>175</td></tr>
</table>
</td></tr>
</table>

<table>
<tr>
<td>Subject:3
Discussion on the scheme of teaching and examination for the students admitted to through lateral entry to third semester in academic year 2019-20</td>
<td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted to through lateral entry to third semester in academic year 2019-20 and onwards.</td>
<td>Board accepted the scheme of teaching and examination for the students admitted through lateral entry to third semester in academic year 2019-20 as below:
<table>
<tr><th>Sl. No</th><th>Semester</th><th>Total credits</th></tr>
<tr><td>1</td><td>III</td><td>22</td></tr>
<tr><td>2</td><td>IV</td><td>24</td></tr>
<tr><td>3</td><td>V</td><td>21</td></tr>
<tr><td>4</td><td>VI</td><td>23</td></tr>
<tr><td>5</td><td>VII</td><td>23</td></tr>
<tr><td>6</td><td>VIII</td><td>22</td></tr>
<tr><td colspan="2">Total</td><td>135</td></tr>
</table>
</td>
</tr>
<tr>
<td>Subject:4
Discussion on syllabus of teaching for students admitted to first year 2018-19 batch from third semester to fourth syllabus</td>
<td>Chairman proposed the detailed syllabus for third and fourth semester students (admitted in first semester in academic year 2018-19)

1. Dr. J. Venkatesh, Prof. R. A. Patil and Dr. V. G. Akkimardi, proposed to modification of syllabus in "Thermodynamics" and inclusion of steam tables and psychometrics charts in the syllabus copy.

2. Dr. J. Venkatesh and Prof. C. M. Veerendrkumar, proposed to change title of the subject "Automotive Chassis and Suspension" to "Automotive Chassis and Control System."

3. Dr. J. Venkatesh and Prof. C. M. Veerendrkumar, proposed to interchanging of the subject "Automotive Chassis and Control System" of 3 credits of 3rd semester to 4th semester and the subject "Theory of Automotive Engines" of 3credits of 4th semester to the 3rd semester.</td>
<td>

Board accepted the proposal and faculty handling the subject are to modify the syllabus and details of tutorials to be maintained.

Board decided to change title to "Automotive Chassis and Control System."

Board accepted the proposal.</td>
</tr>
</table>

	4. Prof. V. Umesh and Prof. R. A. Patil, proposed to change title of the subject "Fluid Mechanics and machines" need to be changed and syllabus to be modified.	Board decided to change title to "**Fluid Mechanics**" and faculty handling the subject are to modify the syllabus and details of tutorials to be maintained.
	5. Dr. S. S. Hiremath, Prof. R. A. Patil and Prof. C. M. Veerendrkumar, proposed to merging of "kinematics of Machines" and "Dynamics of machinery" as "Theory of Machines" with certain changes and inclusion of tutorials in 4th semester.	Board decided to change title to "**Theory of Machine**" and faculty handling the subject are to modify the syllabus and details of tutorials to be maintained.
	6. Dr. J. Venkatesh, Prof. C. M. Veerendrkumar and Prof. P. B. Bajantri, proposed to change the title of the subject "Automotive system Design" to "Design of Machine Elements – I" and inclusion of tutorials and data hand book in syllabus.	Board decided to change title to "**Design of Machine Elements - I**" and details of tutorials to be maintained.
	7. Dr. V. G. Akkimardi and Prof. V. Umesh proposed, to merging "Material Testing lab" and "Metrology and Measurement lab" as "Material testing and Measurement laboratory."	Board decide the proposal to change the title to "**Material testing and Measurement laboratory**" and faculty handling the laboratory are to modify the syllabus.
Subject:4 Discussion on scheme of teaching and examination for the students admitted to first year 2018-2019 with total of 175 credits from the fifth semester to eight semester.	Chairman proposed the detailed scheme of teaching and examination for the students admitted to first year 2018-2019 with total of 175 credits from the fifth semester to eight semester.	
	1. Prof. V. Umesh and Prof. D. D. Chillal proposed to include "Heat Transfer" subject as core in 5 semester	Board accepted the same
	2. Dr. J. Venkatesh, Prof. C. M. Veerendrkumar and Prof. P. B. Bajantri, proposed to change the title of the subject "Automotive System Design - II" to "Design of Machine Elements – II" and include the data hand book in the syllabus.	Board decided to change the title to **"Design of Machine Elements – II"** and details of tutorials to be maintained.
	3. Dr. J. Venkatesh and Prof. R. Nagraja, proposed to change title of the subject "Automotive Engine Auxiliary Systems" to "Auxiliary Systems for Automotive Engines"	Board decided to change title of the subject to **"Auxiliary Systems for Automotive Engines"** and syllabus to be modified.

	4. Dr. S. S. Hiremath and Prof. R. Nagraja, proposed interchanging of the subject "Auxiliary Systems for Automotive Engines" of 3 credits of 5th semester to 4th semester.	Board accepted the same.
	5. Dr. J. Venkatesh, Dr. V. G. Akkimardi Prof. V. Umesh and Prof. D. D. Chillal proposed to change title of the subject "Industrial Organisation and Management" to "Entrepreneurship and Industrial Management" and updating of syllabus covering working capital, types of funding and government policies. It is shifted from 7th to 5th semester.	Board decided to change the title to **"Entrepreneurship and Industrial management".** The syllabus have first units as Entrepreneurship and small scale industry and remaining units on management.
	6. Dr. J. Venkatesh and Prof. R. Nagaraja, proposed to change title "Vehicle Testing and Scanning lab" to "Automotive Scanning Laboratory" and also shifted from 6th semester to 5th semester.	Board decided to change the title to **"Automotive Scanning Laboratory."**
	7. Dr. J. Venkatesh and Prof. C. M. Veerendrkumar proposed to shift subject "Autotronics" from 6th semester to 7th semester.	Board accepted the same.

Around 10% changes were implemented with regards to omission, addition and modification of course contents

Dr. J. Venkatesh proposed suggestions related to the format of text books and references in the syllabus copy, starts with authors name, title of the book and publications etc.

Prof. D. D. Chillal proposed the vote of thanks to all the BOS members for their continued support, cooperation and valuable inputs for curriculum.

BASAVESHWAR ENGINEERING COLLEGE, AUTONOMOUS)BAGALKOT

DEPARTMENT OF AUTOMOBILE ENGINEERING

Board of Studies Meeting on 18-03-2017

Agenda

1. Formal welcome by BOS Chairman
2. Overview of briefing on Last BOS conducted on 04/04/2016
3. Revision and approval of 5th to 8th semester scheme and syllabus for 2015-16 admitted batch
4. Post Approval of the resolutions of local BOS meeting conducted on 30/12/2016 in Automobile Engineering department, BEC Bagalkot.
5. Finer changes/Modification, if any, for higher semester subjects
6. Any other matter relevant to curriculum.
7. Redefine the department mission and PEOs

BOS Members Present

Sl.No	Name of the BOS Members	Name of the Institute/Organization	Signature
1	Dr. V. G. Akkimardi Prof. and Head, Automobile Dept.BEC, Bagalkot	BEC, Bagalkot, Chairman	18/3/17
2	Dr. Somashekhar S. Hiremath Professor, IITM, Chennai	IIT Madras, Chennai, Member (VTU nominee)	18/3/17
3	Mr. Chandrasekhar Masanakatti Divisional Manager ERC Tata Motors, Pune	Tata Motors, Pune, Member (Alumni)	18/3/17
4	Prof. S. S. Hiremath Professor, BEC Bagalkot	BEC Bagalkot, Member	
5	Prof. R. A. Patil Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	
6	Prof.R.Nagaraja Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	18.3.17
7	Prof. D.D.Chillal Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	18/3.
8	Prof. Umesh V Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	18/3
9	Prof.C.M.Veerendrakumar Associate Professor, BEC Bagalkot	BEC Bagalkot, Member	18/3/17
10	Prof.PramodBhajantri Assistant Professor, BEC Bagalkot	BEC Bagalkot, Member	18/3/17

		code	
UAU613C	Auto Electrical and Electronics	Change of title from existing to new title 'Automotive Electrical Systems ' with new code	
UAU608L	Auto Engg. Lab-III	Change of title from existing to new title 'vehicle testing and scanning lab with new code	
UAU 519L	Auto Engg. Lab-II	Inclusion of this lab in 6th semester and Change of title from existing to new title 'automotive power train and electrical servicing with new code	
UAU609L	Auto Engg. Lab-IV	Inclusion of this lab in 7th semester and Change of title from existing to new title 'Automotive Reconditioning Lab' with new code	
UAU 733E	Vehicle Dynamics	Conversion of department elective Vehicle Dynamics to core subject retaining same credits and thereby reducing the number of department electives from 3 to 2 in 7th semester with new code	
	Internship	Inclusion of internship of 1 credit in 7th semester with code.	
Group electives of VII and VIII Semester	Group of Department electives-V,VI,VII,VIII and IX of 7th and 8th semester	Merger of group electives-V,VI,VII,VIII and IX into one single group of open electives	
Department Mission	**1.**To disseminate the knowledge to build the outstanding professionals in automobile engineering through teaching learning process. **2.** To develop the platform for higher learning, research and industry institute interaction to face global challenges inculcated with human and social values'		
Program Educational Objectives (PEO'S)	**PEO 1.**To prepare the students with knowledge in basic science and engineering to meet global challenges. **PEO 2.** To develop the students in automotive engineering, thermal, design, manufacturing, autotronics in line with present technology. **PEO 3.** To develop the students as entrepreneurs and encourage to Pursue higher education and research.		

		code	
UAU613C	Auto Electrical and Electronics	Change of title from existing to new title 'Automotive Electrical Systems ' with new code	
UAU608L	Auto Engg. Lab-III	Change of title from existing to new title 'Vehicle testing and scanning lab with new code	
UAU 519L	Auto Engg. Lab-II	Inclusion of this lab in 6th semester and Change of title from existing to new title 'automotive power train and electrical servicing with new code	
UAU609L	Auto Engg. Lab-IV	Inclusion of this lab in 7th semester and Change of title from existing to new title 'Automotive Reconditioning Lab' with new code	
UAU 733E	Vehicle Dynamics	Conversion of department elective Vehicle Dynamics to core subject retaining same credits and thereby reducing the number of department electives from 3 to 2 in 7th semester with new code	
	Internship	Inclusion of internship of 1 credit in 7th semester with code.	
Group electives of VII and VIII Semester	Group of Department electives-V,VI,VII,VIII and IX of 7th and 8th semester	Merger of group electives-V,VI,VII,VIII and IX into one single group of open electives	
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The change in course contents made can be approximated to around 10 to 15 % which can be seen from the table above.

DEPARTMENT OF BIOTECHNOLOGY
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

Proceedings of Board of Studies Meeting held on 12.07.2017

10th board meeting of biotechnology is held on 12th July 2017 in the department of biotechnology seminar hall on from 10 am to 5 pm the main agenda was to reconcile, construct and approve the scheme and syllabus of BE Biotechnology for the academic year 2017-18. Following are the suggestions made during the meeting

The Chairman of BoS, Dr. Bharati S Meti, HoD, Dept. of Biotechnology, Basaveshwar Engineering College extended a warm welcome to all the members of BoS.		
Sub.1	:	To read and approve the minutes of Board of Studies meeting held on 20th August.2016
Res. 1	:	The minutes of the previous BoS meeting held on 20.08.2016 was presented by HoD. As no comments were received, the BoS members confirmed the minutes and it was resolved to approve the same.
Sub. 2	:	To appraise the activities of the department from 01.08.2016 to 30.06.2017
Res. 2	:	The Chairman of BoS briefly presented activities of the department from 01.08.2016 to 30.06.2017
Sub.5	:	To discuss and approve the syllabus for III to VIII semesters for the students admitted during 2017-18, 2018- 19 & 2019-20 (200 & 175 Credits)
Res.5	:	The chairman presented the syllabus for III and VIII semesters for the students admitted during 2017-18, 2018- 19 & 2019-20 and it was resolved to approve the same with following suggestions • Cell biology and Genetics & Plant and animal cell culture technique can be clubbed and made as Cytogenetics and Cell culture technique. • Cell biology and Genetics Lab can be removed. • Unit operations may be shifted to III semester from IV semester • Enzyme and biotransformation and eEzyme technology can be clubbed to make Enzymology and its applications • Biostatistics Lab may be shifted to IV semester. • Biokinetics and Enzyme technology Lab may be renamed as Enzyme kinetics and Enzyme Technology • Enzyme kinetics and enzyme technology may be shifted to V semester • Bioprocess Control and Automation can be renamed as Bioprocess

Instrumentation and Control Lab

- Bioprocess Equipment Design and Drawing can be renamed as Bioprocess Equipment Design since drawing part is taken care by chemical engineering. Bioprocess Equipment Design examination can be reduced to3 hours.
- Industrial Safety can be taught along with Bioethics and can be renamed as Industrial Safety and Bioethics.
- Mini project can be introduced in VI semester
- Any one of the Elective or Industrial management and Entrepreneurship may be shifted to VIII semester to match the semester credits
- Biostatistics and Bio-modelling can be taught by Mathematics and Biotechnology department together if evaluator is not comfortable to evaluate complete paper then both course instructors can be evaluate together
- Students who have more than 5 attempts can take extra attempts for the subject
- Self study component may be introduced in 5th and 6th semester as a trial basis for 2 credits
- Evaluation for the Industrial project maybe carried with internal and industrial guide (30:20) together, this evaluation is for CIE only
- PEO and PSO are suggested to reframe

DEPARTMENT OF BIOTECHNOLOGY

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

Proceedings of Board of Studies Meeting held on 07.07.2018

The Board of Studies meeting of Biotechnology department was held on 7th July 2018 at 10.00 am. Resolutions made are as follows ,

The Chairman of BoS, Dr. Bharati S Meti, HoD, Dept. of Biotechnology, Basaveshwar Engineering college extended a warm welcome to all the members of BoS.		
Sub.1	:	To modify and finalize the number of subjects in final year 175 credit scheme
Res. 1	:	The Chairman of BoS briefly presented 175 credit scheme and further it is suggested to have only subject in final semester and pay more attention towards Project and redistribute the credits of project phase II (from 12 to 15 credits) and 3 credits for Project phase I.
Sub. 2	:	To conduct club activities
Res. 2	:	The Chairman of BoS briefly presented activities of the department . All the members were happy about the department developments and informed the HoD and faculty to continue with their good work and further Club activity to be included for 3 hours preferably consideration should be throughout college at a time.
Sub.3	:	To discuss and approve Biostatistics subject to be taught at higher semester
Res.3	:	The chairman presented the distribution of credits. Further it was resolved to keep Biostatistics subject at higher semester, preferably at 6 semester level instead of 4th semester and the same was approved.
Sub.4	:	To discuss tutorial for various subjects
Res. 4	:	Tutorials should be included for mathematical subjects where three tutorial sheets for each unit to be maintained. Tutorials need not be included for each and every subject.
Sub.5	:	To discuss and approve the syllabus for III to VIII semesters for the students admitted during 2018-19 (175 Credits)
Res.5	:	The chairman presented the syllabus for III and VIII semesters for the students admitted during 2018-19 and it was resolved to approve the same with following suggestions

		1. It is suggested to introduce in every semester the subject should have a link as per the domain and so so also the elective subjects also to be considered 2. Instrumentation and process control subject is not having much relevance in the industry so the subject can be excluded. 3. IPR syllabus from industrial safety and bioethics may be shifted to Industrial Management and entrepreneurship 4. Reframing of the Industrial Management and Entrepreneurship syllabus and further it is suggested to have a flow and continuity.
Sub.6	:	To discuss and approve the first year scheme for the academic year 2018- 19 and syllabus of Environmental Studies for the students (First year)
Res. 6	:	The chairman presented the syllabus of Environmental Studies for the students (First year). Environmental studies UBT133M/ 233M as common subject syllabus is finalized and approved
Sub.7		Any other subjects with permission of the chair.
Res.7	:	As there are no other matters , the meeting concluded with vote of thanks, BOS coordinator, Prof. Preeti S Kumarmath proposed thanks to all the BOS members and chairman for spending their valuable time and their active participation & valid suggestions.

DEPARTMENT OF BIOTECHNOLOGY

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

Proceedings of Board of Studies Meeting held on 07.06.2019

The Board of Studies meeting of Biotechnology department was held on 7th June, 2019 at 2.00 pm. Suggestions made are as follows,

:	Prepare the syllabus strong with basic knowledge and as per GATE Level
:	Suggested to merge bioinformatics along with genomics and Proteomics syllabus
:	Technical seminar Credits not required
:	Question paper must be based with GATE question paper level
:	Suggested to remove Instrumentation and Process Control subject with lab
:	It is suggested that on time MOOCS courses should be made mandatory
:	Industrial internship evaluation should be made by industry and Staff Incharge
:	Suggested to introduces Nutraceuticals and food processing Lab and QA / QC Lab
:	Genetics can be merged with Molecular biology and the title may be molecular biology and Genetics
:	2 credits QA/QC Lab is introduce in old Scheme students to match the 200 credits for year back students.
:	Scheme and syllabus of 175 credits for 2019-2020 discussed and approved
:	Suggested the modifications of the contents of the subjects upstream processing Technology, Downstream processing Technology, structural biology, Bioinformatics, Genomics and proteomics, Microbiology Lab , Bio-kinetics and Enzyme kinetics Lab
:	If the students get the opportunity to do project in reputed institutes or industry may be deputed for 3-months during his/her VIII semester, for the same students portion will be completed by conducting the classes in double strength

DEPARTMENT OF BIOTECHNOLOGY
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

Proceedings of Board of Studies Meeting held on 09.07.2021

The Board of Studies meeting of Biotechnology department was held on 9th July 2021 at 2.00 pm through video conferencing (VC) (Google meet **meet.google.com/hgw-kqtf-unk**). Resolutions made are as follows.

The Chairman of BoS, Dr. Bharati S Meti, HoD, Dept. of Biotechnology, Basaveshwar Engineering college extended a warm welcome to all the members of BoS.		
Sub.1	:	To read and approve the minutes of Board of Studies meeting held on 30.07.2020.
Res. 1	:	The minutes of the previous BoS meeting held on 30.07.2020 was presented by HoD. As no comments were received, the BoS members confirmed the minutes and it was resolved to approve the same.
Sub. 2	:	To appraise the activities of the department from 01.08.2020 to 30.06.2021
Res. 2	:	The Chairman of BoS briefly presented activities of the department from 01.08.2020 to 30.06.2021. All the members were happy about the department developments and informed the HoD and faculty to continue with their good work.
Sub.3	:	Ratification of modified scheme of teaching for the students admitted during 2018-19, 2019-20 & 2020-21 (III to VIII semester for 175 credits)
Res.3	:	The chairman presented the distribution of credits, scheme of teaching and new CIE & SEE question paper pattern and project evaluation rubrics. It was resolved to approve the same with following suggestions 1. For the credit matching, one credit Food analysis techniques lab may be introduced at 7th sem for 2018-19 batch students. 2. Kannada subject at 3rd sem is made as credit course as per GoK guidelines, and the same is approved for 2019-20 & 2020-21 batch onwards 3. New CIE & SEE question paper pattern for 2020-21 batch onwards is approved (10 marks for assignments)
Sub.4	:	To discuss and approve the **syllabus** of VII and VIII semesters for the students admitted during 2018-19 (200 Credits)

Res. 4	:	The chairman presented the **syllabus** for VII and VIII semesters for the students admitted during 2018-19 (200 Credits) and it was resolved to approve the same scheme and syllabus for 2018-19 batch year back students also
Sub.5	:	To discuss and approve the **syllabus** for III to VIII semesters for the students admitted during 2018-19, 2019- 20 & 2020-21(175 Credits)
Res.5	:	The chairman presented the **syllabus** for III and VIII semesters for the students admitted during 2018-19, 2019- 20 & 2020-21 and it was resolved to approve the same with following suggestions 1. It is suggested to introduce one credit Food analytical techniques lab for the batch of 2018-19 onwards for one credit in 7th sem. 2. Fundamentals of enzymes may be introduced in biochemistry syllabus at 3rd sem. 3. Other types of reactors viz., microbioreactors, parallel bioreactors and multibioreactors may be included in Upstream process technology and Bioprocess equipment design courses. 4. Kannada subject at 3rd sem level is approved. 5. Open electives –Biofuels, Environmental technology and Industrial safety at 5th, 6th and 7th sem respectively are approved.
Sub.6	:	To discuss and approve the **scheme of teaching & examinations** for the students seeking admission during the academic year **2021-22** (I to VIII semester)
Res. 6	:	The chairman presented the **scheme of teaching & examinations** for the students seeking admission during the academic year **2021-22** (I to VIII semester for 175 credits).
Sub.7	:	To discuss and approve the syllabus of **Environmental Studies** for the students (First year) seeking admission during the academic year **2021-22**
Res. 7	:	The chairman presented the syllabus of **Environmental Studies** for the students (First year) seeking admission during the academic year **2021-22.** After the detailed discussions it was suggested to include topics such as, • Biodiversity guidelines, Circular economics; bioplastic as an alternate source; Environmental causes and control of the pandemic; • Case studies can be assigned for the students to gain more knowledge

Sub.8	:	**To discuss and approve the MOOCS courses**
Res. 8	:	**Suggested to register MOOCS courses between 3rd sem to 7th sem (preferable not to register in 8th sem). Approved one credit for 2018-19 batch and 3 credits to 2019-20 batch onwards.**
Sub.9	:	To discuss and approve the assessment **rubrics** for Internship. Mini project and Project work for the academic year 2021-22.
Res. 9	:	The chairman presented the **rubrics** for Internship. Mini project and Project work. The BoS members approved the rubrics with following suggestions • allotting internal guide for the internship for every student/batch of the students to keep track or to collect the progress of the students at industry • students can also be sent 4-6 months to industries, startups, incubation centers, IITs/NITs for their project work. • for SEE project evaluation involvement of guide is been suggested
Sub.10	:	To discuss and approve the list of **online subjects** to be registered by the students for B.E. Honours degree.
Res.10	:	The committee members approved the subjects listed by VTU for the award of BE honours degree.
Sub.11	:	To discuss and approve the introduction **of online mode of teaching** for VIII sem from 2021-22 onwards.
Res.11	:	The BoS members approved for **Online mode of teaching** for VIII Semester students from 2021-22 onwards and also suggested to use pre recorded video classes and weekend live class discussions in case students are sent to industrial projects.
Sub.12	:	Ratification of scheme and syllabus for the PG students in Food Biotechnology admitted during 2020-21 (I to IV semester for 88 credits).
Res.12	:	Approved of the scheme and syllabus for the PG students in Food Biotechnology admitted during 2020-21 (I to IV semester) for 88 credits with following suggestions: • Suggested to include experiments related to dairy processing; designing of new food product and learning of indigenous foods in Food Processing and Product development Lab at 3rd sem.
Sub.13	:	To discuss and approve the scheme of teaching and examination for PG students seeking admission during the academic year 2021-22 (I to IV semester for 88 credits).
Res.13	:	The chairman presented the **scheme of teaching & examinations** for the students seeking admission during the academic year **2021-22** (I to IV semester

		for 88 credits). The BoS members approved the same suggesting following changes: • Student can go for one year to industries/ premier institutes for their project work. • The courses at third semester can be engaged using online mode of teaching. • Recorded video lectures can be posted and weekend discussion classes can be engaged when student is in the industry for his project work.
Sub.14	:	To discuss and approve the PG diploma course and Job oriented Short Term Online /Offline certificate course in "Nutraceuticals and Food Processing" in association with KITS, GOK, Bengaluru for the academic year 2021-22.
Res.14	:	One year PG diploma course and Three Months Job oriented Short Term Online / Offline certificate course in "Nutraceuticals and Food Processing" is approved. It is recommended to continue the same syllabus for one year diploma course for the academic year 2021-22. Syllabus for three months certificate course is ratified & approved for 2020-21 on words
Sub.15	:	Any other subjects with permission of the chair.
Res.15	:	As there are no other matters .
The meeting concluded with vote of thanks, BOS Coordinator proposed thanks to all the BOS members and chairman for spending their valuable time and their active participation & valid suggestions.		

Basaveshwar Engineering College (Autonomous), Bagalkot

Department of Computer Science and Engineering (CSE)

Resolutions of the Meeting of Board of Studies

7th October 2021, Thursday, at 10:00 am

Chairman welcomed the members of the meeting.

Sub (1).	Discussion and approval of scheme of teaching from 1st semester to 8th semester B. E. (CSE) as per the NEP 2020.
Res:	After thorough discussion the scheme of teaching from 1st semester to 8th semester B. E. (CSE), framed as per the recommendations of the NEP 2020, was approved.
Sub (2).	Discussion and approval of the syllabus of newly offered elective for M. Tech. (CSE): Software Defined Networks
Res.	Software Defined Networks is being offered for the first time to the students of M. Tech. (CSE) and is given the subject code PCS039E. Members discussed and proposed some minor corrections, which were accommodated by the course instructor.
Sub (3).	Approval of syllabi of open elective subjects for 6th semester of BE(CSE) students: Cloud Computing & Applications and IoT & Applications
Res:	COs are re-defined. Titles are revised in Units II and III for Cloud Computing Applications course. COs are revised for IoT and Applications course.
Sub (4).	Discussion on detailed syllabus of Principles of Programming with C, to be offered for the students to be admitted to first year for the academic year 2021-2022.
Res.	To include the Principles of Programming, Introduction to problem solving, algorithms and flowcharts chapter, along with sufficient examples and exercises, emphasizing the principles of programming and problem solving. Content is altered, among the units, to maintain continuity and homogeneity. Course outcomes of both theory and laboratory course were re-written. Some of the reference books, which were quite old, were removed from the list. Suggested to include the latest editions for the textbooks and reference books. For the laboratory course, the practice programs were removed. Some of the branch specific programs were advised to be included in the practice.

Signatures of the Members present

Sl. No.	Name of the member	Signature
1.	Dr. V. B. Pagi	7/10/21
2.	Dr. S. V. Saboji	7/10/21
3.	Dr. S. M. Hatture	07/10/2021
4.	Dr. V. H. Naik	07.10.2021
5.	Prof. S. S. Yendigeri	07/10/2021
6.	Prof. S. V. Hanji	7/10/21
7.	Dr. P. S. Challagidad	07/10/2021

7th October 2021

Chairman, BoS CSE

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC(A), Bagalkot
2. The Principal, BEC (A), Bagalkot
3. The Controller of Examinations, BEC(A), Bagalkot
4. All members of Board of Studies in CSE, BEC(A), Bagalkot

BVVS

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS),
BAGALKOT
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Proceedings and Resolutions of Board of Studies Meeting held on 03.07.2020

The Board of Studies meeting of the Department of Computer Science and Engineering was held on 03rd July 2020 at 2.30 pm through video conferencing (VC). Dr. S. V. Saboji, Head of the Department welcomed all the members and started the meeting.

Agenda. 1	:	***Approval of 5th and 6th semester Syllabus BE (CSE) programme for the scheme of 175 credits scheme of the academic year 2018-19 and onward admitted batches.***
Res. 1	:	After due deliberations, the Board of Studies recommend to approve the syllabus of 5th and 6th semester of BE (CSE) programme for the 175credits scheme of academic year 2018-19 and onwards admitted batches.
Agenda. 2	:	***Approval of professional electives Courses for 4th and 6th semester of BE (CSE) students for the 175 credits scheme of academic year 2018-19 and onwards admitted batches.***
Res. 2	:	The Board recommend and approve the proposed professional electives courses for 4th and 6th semester of BE (CSE) students for the 175 credits scheme of academic year 2018-19 and onward admitted batches
Agenda. 3	:	***Approval of open Electives Courses for 4th and 6th semester of BE (CSE) students for the 175 credits scheme of academic year 2018-19 and onwards admitted batches.***
Res. 3.	:	The Board approved the open electives subjects for 4th and 6th semester of BE (CSE) students for the 175credits scheme of academic year 2018-19 and onward admitted batches.
Agenda. 4	:	***Approval of open elective Advanced C Programming for fifth and sixth semester of all Engineering branches.***
Res. 4.	:	The Board recommended certain modifications to the syllabus of open elective "Advanced C Programming" for fifth and sixth semester of all Engineering branches, by including the Data Structures portion.
Agenda. 5	:	***Implementation of amendment to guidelines of academic autonomy by VTU, Belagavi in accordance with VTU Ref. No. VTU/BGM/OS-Aca/2020-21/369, Dated 3rd June 2020 in connection to award of BE Degree with honours.***
Res. 5.	:	The Board agreed to abide by the guidelines of academic autonomy by VTU, Belagavi in accordance with VTU Ref. No. VTU/BGM/OS-Aca/2020-21/369, dated 3rd June 2020 for the award of BE Degree with honors.

da. 6	:	***Framing and implementation of Assessment Rubrics for Internships and Technical Seminars, Mini-Project, Major Project Phase I&II of BE CSE program.***
. 6.	:	The Board recommended to follow Assessment Rubrics for Internships and Technical Seminars, Mini-Project, Major Project Phase I&II of BE CSE program as recommended by AICTE and Joint Board.
genda. 7	:	***Discussion on Scheme for all semesters of B.E (CSE) for the students to be admitted to first year for the academic year 2020-2021.***
Res. 7.	:	It was resolved to approve the Scheme for all semesters of B.E(CSE) for the students to be admitted to first year for the academic year 2020-2021 with the following suggestions: i) Frame a course by combining the Data Communication and Computer Networks Courses. ii) Make a Pre-requisite course Cryptography and Network Security for offering Cyber Security course. iii) Introduce more number of Department and Open Electives.

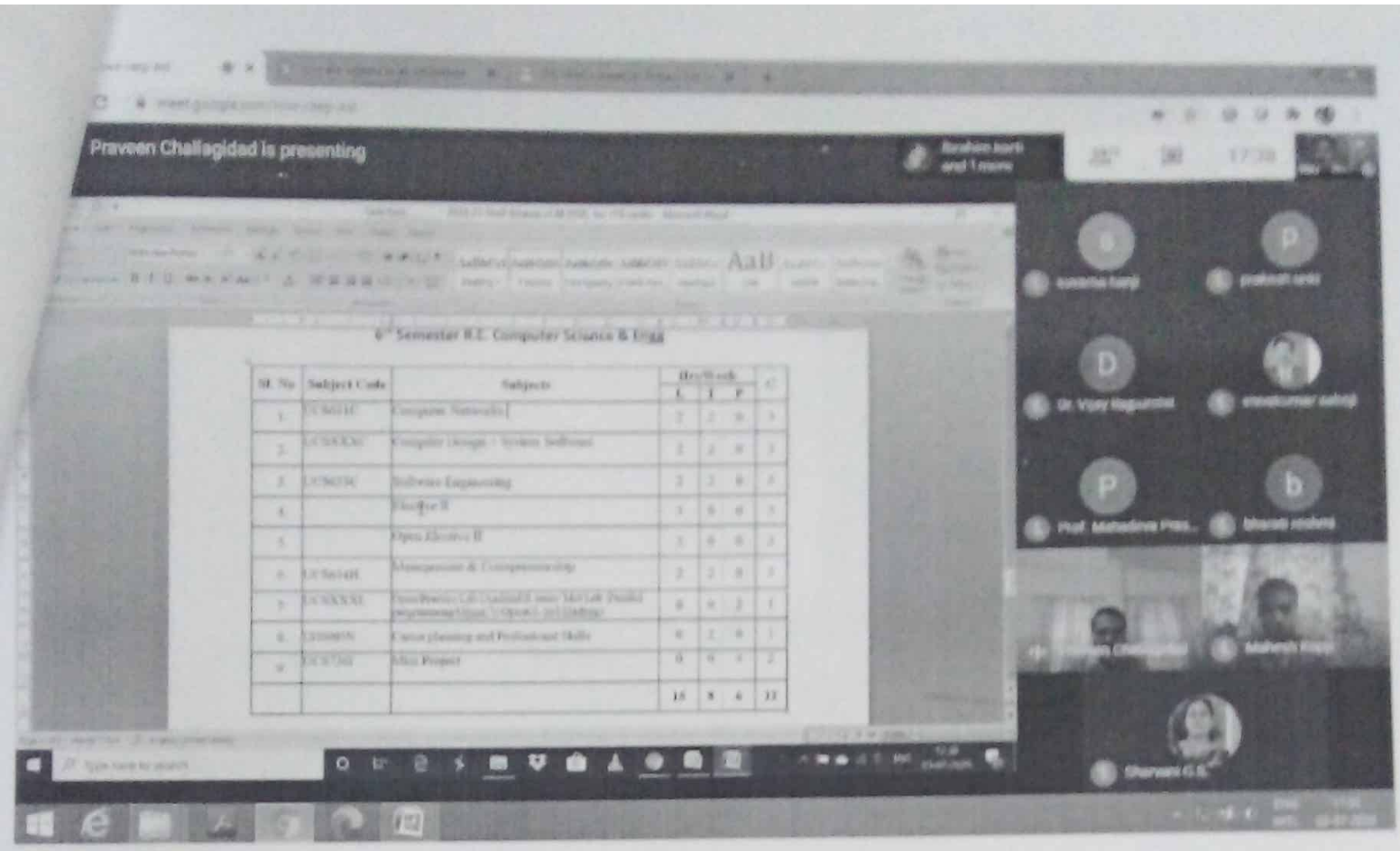
Name and Signature of members presentfor the meeting

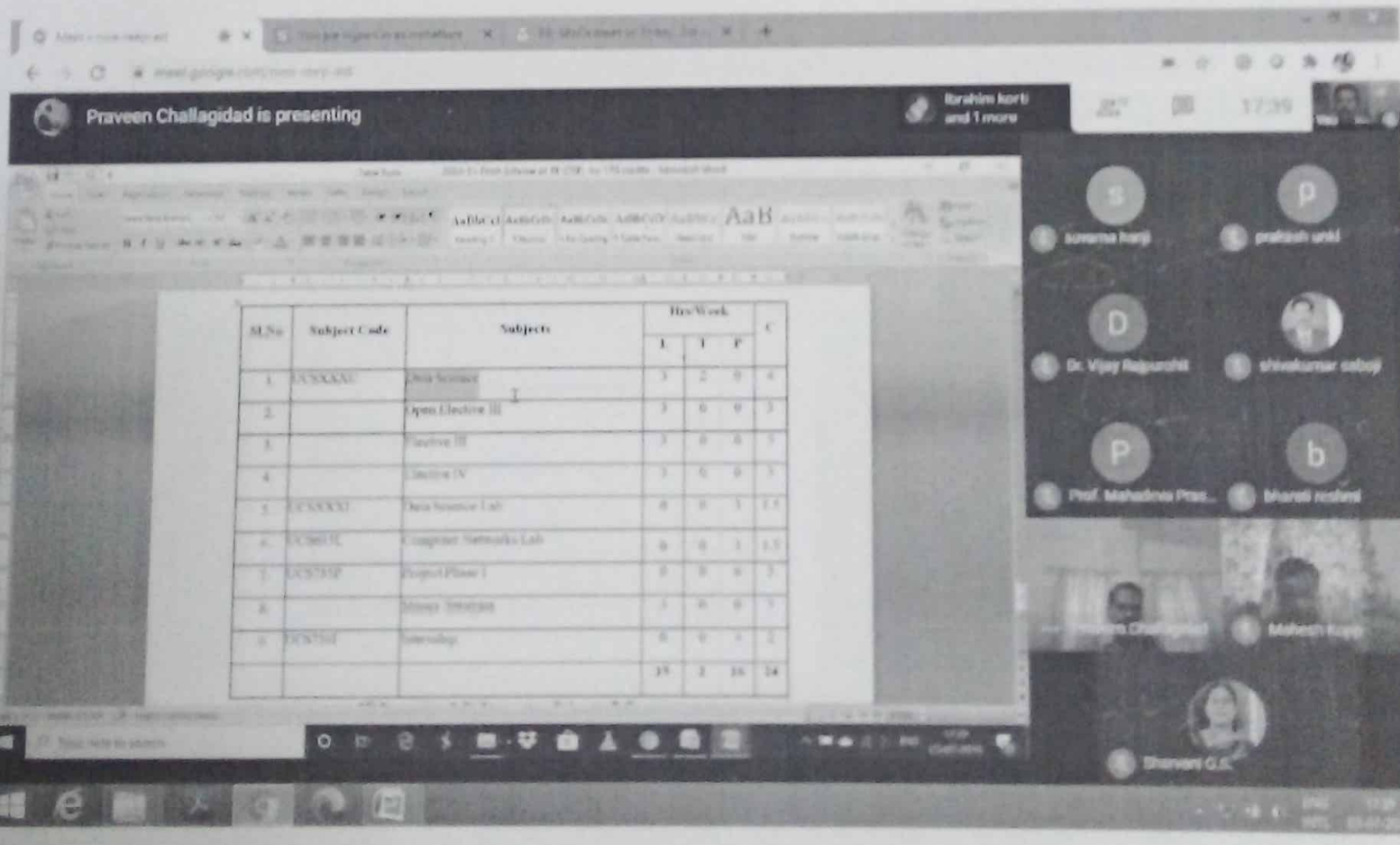
Sl. No.	Name	Nomination	Signature
1.	Dr. S. V. Saboji	Chairman	3-7-2020
2.	Dr. V. B. Pagi	Member	3-7-2020.
3.	Dr. S. M. Hatture	Member	03/07/2020
4.	Dr. Vilas H. Naik	Member	3.7.2020
5.	Prof. S.S.Yendigeri	Member	3-7-2020
6.	Prof. S. V. Hanji	Member	3/7/2020
7.	Prof. P.S. Challagidad	Member	3/7/2020
8.	Dr. S. R. MahadevaPrasanna	Subject Expert	
9.	Dr. Sharvani G. S.	Subject Expert	
10.	Dr. P.H.Unki	Subject Expert	
11.	Dr. P.R.Patil	VTU Nominee	

12.	Dr. Vijay S. Rajpurohit	Subject Expert
13.	Mr. Mahesh Kopp	Representative from Industry
14.	Dr. Rajapurohit	Meritorious alumnus
15.	Dr. B.M.Reshmi	Co-opted Member
16.	Mr. I. H.Korti	Student Member
17.	Ms. Sneha Allurkar	Student Member

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC(A), Bagalkot
2. The Principal, BEC(A), Bagalkot
3. The Controller of Examinations, BEC(A), Bagalkot
4. All members of Board of Studies in CSE, BEC(A), Bagalkot


Praveen Challagidad is presenting
Ibrahim korti and 1 more
6th Semester B.E. Computer Science & Engg
Sl. No
Subject Code
Subjects
Hrs/Week
L
T
P
C
Open Elective II
Management & Entrepreneurship
Career planning and Professional Skills
Mini Project
Sowmya Ranji
prakash unki
Dr. Vijay Rajpurohit
shivakumar sabaji
Prof. Mahadeva Pras...
bharati reshmi
Mahesh Kuppi
Sharvani G.S.


Praveen Challagidad is presenting
Ibrahim korti and 1 more
Sl.No
Subject Code
Subjects
Hrs/Week
L
T
P
C
Open Elective III
Elective IV
Project Phase I
Mini Project
Internship
Sowmya Ranji
prakash unki
Dr. Vijay Rajpurohit
shivakumar sabaji
Prof. Mahadeva Pras...
bharati reshmi
Mahesh Kuppi
Sharvani G.S.

Basaveshwar Engineering College (Autonomous), Bagalkot

Department of Computer Science & Engineering

Proceedings of the BoS Meeting held on 6rd Jan 2020

The following members were present for the meeting:

Sl. No.	Name	Nomination
1.	Dr. S. V. Saboji	Chairman
2.	Dr. Veerappa B. Pagi	Member
3.	Dr. S. M. Hatture	Member
4.	Dr. V. H. Naik	Member
5.	Prof. S. S. Yendigeri	Member
6.	Prof. S. V. Hanji	Member
7.	Prof. P. S. Challagidad	Member
8.	Mohammad I. Korti	Student Member
9.	Allurkar Sneha	Student Member

To begin with, the Chairman welcomed all members of Board of Studies present in the meeting of Board of Studies. The following decisions were taken after detailed deliberations.

Agenda Item No. 1. Offering PYTHON APPLICATION PROGRAMMING LAB courses for VII and VIII semester from the academic year 2019-20.

Resolution: As recommended by the board of studies, it is decided to offer the following courses for the students from the academic year 2019-20.

Sl.No.	Subject code	Title	Credits	Semester
1	UCS814L	PYTHON APPLICATION PROGRAMMING LAB	1	VIII Semester B. E. (CSE)

The meeting ended with concluding remarks and vote of thanks by the Chair.

Signature of the members present for the meeting

Sl. No.	Name	Nomination	Signature
1.	Dr. S. V. Saboji	Chairman	
2.	Dr. Veerappa B. Pagi	Member	6/1/2020
3.	Dr. S. M. Hatture	Member	
4.	Dr. V. H. Naik	Member	
5.	Prof. S. S. Yendigeri	Member	
6.	Prof. S. V. Hanji	Member	
7.	Prof. P. S. Challagidad	Member	
8.	Mohammad I. Korti	Student Member	
9.	Allurkar Sneha	Student Member	

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

Chairman, BoS CSE

Basaveshwar Engineering College (Autonomous), Bagalkot

Department of Computer Science & Engineering

Proceedings of the BoS Meeting held on 23rd August 2019

The following members were present for the meeting:

Sl. No.	Name	Nomination
1.	Dr. S. V. Saboji	Chairman
2.	Dr. V. B. Pagi	Member
3.	Prof. S. M. Hatture	Member
4.	Prof. K. S. Patil	Member
5.	Prof. V. M. Bonal	Member
6.	Prof. S. N. Benkikeri	Member
7.	Prof. Smita Gour	Member
8.	Dr. Lokesh B. Bhajantri	Co-opted Member
9.	Raju Nadaf	Student Member
10.	Akshata Kundaragimath	Student Member

To begin with, the Chairman welcomed all members of Board of Studies present in the meeting of Board of Studies. The following decisions were taken after detailed deliberations.

Agenda Item No. 1. Offering soft skill courses for VII and VIII semester from the academic year 2019-20

Resolution: As recommended by the joint board of studies, It is decided to offer the following courses for the students from the academic year 2019-20.

Sl.No.	Subject code	Title	Credits	Semester
2	UHS002N	Advanced Quantitative Aptitude and Soft skills	1	VII Semester B. E. (CSE)
3	UHS003N	Career planning and professional skills	1	VIII Semester B. E. (CSE)

The meeting ended with concluding remarks and vote of thanks by the Chair.

Signature of the members present for the meeting

Sl. No.	Name	Nomination	Signature
1.	Dr. S. V. Saboji	Chairman	23/8/19
2.	Dr. V. B. Pagi	Member	23/8/19
3.	Prof. S. M. Hatture	Member	23/08/19
4.	Prof. K. S. Patil	Member	23/8/19
5.	Prof. V. M. Bonal	Member	
6.	Prof. S. N. Benkikeri	Member	
7.	Prof. Smita Gour	Member	
8.	Dr. Lokesh B. Bhajantri	Co-opted Member	23/08/19
9.	Raju Nadaf	Student Member	
10.	Akshata Kundaragimath	Student Member	

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

Basaveshwar Engineering College (Autonomous) Bagalkot
Department of Computer Science and Engineering (CSE)

Proceedings of the Meeting of Board of Studies of Department of CSE, held on 15th June 2019, Saturday, at 10:00 am, in CSE Department

The following members were present:

Sl. No.	Name	Nomination
1.	Dr. S. V. Saboji	Chairman
2.	Dr. Veerappa B. Pagi	Member
3.	Prof. S. M. Hatture	Member
4.	Prof. K. S. Patil	Member
5.	Prof. V. M. Bonal	Member
6.	Prof. S. N. Benkikeri	Member
7.	Prof. Smita Gour	Member
8.	Dr. Harish Kenchannavar	Subject Expert from outside the College
9.	Dr. Pushpa Patil	Subject Expert from outside the College
10.	Mr. Ramalingappa Tumbaraguddi	Representative from Industry
11.	Dr. Lokesh B. Bhajantri	Co-opted Member
12.	Akshata Kundaragimath	Student Member
13.	Raju Nadaf	Student Member

To begin with, the Chairman welcomed all members of Board of Studies present in the meeting of Board of Studies. The following decisions were taken after detailed deliberations.

1. **Agenda Item No. 1.** Discussion and approval of detailed syllabus of 3rd and 4th semester of BE(CSE) programme for the 175credits scheme of year 2018-19 and onward admitted batches. Considering Constitution of India and Environmental Studies as 0-credit courses for 2018-19 admitted students. Considering the same courses as mandatory for 2019-20 admitted lateral entry students, to balance the credits to 135.

   Resolution: Detailed syllabus of 3rd and 4th semester of BE(CSE) programme for the 175credits scheme of year 2018-19 is discussed and approved. As directed by the Principal and the Controller of Examination, Constitution of India and Environmental Studies will be awarded as 0-credits for 2018-19 admitted students. The same courses are considered as mandatory courses, with 0 credits, for 2019-20 admitted lateral entry students, to balance the credits to 135.

2. **Agenda Item No. 2.** Discussion and approval of soft skills subjects for 4th and 6th semester of BE(CSE) students of 2016-17 and onwards admitted batches.

   Resolution: After thorough discussions, the proposed soft skills subjects for 4th and 6th semester of BE(CSE) students of 2016-17 and onwards admitted batches is approved.

3. **Agenda Item No. 3.** Discussion and approval of detailed syllabus for 3rd and 4th semester of M. Tech.(CSE) students for 88 credits scheme of year 2018-19 onward admitted batches.

   Resolution: As per the recommendations of AICTE and VTU, the proposed curricular framework for M. Tech. (CSE) programme, for 88 credits, for the academic year 2018-19 is discussed. The detailed syllabus for 3rd and 4th semester of M. Tech.(CSE) students for the year 2018-19 onward admitted batches is discussed and approved.

4. **Agenda Item No. 4.** Approval of NPTEL courses for 1 credit with course duration of 8 weeks or above. A student can register a maximum of 3 courses during the period of his/her degree.

   Resolution: As directed by the Principal and the Controller of Examination, NPTEL courses for 1 credit with course duration of 8 weeks or above is approved. Further a student can register a maximum of 3 courses during the period of his/her degree.

5. **Agenda Item No. 5.** Discussion of maximum 100 points completion for AICTE recommended activity point programme.

Resolution: AICTE recommended activity point programme for 100 points is discussed in detail and suggested to conduct as per guidelines of Principal and Controller of Examination.

Additional item 1. Inclusion of Internet of Things as a new elective for UG degree and Machine learning for UG and PG.

Resolution: It is decided to include Internet of Things as a new elective for UG programme and Machine learning for UG and PG in CSE.

Additional item 2: Inclusion of new elective AIRCRAFT DESIGN for UG degree which is offered by HAL Management Academy Bangalore .

Resolution: It is decided to include new elective AIRCRAFT DESIGN for UG degree which is offered by HAL Management Academy Bangalore.

Additional item 3. Approval of additional courses for credits balancing to re-registered students. Approval of change of electives for re-registered students in academic year 2018-19.

Resolution: An additional course for credits balancing to re-registered students which is discussed in internal BOS is approved for academic year 2018-19. Further change of electives for reregistered students in academic year 2018-19 is approved.

Additional item 4. Norms of CIE and SEE evaluation for seminar, project and internship.

Resolution: Norms of CIE and SEE evaluation is discussed and approved.

Suggestions given by the honorable members of the BoS:

Enclosure I: Detailed syllabus of teaching for 3rd and 4th semester B. E. (CSE) and M. Tech. Programmes for the academic year 2018-19 admitted batches

Enclosure II: Norms of evaluation CIE and SEE evaluation.

The meeting ended with concluding remarks and vote of thanks by the Chair.

Signature of the members present for the meeting

Sl. No.	Name	Nomination	Signature
1.	Dr. S. V. Saboji	Chairman	15/6/19
2.	Dr. Veerappa B. Pagi	Member	15/06/19
3.	Prof. S. M. Hatture	Member	
4.	Prof. K. S. Patil	Member	15/6/19
5.	Prof. V. M. Bonal	Member	15/6/19
6.	Prof. S. N. Benkikeri	Member	15/6/19
7.	Prof. Smita Gour	Member	15/6/19
8.	Dr. Harish Kenchannavar	Subject Expert	15/6/2019
9.	Dr. Pushpa Patil	Subject Expert	15/6/19
10.	Mr. Ramalingappa Tumbaraguddi	Representative from Industry	15/06/2019
11.	Dr. Lokesh B. Bhajantri	Co-opted Member	15/6/19
12.	Akshata Kundaragimath	Student Member	15/6/19
13.	Raju Nadaf	Student Member	15/6/19

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

Proceedings of the BoS Meeting held on 4th Feb 2019

The following members were present for the meeting:

Sl. No.	Name	Nomination
1.	Dr. S. V. Saboji	Chairman
2.	Dr. Veerappa B. Pagi	Member
3.	Prof. S. M. Hatture	Member
4.	Prof. K. S. Patil	Member
5.	Prof. V. M. Bonal	Member
6.	Prof. S. N. Benkikeri	Member
7.	Prof. Smita Gour	Member
8.	Dr. Lokesh B. Bhajantri	Co-opted Member
9.	Raju Nadaf	Student Member
10.	Akshata Kundaragimath	Student Member

Agenda : Re-articulation of PEOs, POs and PSOs

Resolution: PEOs are rearticulated by aligning with departmental mission statements. Further POs and PSOs are redefined in order to align with revised PEOs as per NBA attributes.

B. E. (Computer Science and Engineering) programme

Program Educational Objectives (PEOs)

Graduate will

I. ***Foundation:*** *Enforce strong foundation in Mathematics, Science and Engineering to model computing systems.*

II. ***Technical Expertise:*** *design and develop effective computing solutions to help the society.*

III. **Soft Skills:** *practice professional, leadership and ethical traits*

IV. **Successful Career:** *be ready for successful career in IT and other diverse avenues*

V. **Life Long Learning:** *exhibit lifelong learning skills and entrepreneurial ability.*

Program Outcomes (POs)

i. **Engineering knowledge** : Apply basic knowledge in mathematics, science and engineering in practice.

ii. **Problem analysis:** Identify, analyze, formulate and solve engineering problems related to CSE.

iii. **Design/Development of Solutions:** Design and develop a solution, with appropriate hardware and software, for real life engineering problems.

iv. **Investigation of complex problems:** Learn, investigate and analyze the complex contemporary problems.

v. **Modern tool usage:** Analyze, design, and develop efficient computing solutions, to various real life, scientific and business problems, using emerging tools and technologies.

vi. **Engineering and Society:** Understand the impact of engineering solutions in the societal context

vii. **Environment and sustainability:** Assess the impact of engineering solutions in environmental context and the need for sustainable development.

viii. **Ethics:** Demonstrate professional, ethical, legal and social issues & responsibilities

ix. **Team work:** Function effectively as an individual, team member and leader for a common accomplishment.

x. **Communication:** Communicate effectively, exhibit leadership and demonstrate managerial skills

xi. **Project management & finance:** Inculcate engineering and management principles and their applications to manage software projects

xii. **Lifelong learning:** Acquire self learning skills and practice life-long learning.

Programme Specific Objectives (PSOs)

PSO1: Problem Solving Skills: Apply the learnt concepts to design and develop Solutions to complex Engineering problems (PEO1, PEO2)

PSO2: Professional Skills: Practice professional, leadership, ethical skills in the career with social commitment and concern to the environment. (PEO3, PEO4)

PSO3: Entrepreneurship skills and career management: Exhibit lifelong learning skills and entrepreneural ability for sustained development. (PEO4, PEO5)

Signature of the members present for the meeting

Sl. No.	Name	Nomination	Signature
1.	Dr. S. V. Saboji	Chairman	4/2/19
2.	Dr. Veerappa B. Pagi	Member	4/2/19.
3.	Prof. S. M. Hatture	Member	4/2/19
4.	Prof. K. S. Patil	Member	4/2/19
5.	Prof. V. M. Bonal	Member	4/2/19
6.	Prof. S. N. Benkikeri	Member	4/2/19
7.	Prof. Smita Gour	Member	4/2/19
8.	Dr. Lokesh B. Bhajantri	Co-opted Member	4/2/19
9.	Raju Nadaf	Student Member	
10.	Akshata Kundaragimath	Student Member	4/2/19

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

Basaveshwar Engineering College (Autonomous), Bagalkot

Department of Computer Science & Engineering

Proceedings of the BoS Meeting held on 7th January 2019

The following members were present for the meeting:

Sl. No.	Name	Nomination
1.	Dr. S. V. Saboji	Chairman
2.	Dr. V. B. Pagi	Member
3.	Prof. S. M. Hatture	Member
4.	Prof. K. S. Patil	Member
5.	Prof. V. M. Bonal	Member
6.	Prof. S. N. Benkikeri	Member
7.	Prof. Smita Gour	Member
8.	Dr. Lokesh B. Bhajantri	Co-opted Member
9.	Raju Nadaf	Student Member
10.	Akshata Kundaragimath	Student Member

To begin with, the Chairman welcomed all members of Board of Studies present in the meeting of Board of Studies. The following decisions were taken after detailed deliberations.

Agenda Item No. 1. Offering new elective on Internet of Things (UCS066E) from the academic year 2018-19

Resolution: It is decided to offer Internet of Things (UCS066E) as a new elective from the academic year 2018-19, based on the industry demand and recommendation by alumni from industry.

Agenda Item No. 2. Offering soft skill courses for IV, V and VI semester from the academic year 2018-19

Resolution: As recommended by the joint board of studies, It is decided to offer the following courses for the students from the academic year 2018-19.

Sl.No.	Subject code	Title	Credits	Semester
1	UHS001N	SOFT SKILLS-1	1	IV Semester B. E. (CSE)

2	UHS002N	SOFT SKILLS- 2	1	V Semester B. E. (CSE)
3	UHS003N	SOFT SKILLS-3	1	VI Semester B. E. (CSE)

Agenda Item No. 3. Balancing the shortage of credits for the students having shortage of ONE credit, who are entering IV year BE in the academic year 2018-19

Resolution: It is decided to offer the following course for the students who have the shortage of ONE credit.

Sl NO	Subject code	Title	Credits
1	UHS004N	SOFT SKILLS-1V	1

Agenda Item No. 4. Balancing the shortage of credits for the students having shortage of TWO credits, who are entering IV year BE in the academic year 2018-19

Resolution: It is decided to offer the following courses for the students who have the shortage of TWO credits.

Sl. No.	**Subject code**	**Name of subject**	**Credits**
1	UCS339L	Introduction to Linux and IT Skills Lab	2

The meeting ended with concluding remarks and vote of thanks by the Chair.

Signature of the members present for the meeting

Sl. No.	**Name**	**Nomination**	**Signature**
1.	Dr. S. V. Saboji	Chairman	
2.	Dr. V. B. Pagi	Member	
3.	Prof. S. M. Hatture	Member	
4.	Prof. K. S. Patil	Member	
5.	Prof. V. M. Bonal	Member	
6.	Prof. S. N. Benkikeri	Member	
7.	Prof. Smita Gour	Member	
8.	Dr. Lokesh B. Bhajantri	Co-opted Member	

9.	Raju Nadaf	Student Member	
10.	Akshata Kundaragimath	Student Member	Akshata

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

Basaveshwar Engineering College (Autonomous) Bagalkot
Department of Computer Science and Engineering (CSE)

Proceedings of the Meeting of Board of Studies of Department of CSE, held on 6th July 2018, Friday, at 11:00 am, in Bhaskaracharya Seminar Hall

The following members were present:

Sl. No.	Name	Nomination
1.	Dr. Veerappa B. Pagi	Chairman
2.	Dr. S. V. Saboji	Member
3.	Prof. S. M. Hatture	Member
4.	Prof. K. S. Patil	Member
5.	Prof. V. M. Bonal	Member
6.	Prof. S. N. Benkikeri	Member
7.	Prof. Smita Gour	Member
8.	Dr. Harish Kenchannavar	Subject Expert from outside the College
9.	Dr. Pushpa Patil	Subject Expert from outside the College
10.	Dr. Lokesh B. Bhajantri	Co-opted Member
11.	Akshata Kundaragimath	Student Member

To begin with, the Chairman welcomed all members of Board of Studies present in the meeting of Board of Studies. The following decisions were taken after detailed deliberations.

1. **Agenda Item No. 1.** Considering Constitution of India and Environmental Studies as 2-credit courses for 2017-18 admitted students. Considering the same courses as mandatory for 2018-19 admitted lateral entry students, to balance the credits to 150.

   Resolution: As directed by the Principal and the Controller of Examination, Constitution of India and Environmental Studies will be awarded as 2-credits for 2017-18 admitted students. The same courses are considered as mandatory courses, with 0 credits, for 2018-19 admitted lateral entry students, to balance the credits to 150.

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2. **Agenda Item No. 2.** Approval of extension of number of attempts, crossing 5 attempts, as requested by two candidates.

   Resolution: It is proposed to consider the cases of extension of approval for the students exceeding 5 attempts, as suggested by the Principal and Controller of Examinations.

   i. **Mr. Raghuveer,** bearing **USN: 2BA13CS057,** a student of **6th semester B. E. (CSE)** has already completed five attempts for **Engineering Mechanics (Subject Code: UCV133C).** He was permitted to register upto a maximum of eight attempts, subjected to the approval by VTU, as per the recommendation dated 5th January 2018.

   ii. **Ms. Payal Pawar,** bearing **USN 2BA13CS041,** a student of **6th semester B. E. (CSE)** has already completed five attempts for **Engineering Physics (Subject Code: UPH122C).** She was permitted to register upto a maximum of eight attempts, subjected to the approval by VTU, as per the recommendation dated 5th January 2018.

3. **Agenda Item No. 3.** Discussion and approval of proposed curricular framework for B. E. (CSE) programme for the academic year 2018-19.

   Resolution: After thorough discussions, the proposed curricular framework for B. E. (CSE) programme, for 175 credits, for the academic year 2018-19 is approved.

4. **Agenda Item No. 4.** Discussion and approval of proposed curricular framework for M. Tech. (CSE) for the academic year 2018-19.

   Resolution: As per the recommendations of AICTE and VTU, the proposed curricular framework for M. Tech. (CSE) programme, for 88 credits, for the academic year 2018-19 is approved.

5. **Agenda Item No. 5.** Discussion and approval of proposed revised curriculum of Programming with C (UCS265C) and C Programming Laboratory (UCS267L) of 1st year B. E. (Common to all students).

   Resolution: Industrial Workshop (PCS324M, 0 credits) was a mandatory course in 3rd semester carrying 0 credits. It is decided to award 2 credits for the Industrial Workshop (PCS334I, 2 credits).

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Additional item 1. Adopting the same scheme of teaching as that of 2015-16 for 2016-17 and 2017-18 admitted batches.

Resolution: It is decided to adopt the same teaching scheme of 2015-16 for UG programme in CSE for the students admitted in 2016-17 and 2017-18.

Additional item 2. Inclusion of Python Application Programming as a new elective.

Resolution: Python Application Programming is approved to be included as an elective for UG students, from 2018-19 onwards.

Additional item 3. Change of contents and text book for Real Time Systems

Resolution: Change of contents and text book for Real Time Systems is approved.

Suggestions given by the honorable members of the BoS: Revised curriculum as per the suggestions of BoS members during the meeting is enclosed.

1. Enclosure I: Proposed scheme of teaching for B. E. (CSE) and M. Tech. Programmes for the academic year 2018-19 admitted batches
2. Enclosure II: Revised scheme of teaching for B. E. (CSE) and M. Tech. Programmes for the academic year 2018-19, as per the suggestions given by the BoS members during the meeting.

The meeting ended with concluding remarks and vote of thanks by the Chair.

Signature of the members present for the meeting

Sl. No.	Name	Nomination	Signature
1.	Dr. Veerappa B. Pagi	Chairman	6-7-2018
2.	Dr. S. V. Saboji	Member	6/7/18
3.	Prof. S. M. Hatture	Member	6/7/18
4.	Prof. K. S. Patil	Member	6/7/18
5.	Prof. V. M. Bonal	Member	
6.	Prof. S. N. Benkikeri	Member	6/7/18
7.	Prof. Smita Gour	Member	6/7/18

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8.	Dr. Harish Kenchannavar	Subject Expert	6/7/2018
9.	Dr. Pushpa Patil	Subject Expert	6/7/18
10.	Dr. Lokesh B. Bhajantri	Co-opted Member	6/7/18
11.	Akshata Kundaragimath	Student Member	6/7/18

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

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Basaveshwar Engineering College (Autonomous) Bagalkot

Department of Computer Sc. & Engg. (CSE)

Proceedings of the Meeting of Board of Studies of Department of CSE, held on 12.07.2017 at 11:00 a.m, in Bhaskaracharya Seminar Hall

The following members were present:

1.	Dr. Veerappa B. Pagi	Chairman
2.	Dr. G. Thippeswamy	Subject Expert
3.	Dr. Jagadish S. Kallimani	Meritorious alumnus
4.	Prof. S. S. Yendigeri	Faculty member
5.	Prof. K. S. Patil	Faculty member
6.	Prof. S. V. Hanji	Faculty member
7.	Dr. S. V. Saboji	Faculty member
8.	Prof. V. H. Naik	Faculty member
9.	Prof. P. V. Kulkarni	Co-opted Member
10.	Dr. S. S. Benchalli	Co-opted Member

To begin with, the Chairman welcomed all members of Board of Studies and co-opted members present in the meeting of Board of Studies. The following decisions were taken after detailed deliberations.

Agenda Item No. 1. Confirmation of proceedings of previous meetings of BOS held on 25th June 2016 and 05-01-2017 at 11.00 a.m.

Resolution: The proceedings of the BoS meeting held on 05-01-2017 are confirmed.

Agenda Item No. 2. Approval for the revised syllabus for 2015-16 and 2016-17 batches

Resolution: The scheme and syllabus of B. E. (CSE) for the 2015-16 and 2016-17 admitted batches are discussed in length. The following are the suggestions by the members:

a. Rename the laboratory as Database Applications Lab for VI Semester B. E. (CSE)
b. Credit structure change to Operating Systems Lab: 0 + 1 + 3, leading to 2 credits.
c. Rename the laboratory as Computer Graphics and Visualization Lab for VI Semester B. E. (CSE).

Agenda Item No. 3. Changes to the proposed scheme for the 2017-18 admitted batch of students.

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Resolution: The scheme of B. E. (CSE) for the 2017-18 admitted batch is discussed in length. The following are the suggestions by the members:

a. Rename the subject Discrete Mathematics as Theoretical Foundations of Computer Science.
b. Mathematics for Computer Science, instead of Mathematics IV for IT branches may be offered, to include exclusive contents like Applied Statistics, Graph theory, Fuzzy logic, Rough sets, which are directly contributing to the domain of Computer Science.
c. Introduce NPTEL based courses for self learning.
d. Introduce certification courses for reputed learning institutes for credits.
e. Use TurnItIn for evaluating the writing skills and originality.
f. Include Rich Internet Application Development/Application development for Cloud/ embedded application/portable application development/IoT based application development for open activity in 7th Semester B. E.
g. For 8th Semester B. E. try to free the students for internship/project in industry.
h. Introduction of branch specific(CSE) mathematics is suggested
i. Operating system, Analysis and design of algorithm and object oriented programming labs are reframed as separate heads
j. Thought was given to introduction of courses like digital marketing / startup engg/ Future skills 2020
k. Scope for autonomy for teacher for evaluation of courses offered.
l. Open activities like free cloud/ embedded development/Portable application development are discussed in length.

The meeting ended with a vote of thanks by the Chair.

Signature of the members present for the meeting

1. Dr. V. B. Pagi, Chairman
2. Dr. G. Thippeswamy, Member
3. Dr. Jagadish S. Kallimani, Member
4. Prof. S. S. Yendigeri, Member
5. Prof. K. S. Patil, Member
6. Prof. S. V. Hanji, Member
7. Dr. S. V. Saboji, Member
8. Prof. V. H. Naik, Member

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9. Prof. P. V. Kulkarni, Co-opted Member

10. Dr. S. S. Benchalli, Co-opted Member 12.7.2015

A copy of the above is forwarded to the following for information and necessary action please.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

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Basaveshwar Engineering College (Autonomous), Bagalkot

Department of Computer Science & Engineering

Proceedings of the BoS Meeting held on 16th Jan 2017

The following members were present for the meeting:

Sl. No.	Name	Nomination
1.	Dr. Veerappa B. Pagi	Chairman
2.	Dr. S. V. Saboji	Member
3.	Prof. S. M. Hatture	Member
4.	Prof. K. S. Patil	Member
5.	Prof. V. M. Bonal	Member
6.	Prof. S. N. Benkikeri	Member
7.	Prof. Smita Gour	Member
8.	Dr. Lokesh B. Bhajantri	Co-opted Member
9.	Raju Nadaf	Student Member
10.	Akshata Kundaragimath	Student Member

Agenda : Revision of PEOs, POs and PSOs

Resolution: PEOs are revised by aligning with departmental mission statements. Further POs and PSOs are revised in order to align with revised PEOs as per NBA attributes.

B. E. (Computer Science and Engineering) programme

Program Educational Objectives (PEOs)

1. To provide strong educational foundation in mathematics, science, basic engineering and Computer Science
2. To prepare students to be ready for IT and other diverse career avenues.
3. To enable the graduates to solve real-life engineering problems of the society.
4. To inculcate professional and ethical attitudes.
5. To imbibe lifelong learning skills and entrepreneurial ability in students.

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Program Outcomes (POs)

1. Engineering knowledge: Apply basic knowledge in mathematics, science and engineering in practice.
2. Problem analysis: Identify, analyze, formulate and solve engineering problems related to CSE.
3. Design/Development of Solutions: Design and develop a solution, with appropriate hardware and software, for real life engineering problems.
4. Investigation of complex problems: Learn, investigate and analyze the complex contemporary problems.
5. Modern tool usage: Analyze, design, and develop efficient computing solutions, to various real life, scientific and business problems, using emerging tools and technologies.
6. Engineering and Society: Understand the impact of IT solutions in the societal context.
7. Environment and sustainability: Assess the impact of engineering solutions in environmental context and the need for sustainable development.
8. Ethics: Demonstrate professional, ethical, legal and social issues & responsibilities
9. Team work: Function effectively as an individual, team member and leader for a common accomplishment.
10. Communication: Communicate effectively, exhibit leadership and demonstrate managerial skills
11. Project management & finance: Inculcate engineering and management principles and their applications to manage software projects
12. Lifelong learning: Acquire self learning skills and practice life-long learning.

Programme Specific Objectives (PSOs)

PSO1: Inculcate analytical, logical, programming and managerial abilities.

PSO2: Apply Software Engineering Principles and Practices to provide software solutions.

PSO3: Design and Develop computational systems for real-life applications.

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Signature of the members present for the meeting

Sl. No.	Name	Nomination	Signature
1.	Dr. Veerappa B. Pagi	Chairman	16/1/17
2.	Dr. S. V. Saboji	Member	16/1/2017
3.	Prof. S. M. Hatture	Member	
4.	Prof. K. S. Patil	Member	16/1/17
5.	Prof. V. M. Bonal	Member	16/1/17
6.	Prof. S. N. Benkikeri	Member	16/1/17
7.	Prof. Smita Gour	Member	16/1/17
8.	Dr. Lokesh B. Bhajantri	Co-opted Member	16/1/17
9.	Raju Nadaf	Student Member	16/1/17
10.	Akshata Kundaragimath	Student Member	

A copy of the above is forwarded to the following for information and necessary action.

1. Member Secretary, Academic Council, BEC Bagalkot
2. The Principal, BEC Bagalkot
3. The Controller of Examinations, BEC Bagalkot
4. All members of Board of Studies in CSE, BEC Bagalkot

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BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF CIVIL ENGINEERING

PROCEEDINGS OF THE MEETING OF BOARD OF STUDIES

A meeting of 13th BOS (Board of Studies) of Civil Engineering courses under Autonomous system was held on 29th September 2021 at 11.00 AM through **ONLINE** mode (Google Meet).

Members present

1. Dr. P.G. Rakaraddi	Chairman	
2. Prof. Jayantkumar	VTU Nominee	
3. Dr. B. Munwar Basha	External Member	
4. Dr. Ambika S.	External Member	
5. Dr. V. G. Mutalik Desai	Alumni	
6. Dr. H. G. Naikar	Industrialist	
7. Dr. S. S. Injaganeri	Special Invitee	
8. Dr. R. B. Khadiranaikar	Member	
9. Prof. B. S. Haravi	Member	
10. Dr. V. S. Soraganvi	Member	
11. Prof. P. S. Bangarshetti	Member	
12. Dr. B. R. Hiremath	Member	
13. Dr. M. M. Hanamasagar	Member	
14. Dr. S. M. Kalagudi	Member	
15. Dr. S. H. Sanni	Member	
16. Prof. S. F. Chitragar	Member	
17. Prof. S. A. Kambali	Member	
18. Prof. G.H. Bandihal	Member	
17. Prof. G.S. Hiremath	Member	
18. Prof. M.Y. Ganiger	Member	
19. Dr. S. M. Malkapur	Member	
20. Ms. Shefali S. Bellary	Student Member	
21. Mr.Jayant Desai	Student Member	

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Proceedings of the 13th BOS meeting held on 29th September 2021

Subject 1	:	Welcome address by the Chairman, BoS and introduction to BoS members.
Resolution		The meeting began with the welcome address by BOS chairman Dr. P.G. Rakaraddi. The Chairman welcomed and introduced the members to the board.
Subject 2	:	To confirm the minutes of BOS meeting held on 03.07.2021.
Resolution		The minutes of BOS meeting held on 03rd July 2021 were presented and approved.
Subject 3	:	Approval of the scheme of teaching & examination as per National Education Policy (NEP)-2020 (**Annexure-I**) for 2021-22 admitting batch.
Resolution	:	The scheme of teaching & examination as per National Education Policy (NEP)-2020 (**Annexure-I**) for 2021-22 admitting batch are presented before the board. The board debated and approved the recommendations.
Subject 4	:	Post facto approval for offering an additional elective – *Traffic Engineering* (UCV555E- 03 credits) for Fifth semester students (2019-20 batch).
Resolution	:	The students demanded additional Departmental elective -*Traffic Engineering* (UCV555E-03 credits). The detailed syllabus was presented and approved for Fifth semester students (2019-20 batch).
Subject 5	:	Post facto approval for offering Open Elective subject *Process Economics and Plant Design* (UCV754N-03 credits) and *Disaster Management* (UCV755N-03 credits) for 7th semester for 2018-19 batch.
Resolution	:	During the previous BOS meeting open electives were approved for 2018-19 batch (175 credits). However, the students demanded additional electives, hence Open Elective subjects *Process Economics and Plant Design* (UCV754N-03 credits) and *Disaster Management* (UCV755N-03 credits) for 7th semester for 2018-19 batch were presented before the board and were approved.
Subject 6	:	Consideration and approval of the proposed structure of UG program and scheme as per AICTE and VTU guidelines and as per the draft scheme proposed by VTU.
Resolution	:	The NEP-2020 scheme for BEC was prepared following the guidelines of AICTE and VTU and also referring to the draft scheme submitted by the expert committee of VTU headed by honorable Vice Chancellor, VTU Belagavi. The recommended scheme was sent to the BoS members and approval was obtained through mail.

Chairman BOS
Department of Civil Engg.
BEC, Bagalkot.

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Trash

Subject			
Fwd: 2021-2022_ODD_SEME...	nayakbhaskar77@gmail.com	2021-11-11 16:53	1.1 MB
Fwd: CIE I Time table template	Patil.G.R, Chitragar.S.F	2021-11-09 17:27	21 KB
Fwd: NBA Updtaed SAR of PG...	deanac@becbgk.edu, Soragavi....	2021-11-09 17:24	5.0 MB
Fwd: BE-6TH SEMESTER REG...	Bandihal G. H, ghbandihal@gm...	2021-11-08 16:52	74 KB
Fwd: BE-6TH SEMESTER REG...	nayakbhaskar77@gmail.com	2021-11-08 11:35	74 KB
Fwd: 11th Graduation Day U...	nayakbhaskar77@gmail.com	2021-11-08 11:34	2.4 MB
Fwd: REGISTERED_AND_NOT...	nayakbhaskar77@gmail.com	2021-11-08 11:33	130 KB
Re: Draft NEP scheme for app...	Principal Consultant	2021-10-29 13:53	14 KB
Re: Draft NEP scheme for app...	Jyant Kumar	2021-10-29 13:52	20 KB

Select Threads Messages 1 to 50 of 651 1

Re: Draft scheme as per VTU guidelines-reg.

To **Dr. B. Munwar Basha** Date **2021-10-29 12:33**

On 2021-10-29 12:28, Dr. B. Munwar Basha wrote:

> Dear Dr. Raka Raddi
> The proposed structure of UG program is approved.
>
> **Best regards**
>
> **Basha**
>
> **----------**
>
> **Dr. B. Munwar Basha**
> Associate Professor
> Academic Block B, Room No: 302
> Department of Civil Engineering
> Indian Institute of Technology Hyderabad
> Kandi, Sangareddy - 502285
> Telangana, INDIA
> **(O) +91 40 2301 6311**
> **(M) +919494792487**
> **(Fax) +91 40 2301 6003, 6032**
>
> **E-mail:** basha@ce.iith.ac.in, mbasha@gmail.com
> **Website:** https://sites.google.com/ce.iith.ac.in/basha
> **----------**
>
> On Fri, Oct 29, 2021 at 12:18 PM hodcv <hodcv@becbgk.edu> wrote:
>
> > Respected Members,
> >
> > Agenda: Consideration and approval of the proposed structure of UG program and scheme as per VTU guidelines.
> >
> > We conducted 13th BOS on 29-09-2021 after which the VTU has issued a circular to implement new scheme (with certain modifications) considering the recommendations of NEP 2020. The proposal of implementation of the new scheme is approved in principle in both the Academic Council and the Governing Council meetings of BEC, Bagalkot held in the month of September 2021.
> >
> > The Principal constituted a committee to plan for considering the recommendations of NEP 2020 and prepare the scheme making reference to the AICTE and VTU guidelines and also referring to the draft scheme submitted by the expert committee to the Government of Karnataka under the Chairmanship of Dr. Karisiddappa, Honorable Vice Chancellor, VTU. The committee conducted several meetings to discuss, deliberate and design the structure for UG program. The recommendations of the committee (Pdf files) are attached herewith for your kind perusal, suggestions and consent.
> >
> > We request you to kindly convey your approval by a return mail, which helps the further preparation for execution of the scheme, by placing the same before the ensuing Governing Council meeting.

Re: Draft NEP scheme for approval-reg.

To **Jyant Kumar** Date **2021-10-29 13:52**

On 2021-10-29 13:19, Jyant Kumar wrote:

> Dear Prof. Rakaraddi:
> Fine with me.
> Minor correction: V Semester , Total Marks (last row) need to be 500 500 1000 (not 1300 1300 2600)
> After VII Sem, "OR" needs to be replaced with "AND"
>
> Regards.
> Sincerely,
> Jyant Kumar
>
> Dr. Jyant Kumar
> Professor in Geotechnical Engineering
> Civil Engineering Department
> Indian Institute of Science
> Bengaluru (India)-560012
> Phone: 91-80-22933119(Direct), 22932323 (office)
> Fax: 91-80-23600404
> Email: jkumar@iisc.ac.in
> http://civil.iisc.ac.in/~jkumar/
>
> ---
>
> **From:** Principal Consultant <hgnaikar@gmail.com>
> **Sent:** 29 October 2021 13:01
> **To:** Dr Prabhu Rakaraddi <pgraddi66@gmail.com>
> **Cc:** Jyant Kumar <jkumar@iisc.ac.in>; Dr. B. Munwar Basha <basha@ce.iith.ac.in>; ambika@ce.iith.ac.in <ambika@ce.iith.ac.in>; Vinayak Mutalik Desai <vgmdesai@git.edu>; hodcv <hodcv@becbgk.edu>
> **Subject:** Re: Draft NEP scheme for approval-reg.
>
> External Email
>
> Dear Dr.Rakaraddi,
>
> The proposed Structure of UG in the trailing mail is APPROVED.
>
> Thanks & Regards
>
> **Dr. H. G. Naikar**
>
> **M.E. (Structures), Ph.D (Structures)**
>
> **MISSE, PE, MISE, MIEI, MICI, MIGS, MACCE**
>
> **Principal Consultant**
>
> **PRAGATHI CONSULTANTS**

Consulting Structural Engineers

Bangalore -560 092

M: +91 98801 38008, T: +91 80 23626661

On Fri, Oct 29, 2021 at 12:29 PM Dr Prabhu Rakaraddi <pgraddi66@gmail.com> wrote:

> Respected Members,
>
> Agenda: Consideration and approval of the proposed structure of UG program and scheme as per VTU guidelines.
>
> We conducted 13th BOS on 29-09-2021 after which the VTU has issued a circular to implement a new scheme (with certain modifications) considering the recommendations of NEP 2020. The proposal of implementation of the new scheme is approved in principle in both the Academic Council and the Governing Council meetings of BEC, Bagalkot held in the month of September 2021.
>
> The Principal constituted a committee to plan for considering the recommendations of NEP 2020 and prepare the scheme making reference to the AICTE and VTU guidelines and also referring to the draft scheme submitted by the expert committee to the Government of Karnataka under the Chairmanship of Dr. Karisiddappa, Honorable Vice Chancellor, VTU. The committee conducted several meetings to discuss, deliberate and design the structure for the UG program. The recommendations of the committee (Pdf files) are attached herewith for your kind perusal, suggestions and consent.
>
> We request you to kindly convey your approval by a return mail, which helps the further preparation for execution of the scheme, by placing the same before the ensuing Governing Council meeting.
>
> With thanks and regards
>
> Dr. P.G. Rakaraddi
> HOD, Civil Engineering
> Chairman BoS
> Basaveshwar Engineering College (Autonomous)
> Bagalkot-587102

Dear sir,

Thanks for the approval.

With regards

Dr P G Rakaraddi

Shri. B.V.V.Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF CIVIL ENGINEERING

PROCEEDINGS OF THE MEETING OF BOARD OF STUDIES

The 12th BOS (Board of Studies) meeting of Civil Engineering department under Autonomous system was held on 03rd July 2021 at 10.30 AM through **ONLINE** mode (Google Meet- link: **https://meet.google.com/tfu-cvpt-shf**).

Members present

1. Dr. P.G. Rakaraddi	Chairman	
2. Prof. Jyant Kumar	VTU Nominee	
3. Dr. B. Munwar Basha	External Member	
4. Dr. Ambika S.	External Member	
5. Dr. V. G. Mutalik Desai	Alumni	
6. Dr. H. G. Naikar	Industrialist	
7. Dr. S. S. Injaganeri	Principal, BEC Bgk	
8. Dr. R. B. Khadiranaikar	Member	
9. Dr. V. S. Soraganvi	Member	
10. Prof. B.S. Haravi	Member	
11. Prof. P.S. Bangarshetti	Member	
12. Dr. B. R. Hiremath	Member	
13. Dr. M. M. Hanamasagar	Member	
14. Prof. S. M. Kalagudi	Member	
15. Dr. S. H. Sanni	Member	
16. Prof. S. F. Chitragar	Member	
17. Prof. S. A. Kambali	Member	
18. Prof. G. H. Bandihal	Member	
19. Prof. G.S. Hiremath	Member	
20. Prof. M.Y. Ganiger	Member	

21. Dr. S. M. Malkapur	Member	
22. Pooja S. Nilugal	Student Member (UG)	
23. Vilas Kulakarni	Student Member (PG)	

Proceedings of the BOS meeting held on 03rd July 2021

UG- Programme

Subject 1	:	Welcome address by the Chairman, BOS and introduction of BOS members.
Resolution		The meeting began with the welcome address by BOS chairman Dr. P.G. Rakaraddi. The Chairman welcomed and introduced the members to the board.
Subject 2	:	To confirm the minutes of BOS meeting held on 21.07.2020.
Resolution		The minutes of BOS meeting held on 21st July 2020 were presented and approved.
Subject 3	:	Approval of the curriculum i.e. scheme of teaching & examination (as per **Annexure-I**) and syllabus for Second, Third and Fourth year B.E. in **Annexure-II** (A), (B) and (C) respectively for 2021-22 admitting batch.
Resolution	:	The scheme of teaching, examination and syllabus of B.E. III to VIII semesters, for the batch to be admitted during academic year 2021-22 are presented before the board. The board debated and approved the recommendations.
Subject 4	:	Post facto approval for offering a laboratory course for four students with 02 credit deficiency for fulfilling credit requirements for the award of BE degree (200 credits).1
Resolution	:	Mr. Amit Goud (2BA13CV010) and Mr. Iranna Gennur (2BA13CV036), Mr. Gagandeep S. L. (2BA14CV038) and Santosh Sannakki (2BA14CV101) were supposed to complete 200 credits for the award of degree as per VTU and College guidelines. However, they completed only 198 credits and were falling short by 02 credits. To meet this requirement a "Design Laboratory" subject for fulfilling credit requirements for the award of BE degree (200 credits) is introduced. The Committee approved the same.
Subject 5	:	Post facto approval for offering a laboratory course for one student with 01 credit deficiency for fulfilling credit requirements for the award of BE degree (200 credits).
Resolution	:	Mr. Siddappa Betageri (2BA13CV106) is supposed to complete 200 credits for the award of degree as per VTU and College guidelines. However, he completed only 199 credits and was falling short by 01 credit. To meet this requirement a "Bridge Engineering laboratory" subject is offered for fulfilling credit requirements for the award of BE degree (200 credits). The Committee approved the same.
Subject 6	:	Post facto approval for offering two additional electives – "Design of Bridges" (UCV852E- 03 credits) and "Design of Masonry Structures" (UCV850E- 04 credits) for Eighth semester students (2017-18 batch, 200 credits).
Resolution	:	During the previous BOS meeting some electives were approved for 2016-17 batch (200 credits). However, the students demanded additional electives i.e "Design of Bridges" (UCV852E- 03 credits) and "Design of Masonry Structures" (UCV850E-04 credits). The detailed syllabus was presented and approved.
Subject 7	:	Post facto approval for change of contents of syllabus for the sixth semester departmental elective subject "Elements of Earthquake Engineering" (UCV661E-03 credits) of 2018-19 batch.

Resolution	:	A few contents of the syllabus were modified for the subject Elements of Earthquake Engineering (UCV661E- 03 credits) and the same is presented and approved.
Subject 8	:	Post facto approval for offering open elective subject "Remote Sensing and Geographic Information Systems" for VI semester (UCV632N- 03 credits) and the departmental elective "Geographic Information Systems" (UCV631E- 03 credits) for 2018-19 batch.
Resolution	:	During the previous BOS meeting some electives were approved for 2018-19 batch (175 credits). However, the students demanded additional electives, hence open elective subject "Remote Sensing and Geographic Information Systems" for 6th semester (UCV632N- 03 credits) and the departmental elective "Geographic Information Systems" (UCV631E- 03 credits) are offered.
Subject 9	:	Approval for the list of online courses like MOOCS/ SWAYAM etc., for the 2021-22 admitting batch.
Resolution	:	A list containing 33 number of professional courses and 07 multidisciplinary courses of online NPTEL courses were presented before the board and were approved.

PG- Programme

Subject 10	:	Approval of the curriculum i.e. scheme of teaching & examination and syllabus for PG I to IV semesters of Environmental Engineering Programme, for 2021-22 admitted batch, Annexure III (A).
Resolution	:	The scheme of teaching, examination and syllabus for PG I to IV semesters of Environmental Engineering Programme, for 2021-22 admitted batch, Annexure III (A) were presented before the board. The board debated and approved the recommendations.
Subject 11	:	Approval of the curriculum i.e. scheme of teaching & examination and syllabus for PG I to IV semesters of Geotechnical Engineering Programme, for 2021-22 admitted batch, Annexure III (B).
Resolution	:	The scheme of teaching, examination and syllabus for PG I to IV semesters of Geotechnical Engineering Programme, for 2021-22 admitted batch, Annexure III (A) were presented before the board. The board debated and approved the recommendations.
Subject 12	:	Approval of the curriculum i.e. scheme of teaching & examination and syllabus for PG I to IV semesters of Structural Engineering Programme, for 2021-22 admitted batch, Annexure III (C).
Resolution	:	The scheme of teaching, examination and syllabus for PG I to IV semesters of Structural Engineering Programme, for 2021-22 admitted batch, Annexure III (A) were presented before the board. The board debated and approved the recommendations.
Subject 13	:	The BOS members suggested introducing a common mathematical subject for all the PG programmes for improving the analytical skills of the students.
Resolution	:	As per the suggestion of the members, a mathematics subject will be introduced in the syllabus of 2022-2023 batch.
Subject 14		The members suggested introducing Lab course in second semester instead of third

		semester for the 2021-22 admitted batch.
Resolution	:	As of now, it is difficult to offer Lab course in second semester for the 2021-22 admitted batch as there will total redistribution of the credits and subjects. In the next revision of syllabus this will be implemented.
Subject 15	:	The members suggested introducing advanced laboratory packages for all the PG lab courses.
Resolution	:	Statistical analysis software will be introduced in lab course for the 2021-22 admitted batch of Environmental Engineering Programme. The students of PG Geotechnical Engineering and Structural Engineering are already learning required advanced software packages in the prescribed courses.
Subject 16	:	The members suggested introducing a pipe network distribution system related elective for the PG Environmental Engineering Programme.
Resolution	:	Design and operation of distribution systems is already being taught in the subject Water Treatment Technology (**PEV132C**) of 04 credits in the first semester of the programme.

Date: 03.07.2021

Dr. P.G. Rakaraddi
Chairman Board of Studies
B.E. (Civil Engg.) Programme

AGENDA:

UG and PG Programme

1. Welcome address by the Chairman, BoS and introduction of new BoS members.
2. To confirm the minutes of BoS meeting held on 15.06.2019.
3. Approval of syllabus for B.E. semesters V to VIII (175 credits) commencing from 2020 – 21 academic year (2018 – 19 admitted batch), **Annexure I.**
4. Approval of the curriculum i.e. scheme of teaching & examination and syllabus for B.E. I to VIII semesters (175 credits) commencing from 2020 – 21 academic year, **Annexure II.**
5. Post facto approval for the change of credit for two laboratories of 2017-18 (200 credits)
   a) Geotechnical Engineering lab (subject code: UCV619L) from 1 to 1.5 credits.
   b) Environmental Engineering lab (subject code: UCV620L) from 1 to 1.5 credits.
6. Post facto approval for contents of syllabus for the newly introduced subject Ground improvement techniques (UCV830E) for 04 credits for 2016 – 17 batch (200 credits).
7. Post facto approval for special permission for two students for fulfilling credit requirements for the award of BE degree (credit deficiency) (200 credits).
8. Post facto approval for contents of syllabus for the newly introduced subject Traffic engineering (UCV722E) of 03 credits for 2017 – 18 batch students who have not registered for soft skill subjects.
9. Post facto approval for the change of code for the PG 2019 – 20 batch as per **Annexure III.**
10. Post facto approval for the change of credit for the following subjects of PG – Structural engineering 2019 – 20 batch.
    a) Design of reinforced concrete structures (PSE122C) from 04 credits to 03 credits.
    b) Design of tall structures (PSE004E) from 04 credits to 03 credits.

Any other matters with the permission of the chair.

Chairman BOS
Department of Civil Engg.
BEC, Bagalkot.

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Basaveshwar Engineering College (Autonomous) Bagalkot
Department of Civil Engineering
Members of Board of Studies [2020-2022]

11th BOS Meeting on 21st July 2020

Sl. No.	Name & Address	Position	Signature
1.	Dr. R. B. Khadiranaikar Professor & Head Department of Civil Engineering B.E.College, Bagalkot	Chairman BoS, BEC	21.7.20
	External Members		
2.	Prof. Jayantkumar Professor, Department of Civil Engineering, Indian Institute of Science, Bangalore-560012	VTU Nominee	
3.	Dr. B. Munwar Basha Associate Professor (GT), Department of Civil Engineering IIT, Hyderabad	Academia	
4.	Dr. Ambika S Assistant Professor, (Envi), Department of Civil Engineering IIT, Hyderabad	Academia	
5.	Dr. H. G. Naikar CEO, Pragathi Consultants, Bangalore	Industry	
6.	Dr. V. G. Mutalik Desai Professor, Civil Engineering Department GIT, Belagavi.	Alumni	

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	Internal Members		
7.	Dr. V. S. Soraganvi Professor, Department of Civil Engineering B.E.College, Bagalkot.	Member	
8.	Dr. P. G. Rakaraddi Associate Professor, Department of Civil Engineering B.E.College, Bagalkot.	Member	
9.	Prof. B. R. Hiremath Associate Professor, Department of Civil Engineering B.E.College, Bagalkot.	Member	
10.	Dr. S. H. Sanni Associate Professor, Department of Civil Engineering B.E.College, Bagalkot.	Member	
11.	Prof. S. F. Chitragar Assistant Professor, Department of Civil Engineering B.E.College, Bagalkot.	Member	
	Student Invitees		
12.	Shivashree N Kurubar USN: 2BA16CV082 VIII Semester , B.E. (Civil).	Student	
13.	Prashant Kammar USN: 2BA18CSE07 IV Semester, M. Tech (Struct. Engg.)	Student	
14.	Dr. S. S. Injaganeri Principal, B. E. College, Bagalkot.	Special Invitee	

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Proceedings of the BOS meeting held on 21st July 2020

UG- Programme

Subject 1	:	Welcome address by the Chairman, BOS and introduction of new BOS members.
Resolution		The meeting began with the welcome address by BOS chairman Dr. R. B. Khadiranaikar. The Chairman welcomed and introduced new members to the board.
Subject 2	:	To confirm the minutes of BOS meeting held on 15.06.2019.
Resolution		The minutes of BOS meeting held on 15th June 2019 were read and approved.
Subject 3	:	Approval of syllabus for B.E. V to VIII semesters for 175 credits commencing from 2020-21, admitted during 2018-19 and 2019-20 (lateral entry), as per **Annexure I.**
Resolution	:	The scheme of teaching, examination and syllabus for B.E. V to VIII semesters for 175 credits, admitted during academic year 2018-19 and B.E. III to VIII semesters for 135 credits lateral entry, admitted during academic year 2019 - 20 were presented before the board. The board debated and approved the recommendations.
Subject 4	:	Approval of scheme of teaching and examination for B.E. I to VIII semesters (175 credits) commencing from 2020-21 academic year, **Annexure-II.**
Resolution	:	The scheme of teaching and examination for B.E. I to VIII semesters (175 credits) commencing from academic year 2020-21 were presented before the board, adhering to the credit distribution recommended by AICTE/UGC/VTU and passed by the Joint Board of BEC Bagalkot. The committee deliberated and approved. The detailed scheme and distribution of credits in different semesters is attached in Annexure II.
Subject 5	:	Post facto approval for the change of credit for two laboratories of 2017-18 (200 credits) 1) Geotechnical Engineering lab (subject code: UCV619L) from 1 to 1.5 credits and 2) Environmental Engineering lab (subject code: UCV620L) from 1 to 1.5 credits.
Resolution	:	The change of credit for two laboratories of 2017-18 (200 credits) 1) Geotechnical Engineering lab (subject code: UCV619L) from 1 to 1.5 credits and 2) Environmental Engineering lab (subject code: UCV620L) from 1 to 1.5 credits were presented before the committee and after deliberations the committee approved the enhancement of credits.
Subject 6	:	Post facto approval for the contents of the syllabus of the additional elective introduced i.e. Ground Improvement Techniques (UCV830E) for 04 credits for 2016-17 batch (200 credits).
Resolution	:	During the previous BOS meeting some electives were approved for 2016-17 batch (200 credits). However, the students demanded additional elective i.e. Ground Improvement Techniques (UCV830E). The detailed syllabus for 04 credits was presented and approved.
Subject 7	:	Post facto approval for special permission for two students for fulfilling credit requirements for the award of BE degree (credit deficiency) (200 credits).

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Resolution	:	Mr. Prashant Kumar (2BA13CV075) and Mr. Sachin Kattimani (2BA13CV032) were supposed to complete 200 credits for the award of degree as per VTU and College guidelines. However, both of them completed only 198 credits and were falling short by 02 credits. To meet this requirement a Design Laboratory subject for fulfilling credit requirements for the award of BE degree (200 credits) is introduced. The Committee approved the same.
Subject 8	:	Approval for offering additional elective of 03 credits for 2017-18 batch students who have not registered for soft skill subjects.
Resolution	:	For 2017-18 batch, soft skill subject was not mandatory. Hence, some of the students did not opt for this subject and they will be falling short of 03 credits. So for those students an elective of 03 credits is offered. Approval was obtained for an elective of 03 credits for these students.

PG- Programme

Subject 9	:	Post facto approval for the change of code for the PG 2019-20 batch as per Annexure III.
Resolution	:	Approval is obtained for the change of code for the PG 2019-20 batch as per Annexure III.
Subject 10	:	Post facto approval for the change of credit for the following subjects of PG – Structural engineering. a) Design of Reinforced Concrete Structures (PSE122C) from 04 credits to 03 credits 2019 – 20 batch. b) Design of Tall Structures (PSE004E) from 04 credits to 03 credits 2018 – 19 batch.
Resolution	:	Approval was obtained for the change of credit for the following subjects of PG – Structural Engineering 2019 - 20 batch. a) Design of Reinforced Concrete Structures (PSE122C) from 04 credits to 03 credits. b) Design of Tall Structures (PSE004E) from 04 credits to 03 credits.
Subject 11	:	With the permission of the chair, Dr. Munwar Basha suggested to change the title of the subject from Foundation Engineering to Advanced Foundation Engineering offered in M.Tech. I Semester for Geotechnical and Structural Engineering.
Resolution	:	Approval was obtained for changing the title from Foundation Engineering to "Advanced Foundation Engineering" from the academic year 2020-21.

Date: 21.07.2020

Dr. R.B. Khadiranaikar
Chairman Board of Studies
B.E. (Civil Engg.) Programme

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To,

The Principal

Basaveshwar Engineering College

Bagalkot – 587102.

BASAVESHWAR ENGG. COLLEGE
BAGALKOT.
Inward No. 542
Date: 5/10/20
Asst.

Dear sir,

Sub: Approval of resolutions made in BOS meeting in the Department of Civil Engineering.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Civil Engineering was held on 21st July 2020 at 10:30 am through video conferencing (Cisco Webex). All the resolutions mentioned in the proceedings are discussed and approved in the BoS meeting.

Thanking you

Date: 22-07-2020

Jyant Kumar

Member

Dr. Jyant Kumar

Professor, Department of Civil Engineering, Indian Institute of Science, Bengaluru-560012

HOD Civil
5/10

To,

The Principal

Basaveshwar Engineering College

Bagalkot – 587102.

Respected sir,

Sub: Approval of resolutions made in BoS meeting in the Department of Civil Engineering.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Civil Engineering was held on 21st July 2020 at 10:30 am through video conferencing (Cisco Webex). All the resolutions mentioned in the proceedings are discussed and approved in the BoS meeting.

Thanking you

Date: 22-07-2020

Member

(Dr. B Munawar Basha

Associate Professor,

Department of Civil Engg.

IIT, Hyderabad.)

To,

The Principal

Basaveshwar Engineering College

Bagalkot – 587102.

Respected sir,

Sub: Approval of resolutions made in BoS meeting in the Department of Civil Engineering.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Civil Engineering was held on 21st July 2020 at 10:30 am through video conferencing (Cisco Webex). All the resolutions mentioned in the proceedings are discussed and approved in the BoS meeting.

Thanking you

Date: 22-07-2020

Member

(Dr. Ambika S

Assistant Professor,

Department of Civil Engg.

IIT, Hyderabad.)

Dr. AMBIKA S
Assistant Professor
Department of Civil Engineering
IIT Hyderabad

PRAGATHI CONSULTANTS
CONSULTING STRUCTURAL ENGINEERS

To,

The Principal

Basaveshwar Engineering College

Bagalkot – 587102.

Respected sir,

Sub: Approval of resolutions made in BoS meeting in the Department of Civil Engineering.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Civil Engineering was held on 21st July 2020 at 10:30 am through video conferencing (Cisco Webex). All the resolutions mentioned in the proceedings are discussed and approved in the BoS meeting.

Thanking you

Date: 22-07-2020

Member
(Dr. H. G. Naikar
CEO, Pragathi Consultants,
Bangalore.)

PRAGATHI CONSULTANTS Bengaluru

#2127/16, 2nd Floor, 9th Main, 'D' Block, CQAL Layout, Sahakara Nagar, Bangalore - 560 092, INDIA.
Phone : 080-23626661 E-mail: hgnaikar@gmail.com

To,

The Principal

Basaveshwar Engineering College

Bagalkot – 587102.

Respected sir,

Sub: Approval of resolutions made in BoS meeting in the Department of Civil Engineering.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Civil Engineering was held on 21st July 2020 at 10:30 am through video conferencing (Cisco Webex). All the resolutions mentioned in the proceedings are discussed and approved in the BoS meeting.

Thanking you

Date: 22-07-2020

Member

(Dr. V. G. Mutalik Desai

Professor,

Department of Civil Engg

GIT, Belagavi.)

Basaveshwar Engineering College (Autonomous), Bagalkot

Department of Civil Engineering

10th BOS Meeting

Agenda:Date: 15-06-2019

1. Discussion on credit distribution of UG and PG programmes and syllabus approval for III and IV semester B.E. Civil Engineering for 2018-19 batch.
2. Discussion on 100 active points as per new AICTE guidelines for 2019-20 batch.
3. Post facto approval for introduction of the following courses:
   a. Fundamentals of Quantitative Aptitude and Soft skills (UHS001N) of 1 credit for IV sem of 2017-18 batch.
   b. Career Planning and Professional skills (UHS—3N) or Seminar (UCV601S) or SWAYAM (UCV601M) of 1 credit for VI sem of 2016-17 batch.
4. Post facto approval for the change of credit for the subject entitled Advanced Construction Management (UCV812H) from 4 to 3 for 2015-16 batch.
5. Post facto approval of the following subject/Lab introduced to fulfill the credit requirement for the award of the degree
   a. Advanced GeoTechnical Engineering Laboratory of 1 credit for VIII semester student Mr. Pradeep S Patil (2BA13CV072)
   b. Ground Improvement Techniques (UCV851E) subject of 2 credit for 2015-16 lateral entry students.
6. Introduction of Management of Rural Water Supply and Sanitation (UCV5--H) of 3 credits as core in V semester for 2017-18 batch.
7. Post facto approval for PG syllabus as per new scheme for 2018-19 batch.
8. Permission for following UG students to reregister and appear in SEE examinations who have completed 8 years duration (201-11 batch onwards).
   1. AvinashNeelavani USN - 2BA10CV014
   2. Vinod Patil USN – 2BA10CV106
   3. Santosh Dorve – 2BA09CV071.

Other matters with the permission of the chair.

Dr. C. B. Shivayogimath
BOS Chairman
Professor and Head,
Dept. of Civil Engineering
BEC, Baglkot

Basaveshwar Engineering College (Autonomous), Bagalkot
Department of Civil Engineering

Resolutions of 10thBos Meeting

Date: 15-06-2019 **Time: 10.00 AM**

Venue: Dept. of Civil Engineering

Subject/ Resolution	Particulars
Subject	Discussion on credit distribution of UG and PG programmes and syllabus approval for III and IV semester B.E. Civil Engineering for 2018-19 batch.
Resolution	**UG Programme:** Deliberations were made and all the proposed credits ofUG subjects were approved with the following changes 1. 3rd semester subject**Mechanics of Materials** – Credits 3 to 4. 2. 3rd semester **Engineering Geology** - Credits 3to 2. 3. 4th semester **Fluid Mechanics** - Credits 3to 4. 4. 4th semester **Building Planning and Drawing** - Credits 3to 2. The titles of the following subjects were changed: 1. Surveying I (UCV341C) of 3rd semester as **Surveying** 2. Surveying II (UCV413C) of 4th semesteras **Advanced Surveying**. BOS members suggested inclusion of the following contents/subjects in the UG syllabus 1. Remote sensing and GIS in **Advanced Surveying**. 2. **Hydrology and Irrigation Engineering** of 3 credits as **Core** subjects instead of elective. 3. Software application lab with software relevant to Civil Engineering like STAAD Pro., ETABS, SAP EPANET, Primevera, MX Road, MAT Lab, e-Tendering etc., instead of C Programming. BOS members approved the syllabus content of the following subjects 1. **Engineering Mathematics – III (UMA301C)** of 3 credits for 3rd semester 2. **Engineering Mathematics – IV (UMA401C)** of 3 credits for 4th semester. **PG Programme:** **Geotechnical Engineering:** 1. **Critical state Soil Mechanics** of II semester is to be offered as **Elective** instead of core and **Reinforced Earth Structure and Geosynthetics** is to be offered as **Core** in II semester. 2. Subject entitled **Fundamentals of Soil Dynamics** of II semester is to be changed as **Dynamics of Soils and Foundations.** 3. The changed credits and codes of the subjects are mentioned in the Annexure-I attached herewith. **Environmental Engineering:** 1. It was suggested to introduce an elective on **Environmental Policies and Regulations**.

	2. The changed credits and codes of the subjects are mentioned in the Annexure-II attached herewith. **Structural Engineering:** 1. The title of the subject **Design of RC Structures** of I semester is to be changed as **Advanced Design of RC Structures**. 2. The title of the subject **Design studio Laboratory** of III semester is to be changed as **Design Studio**. 3. The changed credits and codes of the subjects are mentioned in the Annexure-III attached herewith.
Subject	Discussion on 100 active points as per new AICTE guidelines for 2019-20 batch.
Resolution	1. BOS members deliberated on 100 active points as per new AICTE guidelines for 2019-20 batch. 2. Members suggested to explore other relevant activities in addition to the activities suggested by AICTE for betterment of the community and discussed further.
Subject	Post facto approval for introduction of the following a. Fundamentals of Quantitative Aptitude and Soft skills (UHS001N) of 1 credit for IV sem of 2017-18 batch. b. Career Planning and Professional skills (UHS—3N) or Seminar (UCV601S) or SWAYAM (UCV601M) of 1 credit for VI sem of 2016-17 batch.
Resolution	Approved.
Subject	Post facto approval for the change of credit for the subject Advanced Construction Management (UCV812H) from 4 to 3 for 2015-16 batch.
Resolution	Approved.
Subject	Post facto approval of the following subject/Lab introduced to fulfill the credit requirement for the award of the degree a. **Advanced GeoTechnical Engineering Laboratory** of 1 credit for VIII semester student Mr. Pradeep S Patil (2BA13CV072) b. **Ground Improvement Techniques (UCV851E)** subject of 2 credit for 2015-16 lateral entry students.
Resolution	Approved.
Subject	Introduction of **Rural Water Supply and Sanitation (UCV533C)** of 3 credits as core in V semester for 2017-18 batch.
Resolution	Approved.
Subject	Post facto approval for PG syllabus as per new scheme for 2018-19 batch.
Resolution	Approved.
Subject	Permission for following UG students to reregister and appear in SEE examinations who have completed 8 years duration (201-11 batch onwards). 1. Avinash Neelavani USN - 2BA10CV014 2. Vinod Patil USN – 2BA10CV106 3. Santosh Dorve – 2BA09CV071.
Resolution	The students who were unable to complete their degree in stipulated period of 8 years (UG) were given extension of two years as per the circular of VTU (VTU/BGM/Aca/2018-19/3676 Dated: 04 August 2018) and hence above students were permitted to reregister and appear for SEE to complete their degree.

ANNEXURE-I

Sl.No	Subject Name	Subject Code (old)	Credits (old)	Subject Code (new)	Credits (new)
1	Geomechanics and Engineering	PGT111C	04	PGT121C	04
2	Soil Exploration and Field testing	PGT112C	04	PGT122C	04
3	Foundation Engineering	PGT113C	04	PGT123C	04
4	Elective -1	PGT00XE	04	PGT00XE	04
5	Elective – 2	PGT00XE	04	PGT00XE	04
6	Elective – 3	PGT00XE	03	PGT00XE	03
7	Seminar	PGT114S	01	PGT124S	01
8	Critical State Soil Mechanics	PGT212C	04	PGT00XE	04
9	Reinforced Earth Structure and Geosynthetics	PGT006E	04	PGT221C	04
10	Dynamics of Soils and Foundation	PGT214C	04	PGT222C	04
11	Elective – 4	PGT00XE	04	PGT00XE	04
12	Elective – 5	PGT00XE	04	PGT00XE	04
13	Elective – 6	PGT00XE	04	PGT00XE	04
14	Elective – 7	PGT00XE	03	PGT00XE	03
15	Term paper	PGT214T	01	PGT224T	01
16	Elective -8	PGT00XE	04	PGT00XE	04
17	Industrial training	PGT321I	04	PGT321I	04
18	Project phase- 1	PGT312P	10	PGT322P	10
19	Laboratory	PGT304L	02	PGT304L	02
20	Project phase- II	PGT421P	24	PGT431P	20

ANNEXURE-II

Sl.No	Subject Name	Subject Code (old)	Credits (old)	Subject Code (new)	Credits (new)
1	Environmental Chemistry and microbiology	PEV121C	04	PEV121C	04
2	Water Treatment Technology	PEV112C	04	PEV122C	04
3	Wastewater Treatment	PEV113C	04	PEV123C	04
4	Elective	PEV00XE	04	PEV00XE	04
5	Elective	PEV00XE	04	PEV00XE	04
6	Elective	PEV00XE	03	PEV00XE	03
7	Seminar	PEV016S	01	PEV124S	01
8	Air Pollution and Control	PEV211C	04	PEV00XE	04
9	Industrial Wastewater Management	PEV212C	04	PEV222C	04
10	Solid Waste Management	PEV203C	04	PEV223C	04
11	Elective	PEV00XE	04	PEV00XE	04
12	Elective	PEV00XE	04	PEV00XE	04
13	Elective	PEV00XE	03	PEV00XE	03
14	Term paper	PEV204T	01	PEV224T	01
15	Elective	PEV00XE	04	PEV00XE	04
16	Industrial Training	PEV321I	04	PEV321I	04
17	Environmental Engineering Laboratory	PEV301L	02	PEV301L	02
18	Project phase-I	PEV312P	10	PEV312P	10
19	Project phase-II	PEV421P	24	PEV431P	20

ANNEXURE-III

Sl.No	Subject Name	Subject Code (old)	Credits (old)	Subject Code (new)	Credits (new)
1	Design of RCC Structures	PSE 101C	04	PSE 111C	03
2	Theory of Elasticity & Plasticity	PSE 103C	03	PSE 112C	04
3	Dynamics of Structures	PSE104C	04	PSE 113C	4
4	Elective – 1	PSE00XE	04	PSE00XE	04
5	Elective – 2	PSE00XE	04	PSE00XE	04
6	Elective – 3	PSE00XE	04	PSE00XE	04
7	Seminar	PSE 114 S	01	PSE 114S	01
8	Pre-stressed Concrete Mechanics and Design	PSE 201C	04	PSE211C	04
9	Finite Element method	PSE 203C	04	PSE 212C	04
10	Elective – 4	PSE00XE	03	PSE00XE	03
11	Elective – 5	PSE00XE	04	PSE00XE	04
12	Elective – 6	PSE00XE	04	PSE00XE	04
13	Elective – 7	PSE00XE	04	PSE00XE	04
14	Structural Engg. Laboratory	PSE 201L	01	PSE 201L	01
15	Elective – 8	PSE00XE	03	PSE00XE	03
16	Industrial training	PSE 321I	04	PSE 331I	05
17	Project phase- I	PSE 302P	12	PSE 312P	10
18	Design Studio Laboratory	PSE303D	04	PSE 313D	02
19	Project phase- II	PSE 421P	24	PSE 411P	20

Basaveshwar Engineering College, Bagalkot
Department of Civil Engineering

IX Board of Studies (BOS) meeting

Date: 07-07-2018 at 10:00 am

Agenda:

1. Implementation of new scheme of credits system (175 credits) as per guidelines of AICTE to UG program from the academic year 2018-19
2. Implementation of new scheme of credits system (88 credits) as per guidelines of AICTE to PG programs from the academic year 2018-19
3. Revision of syllabus for both UG and PG programs as per new scheme proposed for the academic year 2018-19
4. To outline the evaluation system for courses in new scheme including tutorials
5. Post facto approval for redistribution of total number of credits for the award of BE Civil Engineering Degree for the academic year 2017-18
6. Post facto approval to the permission granted to appear exams on sixth attempt in few courses to UG students to complete their degree as per VTU circular
   a) Nabhonil Kar (2BA11CV061)
   b) Sachin Kumbar (2BA11CV086)
   c) Sangamesh Chalawadi (2BA14CV095)

Other matters with the permission of the chair

Dr. M. S. Gadagi
Chairman, Board of Studies
Department of Civil Engineering
Basaveshwar Engineering College, Bagalkot
Mob. 9449626288

Basaveshwar Engineering College, Bagalkot
Department of Civil Engineering

Resolutions of IX Board of Studies (BOS) meeting

Date: 07-07-2018 at 10:30 am

Resolutions

S. No	Subject/ Resolution	Particulars
1	Subject	Implementation of new scheme of credits system (175 credits) as per guidelines of AICTE to UG program from the academic year 2018-19
	Resolution	As per the AICTE /UGC/VTU guidelines the credit system for BE Civil Engineering program is 175 credits. Currently the college is following 200 credit systems. As per the new guidelines of AICTE/UGC/VTU, the BOS committee members agreed upon to restructure the credit system as 175 credit format from the academic year 2018-19. The courses like core subjects, program electives, open elective, humanity sciences, basic sciences, mandatory courses, project works and laboratory works and tutorials are covered under 175 credits. The detailed of scheme and distribution of credits in different semesters is attached in Annexure-I.
2	Subject	Implementation of new scheme of credits system (88 credits) as per guidelines of AICTE to PG programs from the academic year 2018-19
	Resolution	As per the AICTE /UGC/VTU guidelines the credit system for M Tech Civil Engineering in Structural engineering, Environmental engineering and Geo- technical engineering is 88 credits. Currently the college is following 100 credit systems. As per the new guidelines of AICTE/UGC/VTU, the BOS committee members agreed upon to restructure the credit system as 88 credit format from the academic year 2018-19. The courses like core subjects, program electives, project works and laboratory works and tutorials are covered under 88 credits. The detailed of scheme and distribution of credits in different semesters is attached in Annexure-II.
3	Subject	Revision of syllabus for both UG and PG programs as per new scheme proposed for the academic year 2018-19

	Resolution	Committee members have decided revise and restructure the the syllabus as per new credits system (175) for UG and (88) credits for PG. Committee members also requested the faculty members to revise and re structure the syllabus as per new guide lines of AICTE/UGC/VTU.
4	Subject	To outline the evaluation system for courses in new scheme including tutorials
	Resolution	Committee members have given opinion about evaluating system to follow the guides lines fixed by college/academic council, and to have uniformity throughout the college.
5	Subject	Post facto approval for redistribution of total number of credits for the award of BE Civil Engineering Degree for the academic year 2017-18
	Resolution	Committee members have approved the redistribution of total credits for the award of degree for the academic year 2017-18.
6	Subject	Post facto approval to the permission granted to appear exams on sixth attempt in few courses to UG students to complete their degree as per VTU circular d) Nabhonil Kar (2BA11CV061) e) Sachin Kumbar (2BA11CV086) f) Sangamesh Chalawadi (2BA14CV095)
	Resolution	Committee members have approved and permitted to appear for the examination subjected to the condition of approval of VTU, Belagavi.
7	Subject	Other matters with permission of chair
	Resolution	Mr. Santosh Venkat Rao bearing USN 2BA09CV071 is permitted to appear examination subjected to the condition of approval of VTU, Belagavi.

B. V. V. S.

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGALKOT - 587103

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

BOARD OF STUDIES (BoS) MEETING

RESOLUTIONS OF THE BoS MEETING HELD ON 16.10.2021

The resolutions of the Board of Studies (BoS) online meeting held on 16.10.2021 at 11.00 am are as follows:

Sub. (1)	:	Seeking approval for proposed I to VIII semester teaching and examination scheme of B. E (Electronics and Communication Engineering) as per NEP and VTU guidelines for 2021-22 (Regular) and 2022-23 (Lateral Entry) Batch students
Res.	:	Approval is accorded to the I to VIII semester teaching and examination scheme of B. E (Electronics and Communication Engineering) as per NEP and VTU guidelines for 2021-22 (Regular) and 2022-23 (Lateral Entry) Batch students. It is as given in ANNEXURE-1.
Sub. (2)	:	Seeking approval for syllabus of proposed I semester subject Basics of Electronics and Communication Engineering of B. E (Electronics and Communication Engineering) along with Course Outcomes and CO-PO-PSO articulation matrix for 2021-22 (Regular) and 2022-23 (Lateral Entry) Batch students
Res.	:	Approval is accorded to the syllabus of proposed I semester subject Basics of Electronics and Communication Engineering of B. E (Electronics and Communication Engineering) along with Course Outcomes and CO-PO-PSO articulation matrix for 2021-22 (Regular) and 2022-23 (Lateral Entry) Batch students. It is as given in ANNEXURE-2.
Sub. (3)	:	Seeking approval for proposed I to IV semester teaching and examination scheme of M.Tech (Defence Technology), Specialization: Communication Systems and Sensors, as per guidelines of Ministry of Defence, AICTE and VTU for 2021-22 Batch students
Res.	:	Approval is accorded to the proposed I to IV semester teaching and examination scheme of M.Tech (Defence Technology), Specialization: Communication Systems and Sensors, as per guidelines of Ministry of Defence, AICTE and VTU for 2021-22 Batch students. It is as given in ANNEXURE-3.

16.10.2021

Dr. Shridhar S. K.
BoS Chairman

Dr. G. S. Biradar
Member (VTU Nominee)

Dr. H. M. Kittur
Member (Subject Expert)

Dr. K. Vishwanath
Member (Subject Expert)

Ms. Sini Balakrishnan
Member (Industry Representative)

Mr. M. S. Dhaded
Member (Alumni)

16/10/2021

Mr. Sridhar Kamalapurkar
Member (Industry Representative)

Prof. S. M. Iddalagi
Member

16/10/21

Dr. P. N. Kulkarni
Member

16.10.21

Dr. J. D. Mallapur
Member

16/10/21

Dr. S. G. Kambalimath
Member

16/10/2021

Dr. A. V. Sutagundar
Member

16/10/2021

Dr. Mahabaleshwar S. K.
Member

16.10.21

Prof. M. J. Sataraddi
Member

16/10/21

Dr. A. C. Katageri
Member

Sub. (4)	:	Seeking approval for syllabus of proposed I and II semester subjects of M.Tech (Defence Technology), Specialization: Communication Systems and Sensors along with Course Outcomes and CO-PO-PSO articulation matrix for 2021-22 Batch students
Res.	:	Approval is accorded to syllabus of proposed I and II semester subjects of M.Tech (Defence Technology), Specialization: Communication Systems and Sensors along with Course Outcomes and CO-PO-PSO articulation matrix for 2021-22 Batch students. It is as given in ANNEXURE-4.
Sub. (11)	:	Any other matter with the permission of chair
		No other matters were came up for discussion.

The meeting concluded with the vote of thanks to the Chairman and Honorable Members.

16.10.2021

Dr. Shridhar S. K.
BoS Chairman

Dr. G. S. Biradar
Member (VTU Nominee)

Dr. H. M. Kittur
Member (Subject Expert)

Dr. K. Vishwanath
Member (Subject Expert)

Ms. Sini Balakrishnan
Member (Industry Representative)

Mr. M. S. Dhaded
Member (Alumni)

16/10/2021.

Mr. Sridhar Kamalapurkar
Member (Industry Representative)

16/10/2021

Prof. S. M. Iddalagi
Member

16/10/21

Dr. P. N. Kulkarni
Member

16.10.21

Dr. J. D. Mallapur
Member

16/10/21

Dr. S. G. Kambalimath
Member

16/10/2021

Dr. A. V. Sutagundar
Member

16.10.2021

Dr. Mahabaleshwar S. K.
Member

16.10.21

Prof. M. J. Sataraddi
Member

16/10/2021

Dr. A. C. Katageri
Member

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGALKOT - 587103

B. V. V. S. | **DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

BOARD OF STUDIES (BoS) MEETING

RESOLUTIONS OF THE BoS MEETING HELD ON 18.05.2019

The resolutions of the Board of Studies meeting held on 18.05.2019 at Seminar Hall, ECE Dept., Basaveshwar Engineering College (Autonomous), Bagalkot at 10.30AM are as follows

Sub (1)	:	Seeking approval for the proposed revised curriculum scheme, along with scheme of evaluation, for III semester to VIII semester B. E (ECE) for a total of 175 credits, with effect from the academic year 2019-2020.
Res.	:	Approval is accorded for the proposed revised curriculum scheme, along with scheme of evaluation, for III semester to VIII semester B. E (ECE) for a total of 175 credits, with effect from the academic year 2019-2020.
Sub (2)	:	Seeking approval for the proposed syllabus of III and IV semesters of B. E (ECE), along with course objectives, course outcomes and mapping of COs to POs and PSOs with effect from 2019-2020.
Res.	:	Proposed syllabus of III and IV semesters of B. E (ECE), along with course objectives, course outcomes and mapping of COs to POs and PSOs, are approved with effect from 2019-2020.
Sub (3)	:	Seeking approval for the revised Program Specific Outcomes (PSOs) for UG program in Electronics and Communication Engineering and M.Tech program in Digital Communication with effect from the academic year 2019-2020.
Res.	:	Revised Program Specific Outcomes (PSOs) for UG program in Electronics and Communication Engineering and M.Tech program in Digital Communication are approved with effect from the academic year 2019-2020.

Dr. P. N. Kulkarni
BoS Chairman

18/5/19
Dr. Tanuja T. C.
Member (VTU Nominee)

Dr. Sripati Acharya
Member (Subject Expert)

Dr. K. V. Suresh
Member (Subject Expert)

Mr. Raghunath
Member (Industry Representative)

18/05/19
Mr. Ashwini Kumar
Member (Alumni)

Mr. Guruprasad Eligar
Member (Industry Representative)

18/5
Prof. S. M. Iddalagi
Member

18/5/19
Dr. J. D. Mallapur
Member

18/5/19
Dr. Shridhar S. K.
Member

18/05/19
Dr. S. G. Kambalimath
Member

18/5/19
Dr. A. V. Sutagundar
Member

18/5/19
Dr. Mahabaleshwar S. K.
Member

18/5/19
Prof. Mamata J. S.
Member

18/5/19
Prof. A. C. Katageri
Member

Sub (4)	:	Seeking approval for the proposed syllabus, along with course objectives and course outcomes, for III and IV semester of M.Tech (Digital Communication) with effect from the academic year 2019-2020.
Res.	:	Proposed syllabus, along with course objectives and course outcomes, for III and IV semester of M.Tech (Digital Communication) is approved, with effect from the academic year 2019-2020.
Sub (5)	:	Seeking approval to adjust a deficit of 2 credits (out of the stipulated requirement 150 credits needed for the award of degree for lateral entry students) for Mr. Nandeesh Hampiholi (USN: 2BA15EC412).
Res.	:	Permission is given to adjust a deficit of 2 credits (out of the stipulated requirement 150 credits needed for the award of degree for lateral entry students) for Mr. Nandeesh Hampiholi (USN: 2BA15EC412).
Sub (6)	:	Any other matter with the permission of chair
Res.	:	Existing Programme Educational Objectives (PEOs) were discussed and curriculum design is carried out in line with PEOs and POs and PSOs.

Dr. P. N. Kulkarni
BoS Chairman

18/5/19
Dr. Tanuja T. C.
Member (VTU Nominee)

Dr. Sripati Acharya
Member (Subject Expert)

Dr. K. V. Suresh
Member (Subject Expert)

Mr. Raghunath
Member (Industry Representative)

18/5/19
Mr. Ashwini Kumar
Member (Alumni)

Mr. Guruprasad Eligar
Member (Industry Representative)

18/5/19
Prof. S. M. Iddalagi
Member

18/5/19
Dr. J. D. Mallapur
Member

18/5/19
Dr. Shridhar S. K.
Member

18/5/19
Dr. S. G. Kambalimath
Member

18/5/19
Dr. A. V. Sutagundar
Member

18/5/19
Dr. Mahabaleshwar S. K.
Member

18/5/19
Prof. Mamata J. S.
Member

18/5/19
Prof. A. C. Katageri
Member

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGALKOT - 587103

B. V. V. S. | **DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

BOARD OF STUDIES (BoS) MEETING

RESOLUTIONS OF THE BoS MEETING HELD ON 07.07.2018

The resolutions of the Board of Studies meeting held on 07.07.2018 at Seminar Hall, ECE Dept., Basaveshwar Engineering College (Autonomous), Bagalkot at 10.30AM are as follows:

Sub (1)	:	Seeking post facto approval for the registration of residual subjects for two students: (1) RaghavendraTalavar (USN: 2BA09EC409), and (2) AmitkumarDandimani (USN: 2BA10EC402) based on the circulars received from VTU, Belagavi.
Res.	:	Post facto approval is accorded for the registration of residual subjects for two students: (1) RaghavendraTalavar (USN: 2BA09EC409), and (2) AmitkumarDandimani (USN: 2BA10EC402) based on the circulars received from VTU, Belagavi.
Sub (2)	:	Seeking approval for the proposed curriculum scheme, along with scheme of evaluation, for I semester to VIII semester B. E (Electronics and Communication Engineering) for a total of 175 credits, with effect from the academic year 2018-2019.
Res.	:	Proposed curriculum scheme, along with scheme of evaluation, for I semester to VIII semester B. E (Electronics and Communication) is approved, for a total of 175 credits, with effect from the academic year 2018-2019.
Sub (3)	:	Seeking approval for the proposed syllabus of Basic Electronics (UEC169C), along with course objectives and course outcomes, for I/II semester B.E with effect from 2018-2019.

Dr. P. N. Kulkarni
BoS Chairman

Dr. Tanuja T. C.
Member (VTU Nominee)

Dr. SripatiAcharya
Member (Subject Expert)

Dr. K. V. Suresh
Member (Subject Expert)

Mr. Raghunath
Member (Industry Representative)

Mr. Ashwini Kumar
Member (Alumni)

Mr. GuruprasadEligar
Member (Industry Representative)

Prof. S. M. Iddalagi
Member

Dr. J. D. Mallapur
Member

Dr. Shridhar S. K.
Member

Dr. S. G. Kambalimath
Member

Dr. A. V. Sutagundar
Member

Dr. Mahabaleshwar S. K.
Member

Prof. Mamata J. S.
Member

Prof. A. C. Katageri
Member

Res.	:	Proposed syllabus of Basic Electronics (UEC169C), along with course objectives and course outcomes, for I/II semester B.E is approved with effect from 2018-2019.
Sub (4)	:	Seeking approval for the proposed curriculum scheme, along with scheme of evaluation, for I semester to IV semester of M.Tech (Digital Communication) for a total of 88 credits, with effect from the academic year 2018-2019.
Res.	:	Proposed curriculum scheme, along with scheme of evaluation, for I semester to IV semester of M.Tech (Digital Communication) is approved, for a total of 88 credits, with effect from the academic year 2018-2019.
Sub (5)	:	Seeking approval for the proposed syllabus, along with course objectives and course outcomes, for I and II semester of M.Tech (Digital Communication) with effect from the academic year 2018-2019.
Res.	:	Proposed Syllabus, along with course objectives and course outcomes, for I and II semester of M.Tech (Digital Communication) is approved, with effect from the academic year 2018-2019.
Sub (6)	:	Any other matter with the permission of chair
Res.	:	The existing Programme Outcomes (POs) and Programme Educational Objectives (PEOs) were discussed and curriculum design is carried out in line with PEOs and POs.

Dr. P. N. Kulkarni
BoS Chairman

Dr. Tanuja T. C.
Member (VTU Nominee)

Dr. SripatiAcharya
Member (Subject Expert)

Dr. K. V. Suresh
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Member

B. V. V. S.

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGALKOT - 587103

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

BOARD OF STUDIES (BoS) MEETING

RESOLUTIONS OF THE BoS MEETING HELD ON 27.05.2017

The resolutions of the Board of Studies meeting held on 27.05.2017 at Seminar Hall, ECE Dept., Basaveshwar Engineering College (Autonomous), Bagalkot at 10.30AM are as follows:

Sub (1)	:	Seeking approval for the detailed syllabus of 5th Semester to 8th Semester of UG Programme i.e., B.E (Electronics and Communication Engineering) W.E.F. academic year 2017-2018.
Res.	:	Approval is accorded to the detailed syllabus of 5th Semester to 8th Semester of UG Programme i.e., B.E (Electronics and Communication Engineering) W.E.F. academic year 2017-2018.
Sub (2)	:	Seeking approval for the detailed syllabus of 3rd Semester and 4th Semester of PG Programme i.e., M. Tech (Digital Communication) W.E.F. academic year 2017-2018.
Res.	:	Approval is accorded to the detailed syllabus of 3rd Semester and 4th Semester of PG Programme i.e., M. Tech (Digital Communication) W.E.F. academic year 2017-2018.
Sub (3)	:	Seeking approval for the evaluation scheme for the following UG programme courses: (a) Advanced "C" Programming (UEC326C), (b) Mini Project (UEC623P), (c) Project Phase – I (UEC726P), (d) Project Phase – II (UEC821P)

Dr. P. N. Kulkarni
BoS Chairman

Dr. R. C. Biradar
Member (VTU Nominee)

Dr. Hassanali G. Virani
Member (Subject Expert)

Dr. Priyatamkumar
Member (Subject Expert)

Mr. Dattatreya Inamdar
Member (Industry Representative)

Mr. Prashant Katageri
Member (Alumni)

Mr. Santosh Hosangadi
Member (Industry Representative)

Prof. S. M. Iddalagi
Member

Dr. J. D. Mallapur
Member

Dr. B. G. Sheeparmatti
Member

Dr. Shridhar S. K.
Member

Prof. S. G. Kambalimath
Member

Prof. S. C. Hiremath
Member

Dr. A. V. Sutagundar
Member

Dr. Mahabaleshwar S. K.
Member

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGALKOT - 587103

B. V. V. S. | **DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

Res.	:	Evaluation scheme for the following UG courses are approved as shown below: **(a) Advanced "C" Programming (UEC326C)** • **50% weightage (50 marks) for theory CIE** Three CIEs, each for 15 marks, are conducted centrally along with all regular subjects, contributes to 45 marks. Assignment/quizzes are given for 5 marks, thus making a total of 50 marks. • **50% weightage (50 marks) for SEE Lab examination** SEE lab examination is conducted for 50 marks with exam panel consisting of both internal and external examiners. **(b) Mini Project (UEC623P), (c) Project Phase – I (UEC726P), (d) Project Phase – II (UEC821P)** Evaluated for 50 marks out of which 35 marks are assigned by the concerned guide based on the qualitative and quantitative assessment of the work done by the candidate and the report submitted by the candidate. Assessment for remaining 15 marks is done by a department subcommittee consisting of two senior faculty members and a project co-coordinator based on the presentation and viva-voce. Consolidated CIE marks (out of 50) are entered by the coordinator/s and signed by the HOD along with the coordinator/s and the same is sent to the COE. 50% weightage (50 marks) for SEE Project examination which is conducted for 50 marks, with exam panel consisting of both internal and external examiners along with HOD/HOD nominee.

Dr. P. N. Kulkarni
BoS Chairman

Dr. R. C. Biradar
Member (VTU Nominee)

Dr. Hassanali G. Virani
Member (Subject Expert)

Dr. Priyatamkumar
Member (Subject Expert)

Mr. Dattatreya Inamdar
Member (Industry Representative)

Mr. Prashant Katageri
Member (Alumni)

Mr. Santosh Hosangadi
Member (Industry Representative)

Prof. S. M. Iddalagi
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Member

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Member

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Member

Dr. Mahabaleshwar S. K.
Member

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGALKOT - 587103

B. V. V. S. | DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Sub (4)	:	Seeking approval for the evaluation method for the following PG programme courses: (a) Industrial Training (PEC314I), (b) Project Phase – I (PEC316P), (c) Seminar (PEC411S), (d) Project Phase – II (PEC412P)
Res.	:	Evaluation scheme for the following PG courses are approved as shown below: **(a) Industrial Training (PEC314I), (b) Project Phase – I (PEC316P), (d) Project Phase – II (PEC412P)** Evaluated for 50 marks out of which 35 marks are assigned by the concerned guide based on the qualitative and quantitative assessment of the work done by the candidate and the report submitted by the candidate. Assessment for remaining 15 marks is done by a department subcommittee consisting of two senior faculty members and a project co-coordinator based on the presentation and viva-voce. Consolidated CIE marks (out of 50) are entered by the coordinator/s and signed by the HOD along with the coordinator/s and the same is sent to the COE. 50% weightage (50 marks) for SEE Project examination which is conducted for 50 marks, with exam panel consisting of both internal and external examiners along with HOD nominee. **(b) Seminar (PEC411S)** CIE: Evaluated for 50 marks by the concerned guide based on the qualitative and quantitative assessment of the work done by the candidate and the report submitted by the candidate.

Dr. P. N. Kulkarni
BoS Chairman

Dr. R. C. Biradar
Member (VTU Nominee)

Dr. Hassanali G. Virani
Member (Subject Expert)

Dr. Priyatamkumar
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Mr. Prashant Katageri
Member (Alumni)

Mr. Santosh Hosangadi
Member (Industry Representative)

Prof. S. M. Iddalagi
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Dr. J. D. Mallapur
Member

Dr. B. G. Sheeparmatti
Member

Dr. Shridhar S. K.
Member

Prof. S. G. Kambalimath
Member

Prof. S. C. Hiremath
Member

Dr. A. V. Sutagundar
Member

Dr. Mahabaleshwar S. K.
Member

6Basaveshwar Engineering College (Autonomous) Bagalkot

Department of Electrical and Electronics Engineering

Board of Studies in EE

Date: 12.10.2021 Time: 16:00 to 18:00 Hrs Venue: Virtual (Online)

14th Meeting Proceedings and Resolutions

Link: https://teams.microsoft.com/l/meetup-join/19%3aquP5ZhCpIHLLLZcUvhwOGJM7YdI_2Vr5iiwm1-STMLs1%40thread.tacv2/1634014770459?context=%7b%22Tid%22%3a%22ae83d8fb-8a78-48d6-8ea2-0990aafca 9da%22%2c%22Oid%22%3a%22888e5a58-28d9-44e2-99 4a-81ddffc9340a%22%7d

		Welcome and Introduction of Members by Member Secretary BoS in EE
Sub-1	:	**Appraisal:** Previous BoS meetings
Res-1	:	Chairman BoS in EE apprised the minutes of meeting held on 06.07.2021 **(Annexure – 1a)** and NEP taskforce committee members **(Annexure – 1b)**
Sub-2	:	**Approval** of scheme of Teaching & Evaluation and syllabus of I to VIII Semesters BE (E&EE) of 160 credit program (2021-22 admitted batch) as per NEP
Res-2	:	**BoS in EE members approved scheme of Teaching & Evaluation of VII and VIII Semesters BE(E&EE) of 175 credit program for 2018-19 admitted batch students** **Description:** Chairman BoS in EE read and briefly explained the schemes for I to VIII semester BE(E&EE) of 160 credits program for AY 2021-22. He highlighted the following key points. a. Curriculum framework for BEC (2021-2022) and Break-up of credits for B.E **(Annexure – 2a)** b. AICTE has strongly recommended to include Ability Enhancement Courses (AEC). In view of this, AEC are included at each semester c. Industry Internship at semester 8 will help students to get industry exposure d. Course in English has been included at 1st Year e. Summer internships after Semester 2 and 4 has been introduced. These internships can be taken up in specialized R&D centres on campus or in industry. The students have to undergo the internships during their summer breaks. f. Ability Enhancement Courses (AEC) and UHV-2 are introduced at different semesters. The courses for AEC are selected as per the ACITE guidelines. g. As per the Supreme Court order, Courses entitled Saamskrutika Kannada/Balake Kannada and Constitution of India are included at semester 3 and 4 respectively. h. In view of reduction in credits to 160, the credits allotment fo core subjects is drastically reduced from 67 to 48. Hence some of the core subjects had to be dropped or reorganized to retain. These subjects were of vital significance to EEE

Chairman BoS-EE & Head of Department

Dr. Siva Kumar K (VTU Nominee)	Dr. Kannan Tinnium (Industry Expert)	Dr. Sarasij Das (Academia)	Mr. VeerendraKavishetti (Alumni)	Dr. B. Chandrashekhar (Industry Expert)	Dr. T. Jayabharati (Academia & Alumni)
Dr. D. S. Jangamshetti (Member)	Smt. Nanda P (Member)	Mr. S. M. Patil (Member)	Dr. R. L. Naik (Member)	Mr. S. G. Nayak (Member)	Smt. S. S. Tambakad (Member)
Dr. B. F. Ronad (Member)	Mr. S. Y. Goudappanavar (Member)	Mr. V. C. Jainkeri (Member)	Mr. S. S. Rathod (Member)		

undergraduate students. To accommodate the missing subjects, the mathematics content related to electrical and electronics engineering at semester 3, 4 and 5 are included in Mathematics – III, IV and V courses respectively. Contents of these courses will be identified by EEE faculty members.

i. Soft Skills courses, mentioned below, are included in the curriculum at 4, 5 and 6 semesters respectively.
   a. UHS001N: Fundamentals of Quantitative Aptitude & Soft Skills
   b. UHS002N: Advanced Quantitative Aptitude and Soft Skills
   c. UHS003N: Career Planning and Professional Skills

   These courses will help students to enhance their aptitude skills and help in campus/off campus recruitment.

j. MOOCS online course (4/8/12 weeks)*: Students should take online courses either in 5th 6th or 7th sem. They must register for the available courses in advance with prior permission from department & thereby CoE. Credits of online courses earned in 5th & 6th shall be cumulatively reflected in 7th sem grade card, including 7th sem online credits. The credit distribution shall be 4 weeks=1 credit, 8 weeks=2 credits and 12 weeks=3 credits.

k. Students have to undergo internship of 10 credits in their 8th semester. The internship has to be done in industry or national research lab or electric power pants or institutes of higher learning, viz. IITs/NITs. To make provision for this, modifications are made in 8th semester scheme as given below:
   - Theory subjects of 8th sem will be in online mode, including the CIE & assignment assessments. SEE will be in offline mode as per BEC academic calendar.
   - If industry requires students to complete/continue the project immediately after internship, i.e in 7th semester, then 7th & 8th semesters can be flipped for such students (if 50% student opt for)

l. As part of NEP requirement,
   - A minor in Electrical and Electronics Engineering is offered for other branch students. The students have to earn additional 18 credits along with regular 160 credits **(Annexure – 2b)**
     - Provision is made such that a student can register during his/her regular semester along with currents semester courses in their respective branches. The regulations for taking-up these courses will be set in the course of time.
     - A student can take only two online courses connected to power system and electrical & electronics measurements
     - Students have to register for minor programme immediately after completion of their 3rd semester.
   - A minor in Electric Vehicle Technology is offered with 18 credits for EEE students. **(Annexure – 2c)**
     - These courses will be other than the courses offered in regular scheme
     - These courses will be skill-based courses taught by internal faculty members. Some courses can also be offered by experts from industry or

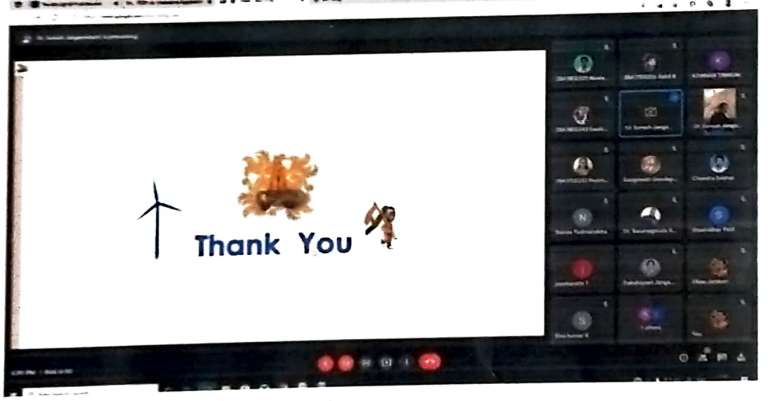
Chairman BoS-EE & Head of Department

Dr. Siva Kumar K (VTU Nominee)	Dr. Kannan Tinnium (Industry Expert)	Dr. Sarasij Das (Academia)	Mr. VeerendraKavishetti (Alumni)	Dr. B. Chandrashekhar (Industry Expert)	Dr. T. Jayabharat (Academia & Alum
Dr. D. S. Jangamshetti (Member)	Smt. Nanda P (Member)	Mr. S. M. Patil (Member)	Dr. R. L. Naik (Member)	Mr. S. G. Nayak (Member)	Smt. S. S. Tambad (Member)
Dr. B. F. Ronad (Member)	Mr. S. Y. Goudappanavar (Member)	Mr. V. C. Jainkeri (Member)	Mr. S. S. Rathod (Member)		

		other higher learning institutes.
Sub-3	:	Any other matters with permission of chair
Res-3	:	No other matters were discussed.
		Vote of Thanks by Mrs. Sunita S. Tambakad Member BoS in EE

Meeting Screen Shots:





Chairman BoS-EE & Head of Department

Dr. Siva Kumar K (VTU Nominee)	Dr. Kannan Tinnium (Industry Expert)	Dr. Sarasij Das (Academia)	Mr. VeerendraKavishetti (Alumni)	Dr. B. Chandrashekhar (Industry Expert)	Dr. T. Jayabharati (Academia & Alumni)
Dr. D. S. Jangamshetti (Member)	Smt. Nanda P (Member)	Mr. S. M. Patil (Member)	Dr. R. L. Naik (Member)	Mr. S. G. Nayak (Member)	Smt. S. S. Tambakad (Member)
Dr. B. F. Ronad (Member)	Mr. S. Y. Goudappanavar (Member)	Mr. V. C. Jainkeri (Member)	Mr. S. S. Rathod (Member)		

Proceedings and Resolutions
of

12th Meeting Board of Studies in EE

Held on

Date: 06.07.2021 Time: 16:00 to 18:00 Hrs
Venue: Virtual (Online)
Link: https://meet.google.com/chz-mshg-bwf

Submitted by

Head of Department
Electrical and Electronics Engineering

Submitted to

The Principal



BVVS Basaveshwar Engineering College (Autonomous)
Bagalkot-587102

Basaveshwar Engineering College (Autonomous) Bagalkot

Department of Electrical and Electronics Engineering

Board of Studies in EE

Date: 06.07.2021 Time: 16:00 to 18:00 Hrs Venue: Virtual (Online)

12th Meeting Proceedings and Resolutions

Online Meeting Link: https://meet.google.com/chz-mshg-bwf Tue Jul 06, 2021 4:00 pm – 6:00pm

  Welcome and Introduction of Members by Chairman BoS in EE

Sub-1 : Appraisal: Previous BoS meetings
Activities and Achievements of faculty members and students

Res-1 : Chairman BoS in EE apprised the following points

i. Last meeting held on 29.06.2020 **(Annexure - 1a)**
ii. BoS Members list **(Annexure - 1b)**
iii. Department activities:
- IEEE NKSS: Dr. S. H. Jangamshetti nominated as founder Chairman
- NPTEL Courses: Dr. D S Jangamshetti (12 W), Mr. S M Patil (12 W), Dr. R L Naik (8 W), Mr. S G Nayak (8 W, 4 W) [W-Weeks]
- Patent Published: Mr. S. S. Rathod – Pub. No. 24/2021, Dtd. 11.06.2021
- Best Researcher Award: Mr. S Y Goudappanavar, Mission 2020 Challenge - by IEEE
- IEEE Senior Member: Dr. B F Ronad and Mr. S Y Goudappanavar
- Superannuation from Service: Mr. R. G. Patil, on 31st March, 2021

iv. Student activities:
- Actively participated in IEEE Webinars.
- Two UG projects – selected for KSCST funding;
- One UG project – communicated to VTU for funding

v. Research and Development activities:
- Grants: Rs. 3.0 lakh VGST, Research Grant for Scientist/Faculty Scheme
- Dr. B F Ronad (PI), Mr. S Y Goudappanavar (Co-PI)
- Publications: Journals-05, Conferences-04
- Citations: 77+

vi. Other activities:
- Webinars Organized by EE faculty members: 11
- Webinars attended by faculty: 33
- Upcoming Activities:
- Alumni Meet: 9.7.21-KUD batches; 16.7.21-VTU batches; 23.7.21-Autonomy
- Poster Presentations by final year EE students
- Industry Webinars:

a) Mr. Jagadish Patil, Design & Planning Manager, British Telecom

Chairman BoS-EE & Head of Department

Dr. Siva Kumar K (VTU Nominee)	**Dr. Kannan Tinnium (Industry Expert)**	**Dr. Sarasij Das (Academia)**	**Mr. Veerendra Kavishetti (Alumni)**	**Dr. B. Chandrashekhar (Industry Expert)**	**Dr. T. Jayabharati (Academia & Alumni)**
Dr. D. S. Jangamshetti (Member)	**Smt. Nanda P (Member)**	**Mr. S. M. Patil (Member)**	**Dr. R. L. Naik (Member)**	**Mr. S. G. Nayak (Member)**	**Smt. S. S. Tambakad (Member)**
Dr. B. F. Ronad (Member)	**Mr. S. Y. Goudappanavar (Member)**	**Mr. V. C. Jainkeri (Member)**	**Mr. S. S. Rathod (Member)**		

b) Dr. Kannan Tinnium, Senior Vice President, Power Solutions Business – R&D, Luminous Power Technologies, Pvt. Ltd
c) Mr. Ravichandra H, Senior Engineer, Schneider Electric
d) Mr. Mandar Katti, Senior Engineer, EATON Pune

Sub-2 : **Approval** of scheme of Teaching & Evaluation and syllabus of VII and VIII Semesters BE(E&EE) of 175 credit program for 2018-19 admitted batch students.

Res-2 : **BoS in EE members approved scheme of Teaching & Evaluation and syllabus of VII and VIII Semesters BE (E&EE) of 175 credit program for 2018-19 admitted batch students**

Description: Chairman BoS in EE read and briefly explained the scheme for VII and VIII semester BE (E&EE) of 175 credit program for 2018-19 admitted batch students. He highlighted the previous approval. (**Annexure-2)**

Sub-3 : **Approval** of scheme of Teaching & Evaluation and syllabus of V to VIII Semesters BE(E&EE) of 175 credit program for 2019-20 admitted batch students.

Res-3 : **BoS members approved the Teaching & Evaluation and syllabus of V to VIII Semesters BE (E&EE) of 175 credit program for 2019-20 admitted batch students.**

Description: Chairman BoS in EE read and briefly explained the scheme for V to VIII semester BE (E&EE) of 175 credit program for 2019-20 admitted batch students. He highlighted the previous approval and subjects offered for improving soft skills. (**Annexure-3)**

Sub-4 : **Approval** of scheme of Teaching & Evaluation and syllabus of III to VIII Semesters BE(E&EE) of 175 credit program for 2020-21 admitted batch students.

Res-4 : **BoS members approved the scheme of Teaching & Evaluation and syllabus of III to VIII Semesters BE(E&EE) of 175 credit program for 2020-21 admitted batch students.**

Description: Chairman BoS in EE read and briefly explained the scheme for III to VIII semester BE(E&EE) of 175 credit program for 2020-21 admitted batch students. He highlighted the key points of the scheme as follows.

- Previous approval of the scheme presented
- Addition of Universal Human Values and English subjects
- Initiations for internship (Every 6 to 7 students of V semester will be linked with our distinguished alumni as industry mentors for).
- Final year projects should be carried in Industry or Inhouse R&D lab
- At least one subject/sem should be taught by an industry expert

Dr. Siva Kumar K, VTU nominee and other external members appreciated the new scheme.

Key suggestions and discussions:

- Dr. Siva Kumar K, VTU nominee:
  i. To include "Generation Transmission and Distribution" Subject after studying the fundamentals of synchronous machines.

Chairman BoS-EE & Head of Department

Dr. Siva Kumar K (VTU Nominee)	**Dr. Kannan Tinnium (Industry Expert)**	**Dr. Sarasij Das (Academia)**	**Mr. Veerendra Kavishetti (Alumni)**	**Dr. B. Chandrashekhar (Industry Expert)**	**Dr. T. Jayabharati (Academia & Alumni)**
Dr. D. S. Jangamshetti (Member)	**Smt. Nanda P (Member)**	**Mr. S. M. Patil (Member)**	**Dr. R. L. Naik (Member)**	**Mr. S. G. Nayak (Member)**	**Smt. S. S. Tambakad (Member)**
Dr. B. F. Ronad (Member)	**Mr. S. Y. Goudappanavar (Member)**	**Mr. V. C. Jainkeri (Member)**	**Mr. S. S. Rathod (Member)**		

- Chairman BoS in EE welcomed the suggestion and he informed the committee members that the appropriate changes will be made in scheme to bring the said subject after the electrical machines.

- Dr. Kannan Tinnium, Industry expert:

i. To include one faculty member to anchor between industry mentor and students.

- Chairman BoS in EE welcomed the suggestion and apprised about existing system of faculty advisors for every 20 students. He said that the faculty advisor will be the link from department with Industry mentor and students.

ii. To include subject on Energy Storage Technologies

- Chairman BoS in EE welcomed the suggestions and appraised the available expertise

- Dr. T. Jayabharati:

i. Students of VIT Vellore are eligible for campus selection soon after VII semester.

- Chairman BoS in EE appraised the placement policy of BEC

All members Approved the new Scheme for 2020-21 batch. **(Annexure-4)**.

Sub-5 : Approval of scheme of Teaching & Evaluation and syllabus for 2021-22, to be admitted batch students.

Res-5 : BoS members approved the scheme of Teaching & Evaluation of I to VIII Semesters BE(E&EE) of 175 credit program (2021-22 admitted batch)

Description: Chairman BoS in EE read and explained the scheme of Teaching & Evaluation for 2021-22 batch to be admitted students to seek the approval. He highlighted the key points of scheme as follows:

- Change of subject title for mathematics at III semester as Computational Methods for Electrical Science and at IV semester as Statistical Methods for Electrical Science.
- Inclusion of English as a mandatory subject at first year.

BoS members appreciated and approved the scheme of Teaching & Evaluation for 2021-22 batch to be admitted students. (**Annexure-5**)

Sub-6 : Appraisal about M.Tech Energy Science & Technology. Approval of scheme of teaching & evaluation and syllabus.

Res-6 : BoS members were apprised about status of M. Tech Energy Science & Technology and Approved the scheme of teaching & evaluation and syllabus.

Description: Chairman BoS in EE appraised the status of programme. He mentioned about the status of admission, that the only girl student admitted took transfer to other college. The program take-off was deprived of no admission. Efforts will go on from the department to get full admission for the academic year 2021-22. The approval of scheme of teaching & evaluation and syllabus done during previous BoS meeting was upheld by the members.

Sub-7 : Appraisal of online courses, B.E (E&EE) honors course

Chairman BoS-EE & Head of Department

Dr. Siva Kumar K (VTU Nominee)	**Dr. Kannan Tinnium (Industry Expert)**	**Dr. Sarasij Das (Academia)**	**Mr. Veerendra Kavishetti (Alumni)**	**Dr. B. Chandrashekhar (Industry Expert)**	**Dr. T. Jayabharati (Academia & Alumni)**
Dr. D. S. Jangamshetti (Member)	**Smt. Nanda P (Member)**	**Mr. S. M. Patil (Member)**	**Dr. R. L. Naik (Member)**	**Mr. S. G. Nayak (Member)**	**Smt. S. S. Tambakad (Member)**
Dr. B. F. Ronad (Member)	**Mr. S. Y. Goudappanavar (Member)**	**Mr. V. C. Jainkeri (Member)**	**Mr. S. S. Rathod (Member)**		

Res-7 : BoS members were appraised about the status of students opted for B.E (E&EE) honors degree.

Description: Chairman BoS in EE briefly explained the status of students opted the honours degree. He highlighted that one student name **Mr. Rasool Ahmed** bearing **USN 2BA18EE040** opted for the honours degree and unfortunately the student was unable to take up the course due to ill health. Chairman informed the members that the efforts of the department will continue to motivate the eligible students to take up honors degree option.

Sub-8 : **Appraisal** of activities for AICTE 100 activity points program

Res-8 : BoS members were appraised about the status of AICTE 100 activity points program and the number of points reduced by VTU.

Description: Chairman BoS in EE appraised the VTU circular Dated August 01, 2019 regarding earning of activity points for award of degree for students admitted under 2018 regulations. He mentioned the links for reference and additional reading to know more about the AICTE activity points as given below:
https://vtu.ac.in/wp-content/uploads/2019/09/circ3014.pdf

VTU circular is enclosed as **Annexure-6.**

Sub-9 : Appraisal AICTE Examination Reforms and Policy – implementation process by BEC

Res-9 : BoS members were apprised about AICTE Examination Reforms and Policy – implementation process by BEC.

Description: Chairman BoS in EE appraised the AICTE Examination Reforms and Policy. He mentioned that BEC has framed BEC Examination reforms and Policy document. It has been adopted from the academic year 2020-21. He highlighted that:

- the change in question paper pattern
- two CIEs of 40 marks each
- assignment will be for 10 marks
- assessment of projects, laboratory, seminars will be as per the rubrics.

Sub-10 : Any other matters with permission of chair

a) Post-facto **Approval** of inclusion of Kannada as compulsory subject. **Annexure-7**
b) **Approval** for number of course outcomes and liking them with BLL 1 to 4 for the Semester 3 and 4 of scheme for 2020-21 batch admitted students.
c) **Approval** of online courses for 2020-21 & 2021-22 batch admitted students to fulfil the requirement of their 7th sem online course.

Chairman BoS-EE & Head of Department

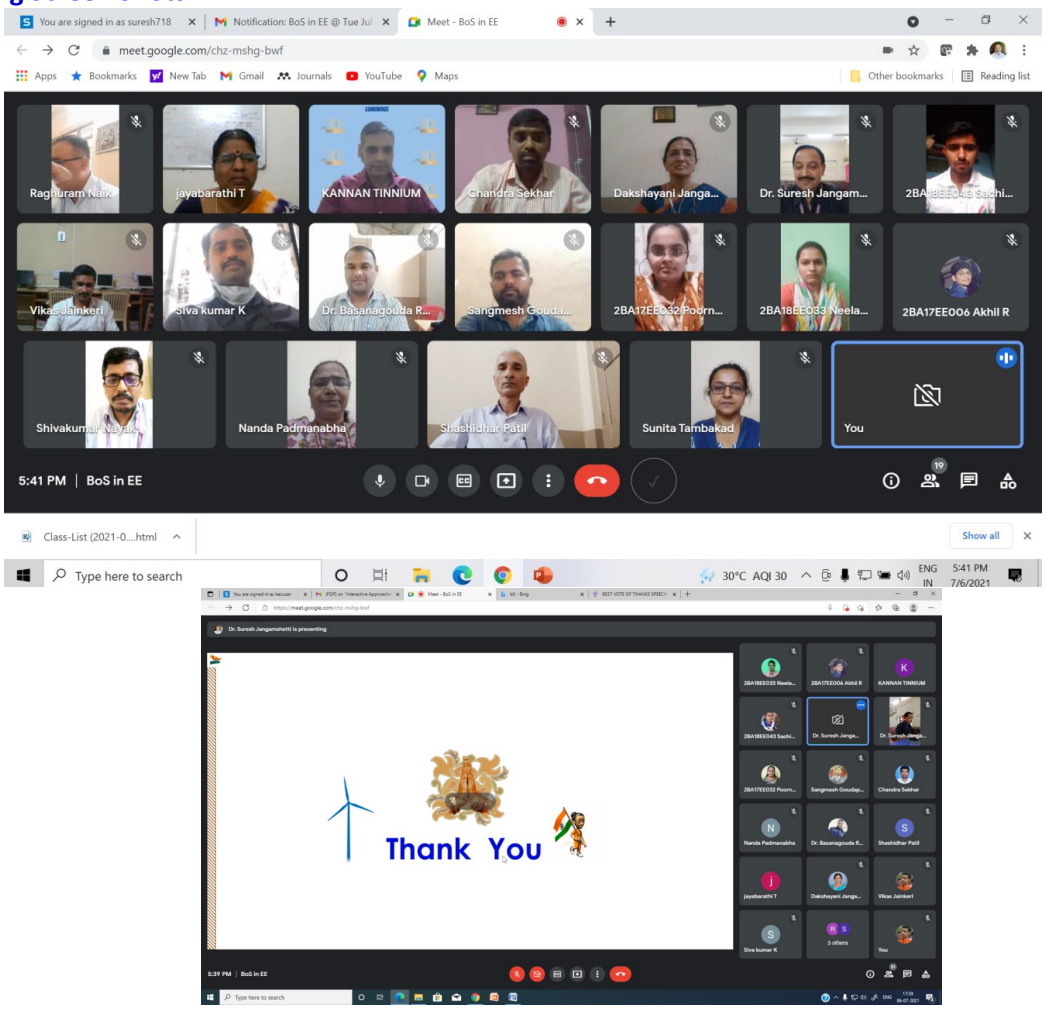
Dr. Siva Kumar K (VTU Nominee)	**Dr. Kannan Tinnium (Industry Expert)**	**Dr. Sarasij Das (Academia)**	**Mr. Veerendra Kavishetti (Alumni)**	**Dr. B. Chandrashekhar (Industry Expert)**	**Dr. T. Jayabharati (Academia & Alumni)**
Dr. D. S. Jangamshetti (Member)	**Smt. Nanda P (Member)**	**Mr. S. M. Patil (Member)**	**Dr. R. L. Naik (Member)**	**Mr. S. G. Nayak (Member)**	**Smt. S. S. Tambakad (Member)**
Dr. B. F. Ronad (Member)	**Mr. S. Y. Goudappanavar (Member)**	**Mr. V. C. Jainkeri (Member)**	**Mr. S. S. Rathod (Member)**		

Res-10 : All members approved (a) (b) and (c) to be adopted and implemented.

Description: Chairman BoS in EE briefly explained about (a) VTU regulations to include Kannada language subject as mandatory at second year level. (b) BLL and the CO linkages. He highlighted that only lower four BLL shall be adopted for theory subjects. Accordingly, the number of COs shall be four in number to match the BLLs for all theory subjects. This will be implemented from the academic year 2021-22 for 2020-21 admitted batch students. The BLLs for laboratory experiments, mini-project and final year project shall be level 5 and 6. Accordingly the COs will be written for laboratory experiments, mini-project and final year project (c) the approval of NPTEL courses by VTU BoS in EE. The courses should not be same as the subjects offered by EE department in their curriculum. The student can also take interdisciplinary subjects. The students can also take subjects offered by IEEE blended learning courses.

Vote of Thanks by Member secretary BoS in EE

Meeting Screen Shots:



Chairman BoS-EE & Head of Department

Dr. Siva Kumar K (VTU Nominee)	**Dr. Kannan Tinnium (Industry Expert)**	**Dr. Sarasij Das (Academia)**	**Mr. Veerendra Kavishetti (Alumni)**	**Dr. B. Chandrashekhar (Industry Expert)**	**Dr. T. Jayabharati (Academia & Alumni)**
Dr. D. S. Jangamshetti (Member)	**Smt. Nanda P (Member)**	**Mr. S. M. Patil (Member)**	**Dr. R. L. Naik (Member)**	**Mr. S. G. Nayak (Member)**	**Smt. S. S. Tambakad (Member)**
Dr. B. F. Ronad (Member)	**Mr. S. Y. Goudappanavar (Member)**	**Mr. V. C. Jainkeri (Member)**	**Mr. S. S. Rathod (Member)**		

Basaveshwar Engineering College (Autonomous) Bagalkot
Department of Electrical and Electronics Engineering

Board of Studies in EE

Date: 06.07.2020 **Time: 14:00 hrs (Online)** **Venue: Virtual**

Meeting Agenda

		 Welcome and Introduction of New Members
Sub-1	:	Appraisal: Previous BoS meetings held on 29.06.2020 Activities and Achievements of students & faculty
Sub-2	:	Approval of scheme of Teaching & Evaluation and syllabus of VII to VIII Semesters BE(E&EE) of 175 credit program (2018-19 admitted batch)
Sub-3	:	Approval of scheme of Teaching & Evaluation and syllabus of V to VIII Semesters BE(E&EE) of 175 credit program (2019-20 admitted batch)
Sub-4	:	Approval of scheme of Teaching & Evaluation and syllabus of III to VIII Semesters BE(E&EE) of 175 credit program (2020-21 admitted batch)
Sub-5	:	Appraisal & Approval of scheme of Teaching & Evaluation and syllabus of 2021-22 batch
Sub-6	:	Appraisal about M.Tech Energy Science & Technology
Sub-7	:	Appraisal of online courses, B.E (E&EE) honors course
Sub-8	:	Appraisal of activities for AICTE 100 activity points program
Sub-9	:	Appraisal AICTE Examination Reforms and Policy – implementation process by BEC
Sub-10	:	Any other matters with permission of chair
		Vote of Thanks

Chairman BoS-EE & Head of Department

Annexure-1a

Basaveshwar Engineering College (Autonomous) Bagalkot
Department of Electrical and Electronics Engineering

Board of Studies in EE

Date: 29.06.2020 **Time: 15:30 hrs (Online)** **Venue: Virtual**

Meeting Agenda

  Welcome and Introduction of Members

Sub-1 : Appraisal: Previous BoS meetings
Activities and Achievements of students & faculty

Sub-2 : Appraisal of scheme of evaluation of V to VIII Semesters BE(E&EE) of 175 credit program (2018-19)

Sub-3 : Approval of syllabus for V & VI Semesters BE(E&EE) of 175 credit program (2018-19)

Sub-4 : Appraisal & Approval of new scheme of Teaching and Evaluation for 2020-21 batch

Sub-5 : Appraisal about M.Tech Energy Science & Technology

Sub-6 : Approval of online courses, B.E (E&EE) honors course

Sub-7 : Appraisal and Approval of activities for AICTE 100 activity points program

Sub-8 : Appraisal AICTE Examination Reforms and Policy – implementation process by BEC

Sub-9 : Any other matters with permission of chair

 Vote of Thanks

Chairman BoS-EE & Head of Department

Annexure-1b

Basaveshwar Engineering College (Autonomous) Bagalkot

Department of Electrical and Electronics Engineering

Members of Board of Studies in E&EE 2019-21 (AY 2021)

1.	 **Dr. S. H. Jangamshetti** Professor & HoD	Head Dept of E&EE BEC (A) Bagalkot	Cell: 9845095956 shjee@becbgk.edu	Chairman BOS, EEED BEC	Wind Energy Conversion Systems, Energy Auditing, Solar PV Systems Design, Solar Energy Conversion Systems, DC distribution and smart grids
	External Members				
1.	 **Dr. Siva Kumar K** Associate Professor	Department of Electrical Engineering, IIT Hyderabad, Kandi, Sangareddy - 502285, Telangana, India	+91-40-2301-6119; ksiva@iith.ac.in	VTU Nominee	Multilevel inverters; open-end winding induction motor drives; Switched Mode Power Conversion; microgrids; Power quality and control
2.	 **Dr. Kannan Tinnium** Senior Vice President Power Solutions Business – R&D	Luminous Power Technologies, Pvt. Ltd., Plot no. 150, Sector 44, Gurgoan-122003, Haryana India	Cell: 8861309018; Off: +91 1244776700 kannan.tinnium@luminousindia.com	Industry	Power system operation and control, smart grid, wind turbine integration
3.	 **Dr. Sarasij Das** Assistant Professor	Department of Electrical Engineering Indian Institute of Science Bangalore, 560012, India Office: room C 316	+91 80 2293 2374 +91 8762007612 sarasij@iisc.ac.in	Academia	Power Systems, Smart Grid, Renewable Energy

4.	 **Mr. Veerendra Kavishetti** Scientist-F, ISRO Bengaluru	#49, Srinilayam, Ashoka Avenue, KR Garden, Murugapallya, Bengalurur-17	9449670481 veer@isac.gov.in	Alumni (1997)	Working in ISRO Bengaluru since 22 years in R&D division
5.	 **Dr. B. Chandrashekhar** Technical Lead	#6, 1st cross, 3rd Main, Ayyppa Nagar 1st block, Ayyappanagar, KR Puram, Bangalore 560036	9663300655/ 8618702419 chandu.2097@gmail.com	Industry	Electric Vehicles Converter topologies for battery charging Battery management system
6.	 **Dr. T. Jayabharati** Senior Professor	School of Electrical Engineering Department of E&EE VIT Vellore - 632014	09488276543 tjayabarathi@vit.ac.in	Academia & Alumni	Power System & Optimisation
	Internal Members				
1.	 **Dr. (Smt) D. S. Jangamshetti** Professor (CAS)	Dept of E&EE BEC (A) Bagalkot	Cell: 9900394330 dsjee@becbgk.edu	Member	Signal processing (DSP) and speech signal processing
2.	 Smt. Nanda P Assoc Prof. (CAS)	Dept of E&EE BEC (A) Bagalkot	Cell: 9900979575 npee@becbgk.edu	Member	Computer Science

3.	 **Mr. S. M. Patil** Assoc Prof. (CAS)	Dept of E&EE BEC (A) Bagalkot	Cell: 9480598009 smpee@becbgk.edu	Member	Power Electronics and Machine Drives
4.	 **Dr. R. L. Naik** Assoc Prof. (CAS)	Dept of E&EE BEC (A) Bagalkot	Cell: 9880529043 rlnee@becbgk.edu	Member	Power Electronics and Multilevel Inverters
5.	 **Mr. S. G. Nayak** Asst Professor	Dept of E&EE BEC (A) Bagalkot	Cell: 9738681084 sgnee@becbgk.edu	Member	Power Electronics
6.	 **Smt. Sunita S. Tambakad** Asst Professor	Dept of E&EE BEC (A) Bagalkot	Cell: 9900489841 sstee@becbgk.edu	Member	Power and Energy Systems
7.	 **Dr. Basanagouda F. Ronad** Professor	Dept of E&EE BEC (A) Bagalkot	Cell: 9449760427 bfree@becbgk.edu	Member	Renewable Energy – Solar PV IPs for Agriculture
8.		Dept of E&EE BEC (A) Bagalkot	Cell: 9916377743 sygee@becbgk.edu	Member	Power and Energy Systems

	Mr. S. Y. Goudappanavar Asst Professor				
9.	 **Mr. Vikas C. Jainkeri** Asst Professor	Dept of E&EE BEC (A) Bagalkot	Cell: 9902004844 vcjee@becbgk.edu	Member	Power & Energy Systems
10.	 **Mr. Sunil S. Rathod** Asst Professor	Dept of E&EE BEC (A) Bagalkot	Cell: 7259244313 ssree@becbgk.edu	Member	Power Systems
	Faculty members (Invitees) External – outside department within BEC - To be invited as per the requirement & availability of expert				
	Students (Invitees)				
1	 **Akhil R**	V Sem, EE 2BA17EE006	+91-8050379192 akhilrk282@gmail.com	Student	
2	 **Poornima Sheeri**	V Sem, EE 2BA17EE032	+91-9483097023 poornimasheeri73@gmail.com	Student	
3	 Mr.Sachin Ganjal	VI Sem, EE 2BA18EE043	+91-8105082038 sachinganjyal@gmail.com	Student	

4	 Miss. Neelganga Goudar	VISem, EE 2BA18EE033	+91-9108607989 goudarng30@gmail.com	Student	

Head of Department
Electrical and Electronics Engineering

Annexure-2

Basaveshwar Engineering College (Autonomous), Bagalkot

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Scheme of Teaching and Evaluation for B.E Electrical and Electronics Engineering based on Joint Board Meeting held on 04-06-2018

2018-19 (admitted batch), 2019-20 (sem 3&4), 2020-21 (sem 4&5), 2021-22 (sem 7&8)

Total Credits for BE =175 (as per VTU/AICTE); Min Credits/sem= 16; Max Credits=28; Average=22

Breakdown of Credits suggested by the VTU Belagavi/ AICTE New Delhi

Sl.	Undergraduate Programme		Current Credits	% allotted by EE	% range as per VTU
1	HSS + Soft skills [6+3+1]		09	05.1	5-10
2	Basic Sciences		25	14.3	10-20
3	Engg. Sciences		21	12.0	10-20
4	Professional Core Courses Advanced C Programming Lab – 2 credits (Mandatory at VI sem, common for circuit branches)		71	40.6	30-40
5	Dept. Electives		21	12.0	10-15
6	Open Elective (VI to VII) 3+3		6	03.4	5-10
7	Mini project (VI) Internship (Min 6 weeks from IV-VI), Registration & Evaluation in VII sem) Project phase-I (VII) Seminar (VIII) Project phase-II (VIII)	2 2 5 1 12	22	12.6	10-15
Total			175	100	100

First Year Course

Subject	Credits	Contact hours
Basic Electrical Engineering	2 (L)+1 (T)	Lectures 2 Hours/week + Tutorial 2 Hours/week

Semester Wise Credit Distribution for Semester-III to VIII

Particulars	Semesters						Total		% of total credits	% range as per VTU
	III	IV	V	VI	VII	VIII				
Core + Lab	16+3	16+3	12+3	6+2+2	6+2	--	71		40.5	30-40
Dept. Elective	--	--	3+3	3	3	3+3+3	21		12.0	10-15
Open Elective	--	--	--	3	3	--	6		03.4	05-10
Mini Project	--	--	--	2	--	--	2	22	12.0	10-15
Internship	--	--	--	--	2	--	2			
Project phase-I	--	--	--	--	5	--	5			
Technical Seminar	--	--	--	--	--	1	1			
Project phase-II	--	--	--	--	--	12	12			
HSS + Soft Skills	--	1	1	3+1	3	--	9		05.1	5-10
Maths	3	3	--	--	--	--	6		--	--
Total	22	23	22	22	24	22	135		--	--

Semester-3 CAY 2019-20 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA335C	Computational Methods for Electrical Science	3	2	2	0	50	50	100
02	UEE351C	Analog and Digital Electronics	4	4	0	0	50	50	100
03	UEE352C	Network Analysis	4	3	2	0	50	50	100
04	UEE353C	Electrical and Electronic Measurements	4	4	0	0	50	50	100
05	UEE354C	Transformers and Induction Machines	4	4	0	0	50	50	100
06	UEE356L	Transformers and Induction Machines Lab	1	0	0	2	50	50	100
07	UEE357L	Electrical and Electronic Measurements Lab	1	0	0	2	50	50	100
08	UEE358L	Network Analysis Lab	1	0	0	2	50	50	100
09	UMA330M	Bridge Course Mathematics-I*	0	3	0	0	50	50	100
10	UBT133M	Environmental Studies**	0	2	0	0	50	50	100
Total			22	21	06	06	500	500	1000

*Bridge Course Mathematics-I : is a mandatory subject only for students admitted to 3rd Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.

**Environmental Studies : is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class / Rank.

Semester-4 CAY 2019-20 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA435C	Statistical Methods for Electrical Science	3	3	0	0	50	50	100
02	UEE451C	Signals and Systems	4	3	2	0	50	50	100
03	UEE452C	Power Electronics	4	4	0	0	50	50	100
04	UEE453C	Operational Amplifiers and Linear IC's	4	4	0	0	50	50	100
05	UEE454C	DC Machines and Synchronous Machines	4	4	0	0	50	50	100
06	UEE456L	Power Electronics Lab	1	0	0	2	50	50	100
07	UEE457L	DC Machines and Synchronous Machines Lab	1	0	0	2	50	50	100
08	UEE458L	Linear IC's Lab	1	0	0	2	50	50	100
09	UMA430M	Bridge Course Mathematics-II*	0	3	0	0	50	50	100
10	UHS001N	Fundamentals of Quantitative Aptitude & Soft Skills	1	2	0	0	50	50	100
11	UHS226M	Constitution of India**	0	2	0	0	50	50	100
Total			23	25	02	06	550	550	1100

*Bridge Course Mathematics –II : is a mandatory subject only for students admitted to 4th Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.

**Constitution of India : is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank.

Semester-5 CAY 2020-21 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE551C	Field Theory	3	2	2	0	50	50	100
02	UEE552C	Digital Signal Processing	3	2	2	0	50	50	100
03	UEE553C	Control Systems	3	2	2	0	50	50	100
04	UEE554C	Generation Transmission and Distribution	3	3	0	0	50	50	100
05	UEE556E	Dept. Elective – 1	3	3	0	0	50	50	100
06	UEE557E	Dept. Elective – 2	3	3	0	0	50	50	100
07	UEE561L	Digital Signal Processing Lab	1	0	0	2	50	50	100
08	UEE562L	Control System Lab	1	0	0	2	50	50	100
09	UEE563L	Analog and Digital Lab	1	0	0	2	50	50	100
10	UHS002N	Advanced Quantitative Aptitude and Soft Skills	1	2	0	0	50	50	100
Total			22	16	8	6	500	500	1000

List of Elective Subjects

Electrical Machine Design	Electrical Engineering Materials
Testing and Commissioning of Electrical Equipment	Micro Electro Mechanical Systems
Advanced Power Electronics	Reactive Power management
Fundamentals of Solar Thermal ECS	

Semester-6 CAY 2020-21 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE651C	Power System Analysis and Stability	3	2	2	0	50	50	100
02	UEE652C	Microcontrollers	3	3	0	0	50	50	100
03	UEE653H	Management and Entrepreneurship	3	3	0	0	50	50	100
04	UEE654E	Dept. Elective – 3	3	3	0	0	50	50	100
05	UEE655E	Open Elective – 1	3	3	0	0	50	50	100
06	UEE661L	Microcontrollers and IoT Lab	1	0	0	2	50	50	100
07	UEE662L	Electrical Auto CAD and MiPower lab	1	0	0	2	50	50	100
08	UEE665P	Mini Project	2	0	0	4	50	50	100
09	UCS659L	Advanced C Programming Lab (mandatory)	2	0	2	2	50	50	100
10	UHS003N	Career Planning and Professional Skills	1	2	0	0	50	50	100
Total			22	16	4	10	500	500	1000

List of Elective Subjects

Modern Control Theory	VLSI Design and Applications
Electrical safety in Industrial plants	Battery Management
Electrical Power Utilization and Drives	Energy Efficient Motors
Fundamentals of Wind Energy Conversion Systems	Computer aided electrical drawing

List of Open Electives Subjects @ 6th Sem	
MATLAB for Engineers	Renewable Energy Resources

Semester-7 CAY 2021-22 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE751C	Computer Applications to Power System	3	3	0	0	50	50	100
02	UEE752C	High Voltage, Switchgear and Protection	3	3	0	0	50	50	100
03	UHS753C	Intellectual Property Rights	3	3	0	0	50	50	100
04	UEE754E	Dept. Elective – 4	3	3	0	0	50	50	100
05	UEE755E	Open. Elective – 2	3	3	0	0	50	50	100
06	UEE761L	Power System Simulation Lab	1	0	0	2	50	50	100
07	UEE762L	High Voltage and Relay Lab	1	0	0	2	50	50	100
08	UEE764I	Internship*	2	0	0	*	50	50	100
09	UEE765P	Project Work Phase – I	5	0	0	8	50	50	100
Total			24	15	0	12	450	450	900

* Working hours will be as per scheduled working hours prescribed by the industry.

List of Elective Subjects

Electrical Machine Drives	Operation Research
Solar Photovoltaic System Design	Standards and Indian Electricity Act
Professional Communication and Technical Writing	Autotronics (Automotive Electronics)
AI Applications to Power Systems	Embedded System and PLC

List of Open Electives Subjects @ 7th Sem	
Energy conservation in Industrial Systems	Electrical Safety for Engineers

Semester-8 CAY 2021-22 [175 credits. 2018-19 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE851E	Dept. Elective – 5	3	3	0	0	50	50	100
02	UEE852E	Dept. Elective – 6	3	3	0	0	50	50	100
03	UEE853E	Dept. Elective – 7	3	3	0	0	50	50	100
04	UEE860S	Technical Seminar	1	0	0	2	50	50	100
05	UEE865P	Project Work Phase – II	12	0	0	24	50	50	100
Total			22	9	0	26	250	250	500

List of Elective Subjects

Power System Operation and Control	Speech Signal processing
Power System Dynamics and Stability	Over Voltages in Power Systems
Data Base management Systems	HVDC Transmission
Energy Conservation, Audit and DSM	Advances in Instrumentation
Flexible AC Transmission Systems	Power System Planning
Digital Control Systems	Smart Grids

Annexure-3

Basaveshwar Engineering College (Autonomous), Bagalkot

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Scheme of Teaching and Evaluation for B.E Electrical and Electronics Engineering based on Joint Board Meeting held on 04-06-2018

2019-20 (admitted batch), 2020-21 (sem 3&4), 2021-22 (sem 4&5), 2022-23 (sem 7&8)

Total Credits for BE =175 (as per VTU/AICTE); Min Credits/sem= 16; Max Credits=28; Average=22

Breakdown of Credits suggested by the VTU Belagavi/ AICTE New Delhi

Sl.	Undergraduate Programme		Current Credits	% allotted by EE	% range as per VTU
1	HSS + Soft skills + Kannada [6+3+1]		10	05.7	5-10
2	Basic Sciences		25	14.3	10-20
3	Engg. Sciences		21	12.0	10-20
4	Professional Core Courses Advanced C Programming Lab – 2 credits (Mandatory at VI sem, common for circuit branches)		71	40.6	30-40
5	Dept. Electives		21	12.0	10-15
6	Open Elective (VI to VII) 3+3		6	03.4	5-10
7	Mini project (VI) Internship (Min 6 weeks from IV-VI), Registration & Evaluation in VII sem) Project phase-I (VII) Technical Seminar (VIII) Project phase-II (VIII)	2 2 4 1 12	21	12.0	10-15
Total			175	100	100

First Year Course

Subject	Credits	Contact hours
Basic Electrical Engineering	2 (L)+1 (T)	Lectures 2 Hours/week + Tutorial 2 Hours/week

Semester Wise Credit Distribution for Semester-III to VIII

Particulars	Semesters						Total		% of total credits	% range as per VTU
	III	IV	V	VI	VII	VIII				
Core + Lab	16+3	16+3	12+3	6+2+2	6+2	--		71	40.5	30-40
Dept. Elective	--	--	3+3	3	3	3+3+3		21	12.0	10-15
Open Elective	--	--	--	3	3	--		6	03.4	05-10
Mini Project	--	--	--	2	--	--	2	21	12.0	10-15
Internship	--	--	--	--	2	--	2			
Project phase-I	--	--	--	--	4	--	4			
Technical Seminar	--	--	--	--	--	1	1			
Project phase-II	--	--	--	--	--	12	12			
HSS + Soft Skills	--	1	1	3+1	3	--		9	05.1	5-10
Maths	3	3	--	--	--	--		6		
Kannada	--	1	--	--	--	--		1		
Total	22	24	22	22	23	22		135		

Semester-3 CAY 2020-21 [175 credits. 2019-20 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA335C	Computational Methods for Electrical Science	3	2	2	0	50	50	100
02	UEE351C	Analog and Digital Electronics	4	4	0	0	50	50	100
03	UEE352C	Network Analysis	4	3	2	0	50	50	100
04	UEE353C	Electrical and Electronic Measurements	4	4	0	0	50	50	100
05	UEE354C	Transformers and Induction Machines	4	4	0	0	50	50	100
06	UEE356L	Transformers and Induction Machines Lab	1	0	0	2	50	50	100
07	UEE357L	Electrical and Electronic Measurements Lab	1	0	0	2	50	50	100
08	UEE358L	Network Analysis Lab	1	0	0	2	50	50	100
09	UMA330M	Bridge Course Mathematics-I*	0	3	0	0	50	50	100
10	UBT133M	Environmental Studies**	0	2	0	0	50	50	100
Total			22	21	06	06	500	500	1000

*Bridge Course Mathematics-I : is a mandatory subject only for students admitted to 3rd Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.

**Environmental Studies : is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class / Rank.

Semester-4 CAY 2020-21 [175 credits. 2019-20 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA435C	Statistical Methods for Electrical Science	3	3	0	0	50	50	100
02	UEE451C	Signals and Systems	4	3	2	0	50	50	100
03	UEE452C	Power Electronics	4	4	0	0	50	50	100
04	UEE453C	Operational Amplifiers and Linear IC's	4	4	0	0	50	50	100
05	UEE454C	DC Machines and Synchronous Machines	4	4	0	0	50	50	100
06	UEE456L	Power Electronics Lab	1	0	0	2	50	50	100
07	UEE457L	DC Machines and Synchronous Machines Lab	1	0	0	2	50	50	100
08	UEE458L	Linear IC's Lab	1	0	0	2	50	50	100
09	UMA430M	Bridge Course Mathematics-II*	0	3	0	0	50	50	100
10	UHS001N	Fundamentals of Quantitative Aptitude & Soft Skills	1	2	0	0	50	50	100
11	UHS226M	Constitution of India**	0	2	0	0	50	50	100
12	UHS488C	Saamskrutika Kannada	1	2	0	0	50	50	100
		OR							
12	UHS489C	Balake Kannada	1	2	0	0	50	50	100
Total			24	27	02	06	600	600	1200

*Bridge Course Mathematics –II	:	is a mandatory subject only for students admitted to 4th Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.
**Constitution of India	:	is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank.
***Saamskrutika Kannada	:	Is for students who speak read and write kannada
***Balake Kannada	:	Is for non-kannada speaking (reading and writing) students

Semester-5 CAY 2021-22 [175 credits. 2019-20 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE551C	Field Theory	3	2	2	0	50	50	100
02	UEE552C	Digital Signal Processing	3	2	2	0	50	50	100
03	UEE553C	Control Systems	3	2	2	0	50	50	100
04	UEE554C	Generation Transmission and Distribution	3	3	0	0	50	50	100
05	UEE5XXE	Dept. Elective – 1	3	3	0	0	50	50	100
06	UEE5XXE	Dept. Elective – 2	3	3	0	0	50	50	100
07	UEE561L	Digital Signal Processing Lab	1	0	0	2	50	50	100
08	UEE562L	Control System Lab	1	0	0	2	50	50	100
09	UEE563L	Analog and Digital Lab	1	0	0	2	50	50	100
10	UHS002N	Advanced Quantitative Aptitude and Soft Skills	1	2	0	0	50	50	100
Total			22	16	8	6	500	500	1000

List of Elective Subjects

Electrical Machine Design	Electrical Engineering Materials
Testing and Commissioning of Electrical Equipment	Micro Electro Mechanical Systems
Advanced Power Electronics	Reactive Power management
Fundamentals of Solar Thermal ECS	

Semester-6 CAY 2021-22 [175 credits. 2019-20 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE651C	Power System Analysis and Stability	3	2	2	0	50	50	100
02	UEE652C	Microcontrollers	3	3	0	0	50	50	100
03	UEE653H	Management and Entrepreneurship	3	3	0	0	50	50	100
04	UEE6XXE	Dept. Elective – 3	3	3	0	0	50	50	100
05	UEE6XXE	Open Elective – 1	3	3	0	0	50	50	100
06	UEE661L	Microcontrollers and IoT Lab	1	0	0	2	50	50	100
07	UEE662L	Electrical Auto CAD and MiPower lab	1	0	0	2	50	50	100
08	UEE665P	Mini Project	2	0	0	4	50	50	100
09	UCS659L	Advanced C Programming Lab (mandatory)	2	0	2	2	50	50	100
10	UHS003N	Career Planning and Professional Skills	1	2	0	0	50	50	100
Total			22	16	4	10	500	500	1000

List of Elective Subjects

Modern Control Theory	VLSI Design and Applications
Electrical safety in Industrial plants	Battery Management
Electrical Power Utilization and Drives	Energy Efficient Motors
Fundamentals of Wind Energy Conversion Systems	Computer aided electrical drawing

List of Open Electives Subjects @ 6th Sem	
MATLAB for Engineers	Renewable Energy Resources

Semester-7 CAY 2022-23 [175 credits. 2019-20 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE751C	Computer Applications to Power System	3	3	0	0	50	50	100
02	UEE752C	High Voltage, Switchgear and Protection	3	3	0	0	50	50	100
03	UEE753H	Intellectual Property Rights	3	3	0	0	50	50	100
04	UEE7XXE	Dept. Elective – 4	3	3	0	0	50	50	100
05	UEE7XXE	Open. Elective – 2	3	3	0	0	50	50	100
06	UEE761L	Power System Simulation Lab	1	0	0	2	50	50	100
07	UEE762L	High Voltage and Relay Lab	1	0	0	2	50	50	100
08	UEE764I	Internship*	2	0	0	*	50	50	100
09	UEE766P	Project Phase – I	4	0	0	8	50	50	100
Total			23	15	0	12	450	450	900

* Working hours will be as per scheduled working hours prescribed by the industry.

List of Elective Subjects

Electrical Machine Drives	Operation Research
Solar Photovoltaic System Design	Standards and Indian Electricity Act
Professional Communication and Technical Writing	Autotronics (Automotive Electronics)
AI Applications to Power Systems	Embedded System and PLC

List of Open Electives Subjects @ 7th Sem	
Energy conservation in Industrial Systems	Electrical Safety for Engineers

Semester-8 CAY 2022-23 [175 credits. 2019-20 admitted batch]

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE8XXE	Dept. Elective – 5	3	3	0	0	50	50	100
02	UEE8XXE	Dept. Elective – 6	3	3	0	0	50	50	100
03	UEE8XXE	Dept. Elective – 7	3	3	0	0	50	50	100
04	UEE860S	Technical Seminar	1	0	0	2	50	50	100
05	UEE865P	Project Work Phase – II	12	0	0	24	50	50	100
Total			22	9	0	26	250	250	500

List of Elective Subjects

Power System Operation and Control	Speech Signal processing
Power System Dynamics and Stability	Over Voltages in Power Systems
Data Base management Systems	HVDC Transmission
Energy Conservation, Audit and DSM	Advances in Instrumentation
Flexible AC Transmission Systems	Power System Planning
Digital Control Systems	Smart Grids

Basaveshwar Engineering College (Autonomous), Bagalkot

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Scheme of Teaching and Evaluation for B.E Electrical and Electronics Engineering for AY 2020-21

(based on Joint Board Meeting held on Saturday 09.05.2020 and 22.05.2021)

Total Credits for BE =175 (as per VTU/AICTE); Min Cr/sem=16; Max Cr/sem=28; Ave=22

Prelude: In order to increase the industry participation in BEC academics, it is felt that:

(1) 'Final year projects should be done in industry by BEC students'
(2) At least one subject/sem should be taught by an industry expert
(3) Mentoring BEC students by distinguished/experienced alumni

(1) To visualize this, students who go for industry internship after 3rd year, must discuss with industry for taking up their final year project in same or referred industry. Usually industries will agree, if students are permitted to do the project in industry. This calls for a reworked scheme, where 8th semester scheme should not have subjects that require presence of students on campus. Hence the following propositions are presented:

- **a. that the subjects of 8th sem (usually 3 elective subjects) can be included in early semesters**
- **b. that the HSS subjects be included in 8th sem and students be given an option to study these subjects online through recognized platforms**
- **c. Project Phase – I and phase – II be merged.**
- **d. If industry requires students to complete/continue the project immediately after internship, i.e in 7th semester, then 7th & 8th semesters can be flipped for such students (if 50% student opt for)**

(2) To visualize this, the institute can use online teaching practice adopted during Covid-19 pandemic. We can enter into MoU/contract with core industries, and request them to engage a subject per semester, including assessment. One internal faculty can be assigned to coordinate the industry-lecture activity.

(3) To visualize this, current students can be connected with a distinguished alumni for mentoring/hand-holding. The paring has to be done when students take admission to first year. The students shall remain attached to the mentor till they graduate.

Keeping this in mind, the scheme for E&EE is prepared. It is also kept in mind to distribute the credits as per AICTE/VTU requirements.

Breakdown of Credits suggested by the VTU Belagavi/ AICTE New Delhi

Sl.	Undergraduate Programme		Current Credits	% allotted by EE	% range as per VTU
1	HSS + Soft skills + UHV-2 + Kannada + English [2X3+1x3+0+1+1]		11	06.3	5-10
2	Basic Sciences		25	14.3	10-20
3	Engg. Sciences		20	11.4	10-20
4	Professional Core Courses Advanced C Programming Laboratory– 2 credits (Mandatory at VI sem, common for circuit branches)		69	39.4	30-40
5	Dept. Electives		18	10.3	10-15
6	Open Elective at V, VI & VII (3+3+3)		9	05.1	5-10
7	Online course (3)		3	01.7	
8	Mini project (VI) Internship (Min 6 weeks from IV-VI), Registration & Evaluation in -VII) Technical Seminar (VII) Project Work (VIII)	2 2 1 15	20	11.4	10-15
Total			175	100	100

First Year Course

Subject	Credits	Contact hours
Basic Electrical Engineering	2 (L)+1 (T)	Lectures 2 Hours/week + Tutorial 2 Hours/week

Semester Wise Credit Distribution for Semester-III to VIII

Particulars	Semesters						Total		% of total credits	% range as per VTU
	III	IV	V	VI	VII	VIII				
Core + Laboratory	18+3	16+3	12+3	6+2+2	3+1	--	69		39.4	30-40
Dept. Electives	--	--	3	3+3	3+3+3	---	18		10.3	10-15
Open Electives	--	--	3	3	3	--	9		05.1	05-10
Online Course	--	--	--	--	3	--	3		01.7	
Mini Project	--	--	--	2	--	--	2	20	11.0	10-15
Internship	--	--	--	--	2	--	2			
Technical Seminar	--	--	--	--	1	---	1			
Project work	--	--	--	--	--	15	15			
HSS + Soft Skills	--	1	1	1	--	3+3	9		05.7	5-10
UHV-2 (Mandatory)	--	--	--	--	---	---	---			
Kannada (HSS)		1					1			
Maths	3	3	--	--	--	--	6			
Total	24	24	22	22	22	21	135			

* Additional online course (student's choice)

Semester-I Physics Group (Common to branches EE, EC EI, CS, IS & AI)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA161C	Engineering Mathematics -I	4.0	3	2	0	50	50	100
02	UPH162C	Engineering Physics	4.0	3	2	0	50	50	100
03	UEE164C	Basic Electrical Engineering	3.0	2	2	0	50	50	100
04	UCS165C	Programming with C	3.0	3	-	0	50	50	100
05	UEC169C	Basic Electronics	3.0	2	2	0	50	50	100
06	UHS126M	Constitution of India*	0	2	0	0	50	50	100
07	UPH166L	Engineering Physics Laboratory	1.5	0	0	3	50	50	100
08	UCS167L	C Programming Laboratory	1.5	0	0	3	50	50	100
Total			20	15	8	6	400	400	800

Semester-II Chemistry Group (Common to branches EE, EC EI, CS, IS & AI)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA261C	Engineering Mathematics -I	4.0	3	2	0	50	50	100
02	UME263C	Elements of Mechanical Engineering	3.0	2	2	0	50	50	100
03	UCH268C	Engineering Chemistry	4.0	3	2	0	50	50	100
04	UCV270C	Engineering Mechanics	3.0	2	2	0	50	50	100
05	UBT233M	Environmental Studies*	0	2	0	0	50	50	100
06	UCH272L	Engineering Chemistry Laboratory	1.5	0	0	3	50	50	100
07	UME275L	Computer Aided Engineering Graphics	2.0	0	0	4	50	50	100
08	UBE176L	Basic Engineering Laboratory	1.5	0	0	4	100	-	100
09	UHS177C	English for Engineers	1.0	2	0	0	50	50	100
Total			20	14	08	11	500	400	900

Semester-3 CAY 2021-22 (175 Credits 2020-21 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA3XXC	Numerical Techniques and Integral Transforms	3	3	0	0	50	50	100
02	UEE361C	Network Analysis	4	3	2	0	50	50	100
03	UEE362C	Electrical Machines-I	3	3	0	0	50	50	100
04	UEE363C	Analog and Digital Electronics	4	4	0	0	50	50	100
05	UEE364C	Electrical and Electronic Measurements	3	3	0	0	50	50	100
06	UEE365C	Field Theory	4	3	2	0	50	50	100
07	UEE371L	Network Analysis Laboratory	1	0	0	2	50	50	100
08	UEE372L	Electrical Machines-I Laboratory	1	0	0	2	50	50	100
09	UEE373L	Analog, Digital and Measurement Laboratory	1	0	0	2	50	50	100
10	UMA330M	Bridge Course Mathematics-I*	0	3	0	0	50	50	100
11	UBT133M	Environmental Studies**	0	2	0	0	50	50	100
Total			24	24	04	06	550	550	1100

*Bridge Course Mathematics-I	:	is a mandatory subject only for students admitted to 3rd Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade/class. A PP/NP grade will be awarded for passing/not passing the subject.
**Environmental Studies	:	is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class / Rank.

Semester-4 CAY 2021-22 (175 Credits 2020-21 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA4XXC	Statistics and Probability Distributions	3	3	0	0	50	50	100
02	UEE461C	Electrical Machines-II	4	4	0	0	50	50	100
03	UEE462C	Generation Transmission and Distribution	3	3	0	0	50	50	100
04	UEE463C	Control Systems	3	2	2	0	50	50	100
05	UEE464C	Signals and Systems	3	2	2	0	50	50	100
06	UEE465C	Operational Amplifiers and Linear IC's	3	3	0	0	50	50	100
07	UEE471L	Electrical Machines-II Laboratory	1	0	0	2	50	50	100
08	UEE472L	Electrical AutoCAD Laboratory	1	0	0	2	50	50	100
09	UEE473L	Operational Amplifiers and Linear IC's Laboratory	1	0	0	2	50	50	100
10	UMA430M	Bridge Course Mathematics-II*	0	3	0	0	50	50	100
11	UHS001N	Fundamentals of Quantitative Aptitude and Soft Skills	1	2	0	0	50	50	100
12	UHS226M	Constitution of India**	0	2	0	0	50	50	100
13	UHS488C	Saamskrutika Kannada***	1	2	0	0	50	50	50
		OR							
14	UHS489C	Balake Kannada***	1	2	0	0	50	50	50
Total			24	26	04	06	650	650	1300

*Bridge Course Mathematics –II	:	is a mandatory subject only for students admitted to 4th Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.
**Constitution of India	:	is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank.
***Saamskrutika Kannada ***Balake Kannada	:	Is for students who speak read and write kannada Is for non-kannada speaking reading and writing

Semester-5 CAY 2022-23 (175 Credits 2020-21 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE561C	Power System Analysis and Stability	3	3	0	0	50	50	100
02	UEE562C	Power Electronics	3	3	0	0	50	50	100
03	UEE563C	Renewable Energy Resources	3	3	0	0	50	50	100
04	UEE564C	Digital Signal Processing	3	3	0	0	50	50	100
05	UEE5XXE	Dept. Elective – 1	3	3	0	0	50	50	100
06	UEE5XXN	Open Elective – 1	3	3	0	0	50	50	100
07	UEE571L	Power Electronics Laboratory	1	0	0	2	50	50	100
08	UEE572L	Renewable Energy Resources Laboratory	1	0	0	2	50	50	100
09	UEE573L	Digital Signal Processing Laboratory	1	0	0	2	50	50	100
10	UHS002N	Advanced Quantitative Aptitude and Soft Skills	1	2	0	0	50	50	100
Total			22	20	00	06	500	500	1000

List of Elective Subjects

Fundamentals of Solar Thermal ECS	Electrical Engineering Materials
Testing and Commissioning of Electrical Equipments	Micro Electro Mechanical Systems
Advanced Power Electronics	Reactive Power management
Professional Communication and Technical Writing	Standards and Indian Electricity Act
Advances in Instrumentation	Autotronics (Automotive Electronics)

List of Open Electives Subjects @ 5th Sem	
MAT**LABORATORY**for Engineers	Renewable Energy Resources

Semester-6 CAY 2022-23 (175 Credits 2020-21 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE661C	Computer Applications to Power System	3	3	0	0	50	50	100
02	UEE662C	Microcontrollers and IoT	3	3	0	0	50	50	100
03	UEE6XXE	Dept. Elective – 2	3	3	0	0	50	50	100
04	UEE6XXE	Dept. Elective – 3	3	3	0	0	50	50	100
05	UEE6XXN	Open Elective – 2	3	3	0	0	50	50	100
06	UEE671L	Power System Simulation Laboratory	1	0	0	2	50	50	100
07	UEE672L	Microcontrollers and IoT Laboratory	1	0	0	2	50	50	100
08	UEE681P	Mini Project	2	0	0	4	50	50	100
09	UCS659L	Advanced C P Laboratory (mandatory)	2	0	2	2	50	50	100
10	UHS003N	Career Planning and Professional Skills	1	2	0	0	50	50	100
11	UHSXXXX	Universal Human Values-II	0	3	0	0	50	50	100
Total			22	20	02	10	550	550	1100

List of Elective Subjects

Modern Control Theory	VLSI Design and Applications
Electrical safety in Industrial plants	Battery Technologies
Internet of Things	Energy Efficient Motors
Embedded System and PLC	Electrical Power Utilization and Drives
Data Base management Systems	Electrical Machine Design
AI Applications to Power Systems	Energy Conservation, Audit and DSM

List of Open Electives Subjects @ 6th Sem	
Electric Vehicle	Fundamentals of Wind Energy Conversion Systems

• Universal Human Values-II	:	is a mandatory subject for all EE students admitted to 6th sem. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank. A PP/NP grade will be awarded for passing/not passing the subject.

Semester-7 **CAY 2023-24 (175 Credits 2020-21 admitted batch)**

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE761C	High Voltage, Switchgear and Protection	3	3	0	0	50	50	100
02	UEE7XXE	Dept. Elective – 4	3	3	0	0	50	50	100
03	UEE7XXE	Dept. Elective – 5	3	3	0	0	50	50	100
04	UEE7XXE	Dept. Elective – 6	3	3	0	0	50	50	100
05	UEE7XXN	Open Elective – 3	3	3	0	0	50	50	100
06	UEE771L	High Voltage and Relay Laboratory	1	0	0	2	50	50	100
07	UEE781I	Internship*	2	0	0	*	50	50	100
08	UEE782S	Technical Seminar	1	0	0	2	50	50	100
09	UEEXXXX	MOOCS online course (4/8/12 weeks)	3	0	0	0	0	0	100
Total			22	15	0	04	400	400	900

* **Working hours will be as per scheduled working hours prescribed by the industry.**

List of Elective Subjects

Solar Photovoltaic System Design	Operation Research
Power System Planning	Smart Grids
Power System Operation and Control	Power System Dynamics and Stability
Flexible AC Transmission Systems	HVDC Transmission
Over Voltages in Power Systems	Battery Energy Management Systems
Digital Control Systems	Electrical Vehicles

List of Open Electives Subjects @ 7th Sem	
Energy conservation in Industrial Systems	Electrical Safety for Engineers

Semester-8 **CAY 2023-24 (175 Credits 2020-21 admitted batch)**

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UHSXXXN	Intellectual Property Rights (online)	3	3	0	0	50	50	100
02	UHSXXXN	Management and Entrepreneurship (online)	3	3	0	0	50	50	100
03	UEE881P	Project Work*	15	0	0	30	50	50	100
Total			21	6	0	30	150	150	300

- **Industry or Inhouse R&D labs**

Basaveshwar Engineering College (Autonomous), Bagalkot

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Scheme of Teaching and Evaluation for B.E Electrical and Electronics Engineering for AY 2021-22

(based on Joint Board Meeting held on Saturday 09.05.2020 and 22.05.2021)

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Prelude: In order to increase the industry participation in BEC academics, it is felt that:

(1) 'Final year projects should be done in industry by BEC students'
(2) At least one subject/sem should be taught by an industry expert
(3) Mentoring BEC students by distinguished/experienced alumni

(1) To visualize this, students who go for industry internship after 3rd year, must discuss with industry for taking up their final year project in same or referred industry. Usually industries will agree, if students are permitted to do the project in industry. This calls for a reworked scheme, where 8th semester scheme should not have subjects that require presence of students on campus. Hence the following propositions are presented:

- **a. that the subjects of 8th sem (usually 3 elective subjects) can be included in early semesters**
- **b. that the HSS subjects be included in 8th sem and students be given an option to study these subjects online through recognized platforms**
- **c. Project Phase – I and phase – II be merged.**
- **d. If industry requires students to complete/continue the project immediately after internship, i.e in 7th semester, then 7th & 8th semesters can be flipped for such students (if 50% student opt for)**

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Keeping this in mind, the scheme for E&EE is prepared. It is also kept in mind to distribute the credits as per AICTE/VTU requirements.

Breakdown of Credits suggested by the VTU Belagavi/ AICTE New Delhi

Sl.	Undergraduate Programme		Current Credits	% allotted by EE	% range as per VTU
1	HSS + Soft skills + UHV-2 + Kannada + English [2X3+1x3+0+1+1]		11	06.3	5-10
2	Basic Sciences		25	14.3	10-20
3	Engg. Sciences		20	11.4	10-20
4	Professional Core Courses Advanced C Programming Lab – 2 credits (Mandatory at VI sem, common for circuit branches)		69	39.4	30-40
5	Dept. Electives		18	10.3	10-15
6	Open Elective at V, VI & VII (3+3+3)		9	05.1	5-10
7	Online course (3)		3	01.7	
8	Mini project (VI) Internship (Min 6 weeks from IV-VI), Registration & Evaluation in -VII) Technical Seminar (VII) Project work (VIII)	2 2 1 15	20	11.4	10-15
Total			175	100	100

First Year Course

Subject	Credits	Contact hours
Basic Electrical Engineering	2 (L)+1 (T)	Lectures 2 Hours/week + Tutorial 2 Hours/week

Semester Wise Credit Distribution for Semester-III to VIII

Particulars	Semesters						Total		% of total credits	% range as per VTU
	III	IV	V	VI	VII	VIII				
Core + Lab	18+3	16+3	12+3	6+2+2	3+1	--	69		39.4	30-40
Dept. Electives	--	--	3	3+3	3+3+3	---	18		10.3	10-15
Open Electives	--	--	3	3	3	--	9		05.1	05-10
Online Course	--	--	--	--	3	--	3		01.7	
Mini Project	--	--	--	2	--	--	2	20	11.0	10-15
Internship	--	--	--	--	2	--	2			
Technical Seminar	--	--	--	--	1	---	1			
Project work	--	--	--	--	--	15	15			
HSS + Soft Skills	--	1	1	1	--	3+3	9		05.7	5-10
UHV-2 (Mandatory)	--	--	--	--	---	---	---			
Kannada (HSS)		1					1			
Maths	3	3	--	--	--	--	6			
Total	24	24	22	22	22	21	135			

* additional online course (student's choice)

Semester-I Physics Group (Common to branches EE, EC EI, CS, IS & AI)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA161C	Engineering Mathematics -I	4.0	3	2	0	50	50	100
02	UPH162C	Engineering Physics	4.0	3	2	0	50	50	100
03	UEE164C	Basic Electrical Engineering	3.0	2	2	0	50	50	100
04	UCS165C	Programming with C	3.0	3	0	0	50	50	100
05	UEC169C	Basic Electronics	3.0	2	2	0	50	50	100
06	UHS126M	Constitution of India*	0	2	0	0	50	50	100
07	UPH166L	Engineering Physics Laboratory	1.5	0	0	3	50	50	100
08	UCS167L	C Programming Laboratory	1.5	0	0	3	50	50	100
Total			20	15	8	6	400	400	800

Semester-II Chemistry Group (Common to branches EE, EC EI, CS, IS & AI)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA261C	Engineering Mathematics -I	4.0	3	2	0	50	50	100
02	UME263C	Elements of Mechanical Engineering	3.0	2	2	0	50	50	100
03	UCH268C	Engineering Chemistry	4.0	3	2	0	50	50	100
04	UCV270C	Engineering Mechanics	3.0	2	2	0	50	50	100
05	UBT233M	Environmental Studies*	0	2	0	0	50	50	100
06	UCH272L	Engineering Chemistry Laboratory	1.5	0	0	3	50	50	100
07	UME275L	Computer Aided Engineering Graphics	2.0	0	0	4	50	50	100
08	UBE176L	Basic Engineering Laboratory	1.5	0	0	4	100	-	100
09	UHS177C	English for Engineers	1.0	2	0	0	50	50	100
Total			20	14	08	11	500	400	900

Semester-3 CAY 2022-23 (175 Credits 2021-22 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA3XXC	Numerical Techniques and Integral Transforms	3	3	0	0	50	50	100
02	UEE361C	Network Analysis	4	3	2	0	50	50	100
03	UEE362C	Electrical Machines-I	3	3	0	0	50	50	100
04	UEE363C	Analog and Digital Electronics	4	4	0	0	50	50	100
05	UEE364C	Electrical and Electronic Measurements	3	3	0	0	50	50	100
06	UEE365C	Field Theory	4	3	2	0	50	50	100
07	UEE371L	Network Analysis Laboratory	1	0	0	2	50	50	100
08	UEE372L	Electrical Machines-I Laboratory	1	0	0	2	50	50	100
09	UEE373L	Analog, Digital and Measurement Laboratory	1	0	0	2	50	50	100
10	UMA330M	Bridge Course Mathematics-I*	0	3	0	0	50	50	100
11	UBT133M	Environmental Studies**	0	2	0	0	50	50	100
Total			24	24	04	06	550	550	1100

*Bridge Course Mathematics-I	:	is a mandatory subject only for students admitted to 3rd Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade/class. A PP/NP grade will be awarded for passing/not passing the subject.
**Environmental Studies	:	is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class / Rank.

Semester-4 CAY 2022-23 (175 Credits 2021-22 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UMA4XXC	Statistics and Probability Distributions	3	3	0	0	50	50	100
02	UEE461C	Electrical Machines-II	4	4	0	0	50	50	100
03	UEE462C	Generation Transmission and Distribution	3	3	0	0	50	50	100
04	UEE463C	Control Systems	3	2	2	0	50	50	100
05	UEE464C	Signals and Systems	3	2	2	0	50	50	100
06	UEE465C	Operational Amplifiers and Linear IC's	3	3	0	0	50	50	100
07	UEE471L	Electrical Machines-II Laboratory	1	0	0	2	50	50	100
08	UEE472L	Electrical AutoCAD Laboratory	1	0	0	2	50	50	100
09	UEE473L	Operational Amplifiers and Linear IC's Laboratory	1	0	0	2	50	50	100
10	UMA430M	Bridge Course Mathematics-II*	0	3	0	0	50	50	100
11	UHS001N	Fundamentals of Quantitative Aptitude and Soft Skills	1	2	0	0	50	50	100
12	UHS226M	Constitution of India**	0	2	0	0	50	50	100
13	UHS488C	Saamskrutika Kannada***	1	2	0	0	50	50	50
		OR							
14	UHS489C	Balake Kannada***	1	2	0	0	50	50	50
Total			24	26	04	06	650	650	1300

*Bridge Course Mathematics –II	:	is a mandatory subject only for students admitted to 4th Semester through lateral entry scheme (Diploma quota). Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.
**Constitution of India	:	is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank.
***Saamskrutika Kannada ***Balake Kannada	:	Is for students who speak read and write kannada Is for non-kannada speaking reading and writing

Semester-5 CAY 2023-24 (175 Credits 2021-22 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE561C	Power System Analysis and Stability	3	3	0	0	50	50	100
02	UEE562C	Power Electronics	3	3	0	0	50	50	100
03	UEE563C	Renewable Energy Resources	3	3	0	0	50	50	100
04	UEE564C	Digital Signal Processing	3	3	0	0	50	50	100
05	UEE5XXE	Dept. Elective – 1	3	3	0	0	50	50	100
06	UEE5XXN	Open Elective – 1	3	3	0	0	50	50	100
07	UEE571L	Power Electronics Laboratory	1	0	0	2	50	50	100
08	UEE572L	Renewable Energy Resources Laboratory	1	0	0	2	50	50	100
09	UEE573L	Digital Signal Processing Laboratory	1	0	0	2	50	50	100
10	UHS002N	Advanced Quantitative Aptitude and Soft Skills	1	2	0	0	50	50	100
Total			22	20	00	06	500	500	1000

List of Elective Subjects

Fundamentals of Solar Thermal ECS	Electrical Engineering Materials
Testing and Commissioning of Electrical Equipments	Micro Electro Mechanical Systems
Advanced Power Electronics	Reactive Power management
Professional Communication and Technical Writing	Standards and Indian Electricity Act
Advances in Instrumentation	Autotronics (Automotive Electronics)

List of Open Electives Subjects @ 5th Sem	
MAT**LABORATORY** for Engineers	Renewable Energy Resources

Semester-6 CAY 2023-24 (175 Credits 2021-22 admitted batch)

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE661C	Computer Applications to Power System	3	3	0	0	50	50	100
02	UEE662C	Microcontrollers and IoT	3	3	0	0	50	50	100
03	UEE6XXE	Dept. Elective – 2	3	3	0	0	50	50	100
04	UEE6XXE	Dept. Elective – 3	3	3	0	0	50	50	100
05	UEE6XXN	Open Elective – 2	3	3	0	0	50	50	100
06	UEE671L	Power System Simulation Laboratory	1	0	0	2	50	50	100
07	UEE672L	Microcontrollers and IoT Laboratory	1	0	0	2	50	50	100
08	UEE681P	Mini Project	2	0	0	4	50	50	100
09	UCS659L	Advanced C P Laboratory (mandatory)	2	0	2	2	50	50	100
10	UHS003N	Career Planning and Professional Skills	1	2	0	0	50	50	100
11	UHSXXXX	Universal Human Values-II	0	3	0	0	50	50	100
Total			22	20	02	10	550	550	1100

List of Elective Subjects

Modern Control Theory	VLSI Design and Applications
Electrical safety in Industrial plants	Battery Technologies
Internet of Things	Energy Efficient Motors
Embedded System and PLC	Electrical Power Utilization and Drives
Data Base management Systems	Electrical Machine Design
AI Applications to Power Systems	Energy Conservation, Audit and DSM

List of Open Electives Subjects @ 6th Sem	
Electric Vehicle	Fundamentals of Wind Energy Conversion Systems

• Universal Human Values-II	:	is a mandatory subject for all EE students admitted to 6th sem. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank. A PP/NP grade will be awarded for passing/not passing the subject.

Semester-7 **CAY 2024-25 (175 Credits 2021-22 admitted batch)**

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE761C	High Voltage, Switchgear and Protection	3	3	0	0	50	50	100
02	UEE7XXE	Dept. Elective – 4	3	3	0	0	50	50	100
03	UEE7XXE	Dept. Elective – 5	3	3	0	0	50	50	100
04	UEE7XXE	Dept. Elective – 6	3	3	0	0	50	50	100
05	UEE7XXN	Open Elective – 3	3	3	0	0	50	50	100
06	UEE771L	High Voltage and Relay Laboratory	1	0	0	2	50	50	100
07	UEE781I	Internship*	2	0	0	*	50	50	100
08	UEE782S	Technical Seminar	1	0	0	2	50	50	100
09	UEEXXXX	MOOCS online course (4/8/12 weeks)	3	0	0	0	0	0	100
Total			22	15	0	04	400	400	900

* **Working hours will be as per scheduled working hours prescribed by the industry.**

List of Elective Subjects

Solar Photovoltaic System Design	Operation Research
Power System Planning	Smart Grids
Power System Operation and Control	Power System Dynamics and Stability
Flexible AC Transmission Systems	HVDC Transmission
Over Voltages in Power Systems	Battery Energy Management Systems
Digital Control Systems	Electrical Vehicles

List of Open Electives Subjects @ 7th Sem	
Energy conservation in Industrial Systems	Electrical Safety for Engineers

Semester-8 **CAY 2024-25 (175 Credits 2021-22 admitted batch)**

Sl.	Sub Code	Subject	C	Hrs/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UHSXXXN	Intellectual Property Rights (online)	3	3	0	0	50	50	100
02	UHSXXXN	Management and Entrepreneurship (online)	3	3	0	0	50	50	100
03	UEE881P	Project Work*	15	0	0	30	50	50	100
Total			21	6	0	30	150	150	300

- **Industry or Inhouse R&D labs**

Annexure-6

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
ಬೆಳಗಾವಿ ಅಧಿನಿಯಮ ೧೯೯೪ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ
"ಜ್ಞಾನ ಸಂಗಮ", ಬೆಳಗಾವಿ-೫೯೦೦೧೮, ಕರ್ನಾಟಕ, ಭಾರತ

Visvesvaraya Technological University
(State University of Government of Karnataka Established as per the VTU Act, 1994)
"Jnana Sangama" Belagavi-590018, Karnataka, India
Phone: (0831) 2498100, Fax: (0831) 2405467, Website: vtu.ac.in

Dr. A. S. Deshpande B.E., M.Tech., Ph.D
Registrar

Phone: (0831) 2498100
Fax: (0831) 2405467

Ref: VTU/BGM/BOS/A9/2020-21 / 447

Date: 27 APR 2021

CIRCULAR

Subject: Activity points for the award of Bachelor's Degree - reg

Reference:
1. AICTE Activity point program (Model Internship Guidelines)
2. VTU/BGM/OS-Aca/Cirs/2020-21/5551, dated: 30.01.2021
2. Hon'ble Vice-Chancellor's Approval Dated:27.04.2021

With reference to the above and pursuant to the AICTE Activity point program, Visvesvaraya Technological University, Belagavi has notified regarding the activity points to be earned by the B.E/B.Tech., students.

Now, because of Covid-19 pandemic, it may not be possible for the students to earn the prescribed AICTE Activity points and get eligibility for the award of degree. Hence as a one-time measure, the number of activity points to be earned by the students is reduced and the same is mentioned in the below table. These reduced points may be proportionality equated to the prescribed activity points-

Sl.no	Student Category	Activity point prescribed by AICTE	Reduced to
1	Day college Regular student admitted to the 4 years Degree program (admitted during 2018-19 and 2019-20)	100	**50**
2	Student entering 4 years Degree programme through lateral entry (admitted during 2019 -20 and 2020-21)	75	**25**
3	The student transferred from other Universities to the fifth semester (admitted during 2020-21)	50	**25**

This is for information and needful in the matted.

Sd/-
REGISTRAR

To,
1. The Principals of all Affiliated/Constituent /Autonomous Engineering Colleges and all Schools of Architecture under the ambit of VTU Belagavi.
2. The Chairpersons of all Departments, Centres for PG Studies in Belagavi, Kalaburgi, Muddenahalli, and Mysore.

Copy to.
1. To the Hon'ble Vice-Chancellor through the secretary to VC, VTU Belagavi for information
2. The Registrar (Evaluation), VTU Belagavi for information.
3. The Regional Directors (I/c) of all the regional offices of VTU for circulation.
4. The Special Officer CNC VTU Belagavi for uploading on VTU website
5. PS to Registrar VTU Belagavi
6. All the concerned Special Officer/s and Caseworker/s of the academic section, VTU, Belagavi

REGISTRAR

Annexure-7

Visvesvaraya Technological University
ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ
"Jnana Sangama" Belagavi-590018, Karnataka State, India

Phone : (0831)2405468
Fax : (0831)2405467
Email : registrar@vtu.ac.in
Website : www.vtu.ac.in

Ref: VTU/Aca/A-9/2020-21/ 2110 Dated: 04 SEP 2020

CIRCULAR

Sub: Kannada Language as compulsory course to B.E./B.Tech./B.arch. programmes; a revision.
Ref: 1. Instructions of Kannada Aabhivridhi Pradikara, Government of Karnataka. 2. Hon'ble Vice-Chancellor's approval dated03.09.2020

With reference to the above subject, all the Autonomous Engineering Colleges under VTU are informed to modify the scheme of teaching and examinations of Architecture, Engineering, and B.Plan programmes from 2020-21 as indicated below.

(i) Kannada Language to be prescribed as a compulsory credit course to students of the first year B.Arch programme, the third semester of B. Planning and B.E./B.Tech programme of scheme 2018. The course shall be evaluated considering CIE (progressive) similar to the 2018 scheme of programmes that apply for affiliated colleges. This course apply to the students of B.Planning and B.E./B.Tech. 3 years (lateral entry) students also. **Kannada Language shall be a head of passing and shall be considered for the vertical progression of students from an even semester to the subsequent odd semester**

(ii) Kannada Language to be prescribed as a compulsory credit course to students of the first year B.Arch programme from 2020 -21 onwards. The course shall be evaluated considering both CIE (progressive) and SEE. **Kannada Language shall be a head of passing and shall be considered for the vertical progression of students from an even semester to the subsequent odd semester.**

(iii) Kannada Language to be prescribed as a compulsory credit course to students of second-year Engineering and B.Plan programmes from 2020-21 onwards so that the course is common to both students admitted to 4 years (regular students) and 3 years (lateral entry students). The course shall be evaluated considering both CIE (progressive) and SEE. **Kannada Language shall a head of passing and shall be considered for the vertical progression of students from an even semester to the subsequent odd semester.**

VTU under the guidance of **Patyya Pusthaka Rachana Samithi** (Tantrika Shishana) constituted by the Government of Karnataka has prepared Kannada Textbooks titled "Samskruthika Kannada"(Aadalitha Kannada) and "Balake Kannada"(Vyavaharika Kannada). While the first book is for the students who know Kannada to speak, read, and write, the second book is for students who do not understand the Kannada language. Only these books are to be prescribed as textbooks.
The soft copy of the books shall be made available in the first week of September 2020 and later the hard copies published by Prasaraanga of VTU Belagavi.

In case the colleges have not prescribed the Kannada course as detailed above under **(i), (ii) and (iii)**, the colleges are informed to revise from 2020-21 as above.

All the Autonomous colleges are requested to upload the scheme of teaching and examinations (with the Kannada course incorporated) of all the 4 years of Engineering, B.Plan programmes, and 5 years of Architecture programme to **academicsyl2018@gmail.com** by 12- 09- 2020.

Generation of USN shall be subject to the fulfilment of Government instructions regarding the implementation of the Kannada language as a prescribed course to all professional programmes.

REGISTRAR

To,
The Principal of all Autonomous Engineering colleges under the ambit of VTU, Belagavi

Copy to:
1 Hon'ble Vice-chancellor through the secretary to VC, VTU Belagavi for kind information.
2 The Registrar(Evaluation) VTU Belagavi for information
3 The Regional Directors of all VTU's Regional offices to inform to Autonomous Colleges in your zone.
4 The special officers/ Office Suptd/Caseworkers of Academic section VTU Belagavi.

Basaveshwar Engineering College (Autonomous) Bagalkot

Department of Electrical and Electronics Engineering

Board of Studies in EE

Date: 29.06.2020 **Time: 15:30 to 17:25 Hrs** **Venue: Virtual (Online)**

Meeting Resolutions

Online Meeting Link: meet.google.com/ykh-tkia-cmh Mon Jun 29, 2020 3:30pm – 6:30pm

		Welcome and Introduction of Members
Sub-1	:	Appraisal: Previous BoS meetings Activities and Achievements of students & faculty
Res-1	:	Chairman BoS in EE apprised about i. Last meeting held in May 2019 ii. Faculty and students' achievements – Awards, Technical publications, FDP/SDP organized, Ph.D awarded and R&D activities iii. Activities organized EE students & their participation under the aegis of IEEE PES student chapter. Role of advisor Dr. B.F.Ronad was appreciated.
Sub-2	:	**Appraisal and Approval** of scheme of evaluation of V to VIII Semesters BE(E&EE) of 175 credit program (2018-19, 2019-20 & 2020-21)
Res-2	:	**BoS in EE members approved scheme for III to VIII semester BE(E&EE) of 175 credit program (2018-19, 2019-20 & 2020-21)** **Description:** Chairman BoS in EE read and briefly explained the scheme for III to VIII semester BE(E&EE) of 175 credit program (2018-19, 2019-20 & 2020-21). He highlighted inclusion of (i) 2 credit mini-project (ii) 1 credit seminar component in VI semester, (iii) 2 credit mandatory advanced 'C' programming lab at 6th sem and (iv) 2 credit internship at 7th sem. Approved Scheme is enclosed as **Annexure-1**.
Sub-3	:	**Appraisal and Approval** of syllabus for III & VI Semesters BE(E&EE) of 175 credit program (2018-19, 2019-20 & 2020-21)

Chairman BoS-EE & Head of Department

Dr. Siva Kumar K Assoc. Prof., IIT Hyderabad VTU Nominee	**Dr. Kannan Tinnium** Senior VP, R&D, LPT Industry Expert	**Dr. Sarasij Das** Asst. Prof., IISc Blr Academia Expert	**Mr. Veerendra Kavishetti** Scientist 'F', ISRO Blr Distinguished Alumni	
Dr. B Chandrasekhar Technical Lead, TCS Industry (Invitee)	**Dr. Jayabarathi T** Professor, VIT Vellore Academia (Invitee)	**Dr. D. S. Jangamshetti** Member	**Mr. R. G. Patil** Member	**Dr. R. L. Naik** Member
Mr. S. G. Nayak Member	**Mr. V. C. Jainkeri** Member	**Pratibha R H** Student (PG)	**Anil B Rathod** Student (PG)	**Akhil R** Student (UG)	**Poornima S** Student (UG)

Res-3	:	**BoS members approved the syllabus for III & VI Semesters BE(E&EE) of 175 credit program (2018-19, 2019-20 & 2020-21).** **Description:** Dr. Kannan Tinnium and Dr. B. Chandrasekhar suggested to include subjects that focus on recent technological advancements in power industry, tool/skills knowledge and laboratory visits. The suggestions are as mentioned below. **Suggestions from Dr. Kannan Tinnium:** i. To include the subject contents focusing on innovation and deep thought process, such as: a. Business case studies – Economic b. Quality of product – Failure rate, probability, reliability c. Exposure to Data analytics / Machine learning / AI Applications / Voice assisted controls / Bio-engineering aspects d. Policies and Standards used for design related topics e. Exposure to community related problem solutions f. Tools / Skills – Modern Power Systems and DC grids g. Non-technical: Presentation, communication and articulation skills **Suggestions from Dr. B. Chandrasekhar:** i. To include the subject focusing on tools and skills and frame the syllabus with ratio of 6:4 for domain and tool knowledge ii. To include subjects like Automotive Electronics, LED Drivers & Communication Protocols iii. To conduct visits to CPRI, Raman Research Institution and other laboratories once in 3 months Chairman BoS and members welcomed the suggestions. It was resolved to incorporate the changes, wherever necessary, for the scheme of 2020-21. Approved syllabus for III & VI sem for 2018-19, 2019-20 & 2020-21 batch is enclosed as **Annexure-2**.
Sub-4	:	**Appraisal & Approval** of new scheme of Teaching and Evaluation for 2020-21 batch
Res-4		**BoS members approved the new scheme of Teaching and Evaluation for 2020-21 batch** **Description:** Dr. Siva Kumar K, VTU nominee and other members appreciated the new scheme. Dr. Sivakumar suggested to include/offer online courses in the 8th semester, that would support their industry projects. Chairman BoS and members welcomed the suggestions. He also informed the committee members that the changes made were inline with the resolutions of the joint board meeting held on 09.05.2020 at BEC. Copy of resolutions enclosed in **Annexure-3**. It was resolved to incorporate the changes wherever necessary. Approved new Scheme for 2020-21 is enclosed as **Annexure-4**.
Sub-5	:	Appraisal about M. Tech Energy Science & Technology

Chairman BoS-EE & Head of Department

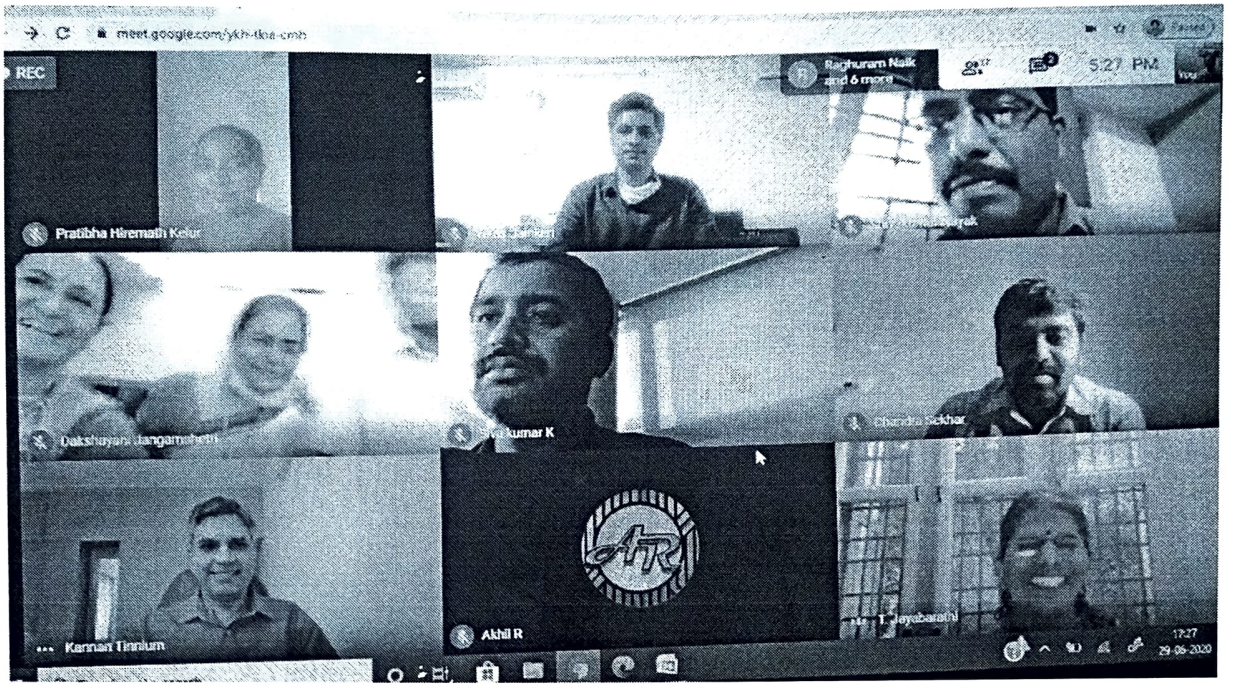
Dr. Siva Kumar K Assoc. Prof., IIT Hyderabad VTU Nominee	**Dr. Kannan Tinnium** Senior VP, R&D, LPT Industry Expert	**Dr. Sarasij Das** Asst. Prof., IISc Blr Academia Expert	**Mr. Veerendra Kavishetti** Scientist 'F', ISRO Blr Distinguished Alumni	
Dr. B Chandrasekhar Technical Lead, TCS Industry (Invitee)	**Dr. Jayabarathi T** Professor, VIT Vellore Academia (Invitee)	**Dr. D. S. Jangamshetti** Member	**Mr. R. G. Patil** Member	**Dr. R. L. Naik** Member
Mr. S. G. Nayak Member	**Mr. V. C. Jainkeri** Member	**Pratibha R H** Student (PG)	**Anil B Rathod** Student (PG)	**Akhil R** Student (UG)	**Poornima S** Student (UG)

Res-5		BoS members were apprised about status of M. Tech Energy Science & Technology. **Description:** Chairman BoS in EE briefly explained the new PG program in EEED along with its scheme and syllabus as submitted to VTU Belagavi. He mentioned about AICTE approval for starting the new M.Tech course.
Sub-6	:	Approval of online courses, B.E (E&EE) honors course
Res-6		**BoS members approved online courses for B.E (E&EE) honors course.** **Description:** Chairman BoS in EE briefly explained the recent notifications of VTU. Enclosure **Annexure-5**
Sub-7	:	Appraisal and Approval of activities for AICTE 100 activity points program
Res-7		**BoS members approved the activities & procedure as adopted by EE department for awarding activity points as suggested by AICTE 100 activity points program** **Description:** Chairman BoS in EE briefly explained the process of awarding activity points. He mentioned the links for reference and additional reading to know more about the AICTE activity points as given below: Chapter-6 of https://www.aicte-india.org/sites/default/files/AICTE%20Internship%20Policy.pdf Or VTU circular http://vtu.ac.in/pdf/circ3014.pdf The policy procedure for awarding activity points by EE department is is enclosed in **Annexure-6.**
Sub-8	:	Appraisal AICTE Examination Reforms and Policy – implementation process by BEC
Res-9		BoS members were apprised about AICTE Examination Reforms and Policy – implementation process by BEC. **Description:** Chairman BoS in EE briefly explained the AICTE Examination Reforms and Policy. He mentioned about Examination reforms workshop attended by BEC faculty and organised to BEC faculty. He also mentioned about college level committee formed to frame examination policies & their implementation process by BEC.
Sub-9	:	Any other matters with permission of chair
Res-9		No matters were discussed
		Vote of Thanks by Chairman BoS in EE

Chairman BoS-EE & Head of Department

Dr. Siva Kumar K Assoc. Prof., IIT Hyderabad VTU Nominee	**Dr. Kannan Tinnium** Senior VP, R&D, LPT Industry Expert	**Dr. Sarasij Das** Asst. Prof., IISc Blr Academia Expert	**Mr. Veerendra Kavishetti** Scientist 'F', ISRO Blr Distinguished Alumni	
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Mr. S. G. Nayak Member	**Mr. V. C. Jainkeri** Member	**Pratibha R H** Student (PG)	**Anil B Rathod** Student (PG)	**Akhil R** Student (UG)	**Poornima S** Student (UG)

Meeting Screen Shots:



Chairman BoS-EE & Head of Department

Dr. Siva Kumar K Assoc. Prof., IIT Hyderabad VTU Nominee	**Dr. Kannan Tinnium** Senior VP, R&D, LPT Industry Expert	**Dr. Sarasij Das** Asst. Prof., IISc Blr Academia Expert	**Mr. Veerendra Kavishetti** Scientist 'F', ISRO Blr Distinguished Alumni	
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Mr. S. G. Nayak Member	**Mr. V. C. Jainkeri** Member	**Pratibha R H** Student (PG)	**Anil B Rathod** Student (PG)	**Akhil R** Student (UG)	**Poornima S** Student (UG)

B.V.V.S

Basaveshwar Engineering College (Autonomous),
[AICTE Recognized, TEQIP – I, II & III, NAAC 'A', Permanent affiliation to VTU]
Department of Electrical & Electronics Engineering
[Govt. Aided, Accredited by NBA, Recognized R & D center of VTU]
Bagalkot - 587 102, Karnataka State, India

Ref No : EE/19-20/31.

Date : 07.08.2019

Proceedings of BOS (Internal Members) meeting held on 16-07-2019

Meeting of Internal BOS members was held on 16.07.2019. The agenda was to discuss regarding laboratory code and credits for the academic year 2019-20, at 5th Semester.

In view of offering Advanced Quantitative Aptitude and soft skills (UHS002N) at 5th semester level (1 Credit), following changes have been made.

Sl No	Laboratory's with Code	Old Code	New Code	Assigned Credits	To be Assigned
1	D C Machines and Synchronous Machines Laboratory	UEE515L	UEE527L	1.5	1
2	Digital Signal Processing Laboratory	UEE526L	UEE528L	1.5	1

Sl No	Name of Internal Member	Designation	Signature
1	Dr. Suresh H Jangamshetti Prof & HoD EEED BEC	Chairman BoS	
2	Dr. D S Jangamshetti Prof EEED BEC	Member	
3	Smt. Nanda P Assoc, Professor EEED BEC	Member	
4	Smt. Sunita S Tambakad Asst, Professor EEED BEC	Member	
5	Dr. B F Ronad Professor EEED BEC	Member	
6	Mr. Sangamesh Y Goudappanavar Asst, Professor EEED BEC	Member	

Prof & Head
Dept. of Elect. Electronics Engg
Basaveshwar Engg. College
BAGALKOT-587 102.

Received
8/8/19

+918354-234204 (Tele Fax)

Basaveshwar Engineering College (Autonomous)

[TEQIP Lead Institute, Govt. Aided Institution, AICTE Recognized, Affiliated to VTU Belgaum]

Bagalkot-587103, Karnataka, India.

BVVS

Department of Electrical and Electronics Engineering

Date: 15-06-2019

BOS Meeting

The proceedings of 10th BOS meeting in the department of E&EE, BEC held on Saturday 15th June 2019 at 10.30 AM in the E&E department seminar hall.

Members Present

S. No	Name	Designation	Signature
1	Dr. Suresh S Jangamshetti Professor & HoD, E&EE, BEC Bagalkot.	Chairman	15/6/19
2	Dr. Suryanarayana Doolla Professor, Dept of Energy Science & Engineering, Indian Institute of Technology, Bombay	VTU Nominee	
3	Dr. Ajit Ghodke Technical Lead, IT Business, India APC Schneider Electric, Bangalore	Member (Industry)	
4	Dr. Gurunath Gurrala Assistant Professor, Dept of Electrical Engineering, Indian Institute of Science, Bangalore- 560012	Member (Academia)	
5	Shri. K. G. Hiremath Superintendent Engineer, HESCOM, Bagalkot	Member (Industry, Alumni)	
6	Dr. Vidya H. A. Professor, Dept of EEE, Global Academy of Technology, Bangalore-98	Invitee (Subject Expert)	
7	Dr. D S Jangamshetti Professor, E&EE, BEC Bagalkot.	Member	15/6/19
8	Smt. Nanda P Asst. Prof, Dept of E&EE, BEC Bagalkot	Member	
9	Smt. Sunita S Tambakad Asst. Prof, Dept of E&EE- PG Program, BEC Bagalkot	Member	15/6/19
10	Dr. Basanagouda F. Ronad Prof, Dept of E&EE- PG Program, BEC Bagalkot	Member	
11	Mr. Sangamesh Y. Goudappanavar Asst. Prof, Dept of E&EE, BEC Bagalkot	Member	
12	Mr. Gangadhar Akki	Student Member (VII Sem UG)	
13	Miss. Deepa Lamani	Student Member (VII Sem UG)	
14	Mr. Jai Jagadeesh O	Student Member (IV Sem PG)	
15	Miss. Farhanaz Mulla	Student Member (IV Sem PG)	

Prof & Head
Chairman BOS
Dept. of Elect. Electronics Engg

Basaveshwar Engineering College (Autonomous)

[TEQIP Lead Institute, Govt. Aided Institution, AICTE Recognized, Affiliated to VTU Belgaum]

Bagalkot-587103, Karnataka, India.

BVVS

Department of Electrical and Electronics Engineering

Proceedings of 10th BOS meeting

Date: 15-6-2019
Time: 10.30 am

Venue: Seminar hall,
Dept of E&EE

(1)	Minutes of previous BoS meeting held on 07-07-2018.
	BoS Chairman presented minutes of previous BoS meeting held on 07-07-2018 to all BoS members.
(2)	Post Facto Approval
	After the discussion following points were suggested • To Reframe syllabus of Exciting Electrodynamics(UEE001E-2Credits) • To offer fundamental courses of soft skill courses at 1st year and advanced topics of soft skills at 3rd year • Online courses selected must be other than the course syllabus and must be evaluated for the same number of credits as registered online. • BoS members appreciated courses offered by HAL.
(3)	Approval of scheme of evaluation of III to VIII Semesters BE(E&EE) of 175 credit program.
	After the discussion it was suggested to have core electrical subjects at 2nd, 3rd year and advanced subjects at 4th year. The detailed scheme is attached for the reference.
(4)	Approval of syllabi for III & IV Semesters BE(E&EE) of 175 credit program.
	After the discussion it was resolved to approve the syllabus of III & IV semester of 175 credit program with minor changes.
(5)	Approval of Syllabus of Basic Electrical Engineering Subject for 1st year for 2019-2020 batch.
	After the discussion it was resolved to approve Syllabus of Basic Electrical Engineering Subject for 1st year for 2019-2020 batch.
(6)	Review of V to VIII semester BE (E&EE) scheme of 200 credit program.
	After the discussion it was resolved to approve the scheme and syllabi of V to VIII semester BE (E&EE) scheme of 200 credit program.
(7)	Review of III & IV semester M.Tech (PES) scheme and syllabus of 88 credits
	After the discussion it was resolved to approve the scheme and syllabi of III & IV semester M.Tech (PES) scheme and syllabus of 88 credits.
	The meeting was concluded with vote of thanks proposed by the Chairman BOS.

Chairman BoS
Prof & Head
Dept. of Elect. Electronics Engg

Basaveshwar Engineering College (Autonomous),
[AICTE Recognized, TEQIP -I, II & III, Permanent Affiliation to VTU Belagavi, NAAC Accredited with grade A]
Department of Electrical & Electronics Engineering
[Govt. Aided, Accredited by NBA, Recognized R&D center of VTU]
Bagalkot-587103, Karnataka state, India

f: Date:

Proceedings of BOS (Internal Members) meeting held on 4-8-2018

Meeting of Internal BOS members was held on 4-08-2018. Agenda was to discuss regarding equivalent electives to be offered for the reregistered (year back students) as the scheme for the academic year 2018-19 is changed. Following are the resolutions made in the meeting.

1. During VII sem, in place of elective "Electrical Machine Design (UEE842E)", elective "Field Theory (UEE546E)" will be offered.
2. For regular (non-lateral entry) students 2 credit elective "Solar Photo Voltaic System Design (UEE827E)" will be offered in VII sem.

The offered electives do not require prerequisites.

Signatures of BOS members (Internal)

Name	Designation	Signature
Dr. D. S. Jangamshetti Professor & HoD EEED BEC	Chairman BOS,	
Dr. S. H. Jangamshetti Professor EEED BEC	Member	
Prof. Nanda P. Assoc Professor EEED BEC	Member	
Smt. Sunita S. Tambakad Asst Professor EEED BEC	Member	
Dr. B.F. Ronad, Professor EEED BEC	Member	
Sangamesh Y. Goudappanavar Asst Professor EEED BEC	Member	

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Bagalkot-587103, Karnataka state, India

Date:07-07-2018

BOS Meeting

The proceedings of 9th BOS meeting in the department of E&EE, BEC held on Saturday 7th July 2018 at 10.30AM in the EE Seminar hall.

Members Present

S.No	Name	Position	Signature
1	Dr. D. S. Jangamshetti, HoD, E&EE, BEC Bagalkot	Chairman BOS,	
2	**Dr. Suryanarayana Doolla** Professor, Dept of Energy Science and Engineering, Indian Institute of Technology , Bombay	VTU Nominee	
3	**Dr. Ajit Ghodke** Technical Lead, IT Business, India APC by Schneider Electric, Bangalore	Member BOS (Industry)	7-7-18
4	**Dr. Gurunath Gurrala** Assistant professor, Dept of Electrical Engineering Indian Institute of Science, Bangalore 560012,	Member BOS (Academia)	
5	**Shri . K.G. Hiremath,** Superintendent Engineer HESCOM, Bagalkot	Member BOS (Industry, Alumni)	7/7/18
6	**Dr. Uma Rao,** Professor, Department of E&EE R V College of Engineering, Bengaluru - 560 059	Special Invitee (Academia)	
7	**Dr. Vidya H.A.** Professor, Dept of EEE Global Academy of Technology, Bangalore-98	Special Invitee (Academia)	7/7/18
8	**Dr. Suresh H. Jangamshetti** Prof. Dept. E&EE	Member, BOS E&EE, BEC Bagalkot	
9	**Smt. Nanda P.** Asst. Prof. Dept. E&EE	Member, BOS E&EE, BEC Bagalkot	
10	**Smt. Sunita S. Tambakad** Asst Prof. Dept. E&EE-PG Program	Member, BOS E&EE, BEC Bagalkot	
11	**Dr. Basanagouda F. Ronad** Prof. Dept. E&EE-PG program	Member, BOS E&EE, BEC Bagalkot	
12	**Mr. Sangamesh Y. Goudappanavar** Asst. Prof. Dept. E&EE	Member, BOS E&EE, BEC Bagalkot	
13	**Miss Annapoorna**	Student Member (VI Sem UG) BOS E&EE, BEC Bagalkot	7/7/18
14	**Mr. Shankar H.**	Student Member (VI Sem, UG) BOS E&EE, BEC Bagalkot	7/7/18
15	~~**Miss Kavita**~~ Miss. Apoorva. Hundekar	Student Member (PG-IV) BOS E&EE, BEC Bagalkot	
16	**Mr. Srivatsav P.M.**	Student Member (PG-IV) BOS E&EE, BEC Bagalkot	07/07/18

Enclosure: Proceedings of the meeting.

Chairman BOS

Basaveshwar Engineering College (Autonomous),
[AICTE Recognized, TEQIP Phase-I, II,III Permanent Affiliation to VTU Belagavi, NAAC accredited with Grade A
Department of Electrical & Electronics Engineering
[Govt. Aided, Accredited by NBA, Recognized R&D center of VTU]
Bagalkot-587103, Karnataka state, India

Proceedings of 9th BOS meeting

Date: 7-7-2018
Time:10.30 am

Venue: Seminar hall,
Dept of E&EE

Sub (1)	To discuss and approve the new scheme of I-VIII semesters BE (E&EE) for the students of batch 2018-19 for total credits of 175.
Res.	After the discussion it was resolved to approve the new scheme of I-VIII semesters BE (E&EE) for the students of batch 2018-19 for credits of 175.
Sub (2)	To discuss and approve syllabus of Basic Electrical Engineering Course for first year, for the academic year 2018-19.
Res.	After the discussion it was resolved to approve the syllabus of Basic Electrical Engineering Course of first year for the academic year 2018-19.
Sub (3)	To approve Environmental Studies and Constitution of India at 3rd & 4th Sem as mandatory subjects for lateral entry (2018-19) students (For 17-18 batch, these subjects are of 2 credits each, in first year).
Res.	After the discussion it was resolved to approve Environmental Studies and Constitution of India at 3rd & 4th Sem as mandatory subjects for lateral entry
Sub (4)	To review and approve the syllabi of III and IV Semester BE (E&EE) for academic year 2019-20 for the batch 2018-19.
Res.	After the discussion it was resolved to approve the syllabi of III and IV Semester BE (E&EE) for academic year 2019-20 for the batch 2018-19.
Sub (5)	To review and approve the syllabi of VII and VIII Semester BE (E&EE) for academic year 2018-19 for the batch 2015-16.
Res.	After the discussion it was resolved to approve the syllabi of VII and VIII Semester BE (E&EE) for academic year 2018-19 for the batch 2015-16
Sub (6)	To discuss and approve the new scheme of I to IV Semester M.Tech. (PES) of 88 credits for the batch 2018-19 for the academic years 2018-19, 2019-20.
Res.	After the discussion it was resolved to approve new scheme of I to IV Semester M.Tech. (PES) of 88 credits for the batch 2018-19, for the academic years 2018-19, 2019-20.
Sub (7)	To review and approve the syllabi of III & IV Semester M.Tech. (PES) for the Academic year 2018-19 for the batch 2017-18
Res.	After the discussion it was resolved to approve syllabi of III & IV Semester M.Tech. (PES) for the Academic year 2018-19 for the batch 2017-18
	The meeting was concluded with vote of thanks proposed by the Chairman BOS.

Chairman BOS

Prof & Head
Dept. of Elect. Electronics Engg.
Basaveshwar Engg. College,
BAGALKOT - 587 103.

Basaveshwar Engineering College (Autonomous)

[AICTE Recognized, TEQIP-I & II, Permanent affiliation to VTU]

Department of Electrical & Electronics Engineering

[Govt. Aided, Accredited by NBA, Recognized R&D center of VTU]

BVVS Bagalkot – 587103, Karnataka State, India

Ref: Date: 27-05-2017

BOS Meeting

The proceedings of 8th BOS meeting in the department of E&EE, BEC held on Saturday 27th May 2017 at 11.00AM in the EE Seminar hall.

Members Present

S.No	Name	Position	Signature
1	Dr. D. S. Jangamshetti	Chairman BOS, HoD, E&EE, BEC Bagalkot	
2	Dr. Himanshu Bahirat	Member, BOS in E&EE, Prof. Dept. EE, IIT Bombay, Subject Expert from Academia	
3	Dr. K Siva Kumar	Member, BOS in E&EE, IIT Hyderabad, Subject Expert from Academia	
4	Mr. Girish G. Dixit	Member, BOS in E&EE, Ministry of Defence, Govt. of India, Bangalore , Alumnus	
5	Mr. R.S. Hiremath	Member, BOS in E&EE, Flexitron, Bengaluru, Subject Expert from Industry	
6	Dr. K. Rajagopal	Member, BOS in E&EE, Prof. Dept. of EE, IISc Bengaluru, VTU Nominee	
7	Dr. D.R. Joshi	Member, BOS in E&EE, GIT Belagavi, Special Invitee Academia	
8	Dr. S.H. Jangamshetti	Member, BOS in E&EE, BEC Bagalkot	
9	Dr. (Smt) G. Suchitra	Member, BOS in E&EE, BEC Bagalkot	
10	Prof. (Smt) Nanda P.	Member, BOS in E&EE, BEC Bagalkot	
11	Prof. S.M. Patil	Member, BOS in E&EE, BEC Bagalkot	
12	Prof. (Smt) Sunita S. Tambakad	Member, BOS in E&EE, BEC Bagalkot	
13	Miss Nafisa Mujavar	Student Member (VIII Sem UG) BOS in E&EE, BEC Bagalkot	
14	Mr. Devappagouda B.	Student Member (VIII Sem, UG) BOS in E&EE, BEC Bagalkot	
15	Miss Savita Kundaragi	Student Member (PG-IV) BOS in E&EE, BEC Bagalkot	

Chairman BOS

Enclosure. Proceedings of the meeting.

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Bagalkot-587103, Karnataka state, India

Proceedings of 8th BOS meeting

Date: 27-5-2017 Venue: Seminar hall,
Time:11.00 am Dept of E&EE

Sub (1)	Seeking approval of permission for the year back students to re-register backlogs for completion of degree as per university letters
Res.	Approval is accorded for the year back students to re-register backlogs for completion of degree. Approval is accorded to provide equivalent subjects.
Sub (2)	To review the syllabi of VII to VIII Semester BE (E&EE) for academic year 2017-18 for the students of batch 2014-15.
Res.	Syllabi of VII & VIII Semester BE (E&EE) for academic year 2017-18 for the students of batch 2014-15 are discussed and finalized.
Sub (3)	To review the schemes of V -VIII Semesters BE (E&EE) for the academic years 2017-18, and 2018-19 for the batch of students 2015-16 and finalize the syllabi.
Res.	Schemes and syllabi of V -VIII Semesters BE (E&EE) for the academic years 2017-18, and 2018-19 for the students of batch 2015-16 are reviewed and finalized.
Sub (4)	To review the syllabi of III -IV Semesters BE (E&EE) for the academic year 2017-18 for the batch of students 2016-17 and finalize.
Res.	Syllabi of III -IV Semesters BE (E&EE) for the academic years 2017-18 for the students of batch 2016-17 are discussed and finalized
Sub (5)	To discuss and finalize the scheme and syllabus of III & IV Semester M.Tech. (PES) for the Academic year 2017-18 for the batch 2016-17.
Res.	Syllabi of III & IV Semester M.Tech. (PES) for the Academic year 2017-18 for the batch 2016-17 are discussed and finalized.
Sub (6)	To discuss and finalize the scheme and syllabus of I to IV Semester M.Tech. (PES) for the academic years 2017-18, 19-20 for the batch 2017-18.
Res.	Scheme and syllabus of I to IV Semester M.Tech. (PES) for the academic years 2017-18, 19-20 for the batch 2017-18 are discussed and finalized
Sub (7)	Discussion and Approval for new Schemes for III to VIII for the 1st year students batch of 2017-18.
Res.	New Scheme for the semesters III to VIII for students of batch 2017-18 (1st year) was discussed and approved.
	The meeting was concluded with vote of thanks proposed by the Chairman BOS.

Chairman BOS

Resolutions of the BOS Meeting held on 27-05-2017

Sub (1)

Student: Muzammil (2BA08EE028)

Sl. No.	Backlog subjects	Subject, Code / Equivalent sub, Code Offered	Offered during semester
1	CAED lab UME 218L (2 Cr)	CAED218L	2016-17 odd sem
2	Signal, Simulation and Control System Laboratory UEE604L (1.5 Cr)	UEE604L	2016-17 odd sem
3	Seminar UEE 801S (1 cr)	UEE 801S	2016-17 odd sem
4	Power Electronics 501C	UEE501C	Supplementary Semester June-July, 2016-17
5	Control Systems UEE513C	UEE513C	Supplementary Semester June-July, 2016-17
6	Computer Applications to Power Systems UEE701C	UEE701C	Regular odd semester 2017-18
7	High Voltage, Switchgear and Protection UEE702C	UEE702C	Regular odd semester 2017-18
8	Energy Auditing & Demand Side Management UEE 721E	UEE 721E	Regular odd semester 2017-18
9	Power system simulation Lab UEE704L	UEE 704L	Regular odd semester 2017-18
10	High Voltage and Relay Lab UEE705L	UEE705L	Regular odd semester 2017-18
11	Industrial Automation UIT731N*	VLSI Design UEE733E	Supplementary Semester June-July, 2016-17

* This subject is open elective offered from Dept. of IT. As the open electives are not offered, a 3 credit department elective VLSI Design UEE733 is recommended and offered.

Student: Shridhar G. Chavan (2BA06EE351)

	Backlog subject	Offered during semester
1	Engineering Maths	2016-17 Odd Sem

Students: Vishnu Gouda (2BA09PES18)
Basappa Siddapur (2BA09PES03)

	Backlog subjects	Offered during semester
1	Project Phase-II, PPE411P Credits-24	2016-17 Odd Sem

Sub (2)

Department of Electrical & Electronics Engineering
Scheme of Teaching and Examination
B.E. (E and E) VII SEMESTER (For the academic Year 2017 -18)

Sl. No	Subject Code	Subjects	C	Hours/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE701C	Computer Applications to Power System	4	4	-	-	50	50	100
02	UEE702C	High Voltage, Switchgear and Protection	4	4	-	-	50	50	100
03	UEE72XE	Elective – 5	4	4	-	-	50	50	100
04	UEE73XE	Elective – 6	3	3	-	-	50	50	100
05	UEE704L	Power System Simulation Lab	1.5	-	-	3	50	50	100
06	UEE705L	High Voltage and Relay Lab	1.5	-	-	3	50	50	100
07	UEE706P	Project Phase -I	5		-		50	50	100
		Total	**23**	**15**	**-**	**6**	350	350	700

Elective – 5 (04 Credits)
UEE721E – Energy Conservation, Audit and Demand Side Management
UEE722E – HVDC Transmission
UEE723E – Power System Planning

Elective – 6 (03 Credits)
UEE731E – Operating System
UEE732E –Speech Signal Processing
UEE733E – VLSI Design

B.E. (E and E) VIII SEMESTER (For the academic Year 2017 -18)

Sl.No	Subject Code	Subjects	C	Hours/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE82XE	Elective - 7	4	4	-	-	50	50	100
02	UEE82XE	Elective - 8	4	4	-	-	50	50	100
03	UEE827E	Elective - 9	2	2	-	-	50	50	100
04	UEE801P	Project Phase - II	15	-	-	15	50	50	100
		Total	**25**	**10**	**-**	**15**	**200**	**200**	**400**

Electives- 7 (04 Credits)
UEE821E – Neural Networks
UEE822E – Data Base Management Systems (DBMS)
UEE823E – Operation Research

Electives – 8 (04 Credits)
UEE824E –Power System Operation and Control
UEE825E – Environmental Impacts of Power Generation
UEE826E – Advances in Instrumentation

Electives – 9 (02 Credits)
UEE827E- Solar Photovoltaic System Design

Legend for Scheme	**L**	Lecturer	**T**	Tutorial	**P**	Practical	**C**	Credits
Legend in Subject code	**C**	Core	**E**	Elective	**S**	Seminar	**I**	Industrial Visit

[2 Credits Elective UEE827E- Solar Photovoltaic System Design is only for regular students and not for lateral entry students diploma quota]

Sub (3 & 4)

Department of Electrical and Electronics Engineering
Scheme of Teaching and Examination
B.E. (E and E) III SEMESTER (Academic Year 2017 -18)

Sl. No	New Subject Code	Subject	C	Hours/Week			Examination Marks		
				L	T	P	CIE	SEE	Total
01	UMA301C	Engineering Mathematics – III	4	4	--	--	50	50	100
02	UEE314C	Network Analysis	4	4	--	--	50	50	100
03	UEE315C	Electrical and Electronics Measurements	4	4	--	--	50	50	100
04	UEE322C	Analog and Digital Electronics	4	4	--	--	50	50	100
05	UEE323C	Object Oriented Programming with C++	4	4	--	--	50	50	100
06	UEE316H	Intellectual Property Rights	3	3	--	--	50	50	100
07	UEE318L	Circuit Simulation and Measurements Lab	1.5	--	--	03	50	50	100
08	UEE327L	Analog and Digital Electronics Lab	1.5	--	--	03	50	50	100
09	UBT133M	Environmental Studies	--	2	--	--	50	50	100
		Total	**26**	**25**	**--**	**6**	**450**	**450**	**900**

Environmental Studies is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class / Rank.

B.E. (E and E) IV SEMESTER (Academic Year 2017 -18)

SL No	Subject Code	Subject	C	Hours/Week			Examination Marks		
				L	T	P	CIE	SEE	Total
01	UMA401C	Engineering Mathematics-IV	4	4	--	--	50	50	100
02	UEE413C	Signals and Systems	4	4	--	--	50	50	100
03	UEE414C	Operational Amplifiers and Linear IC's	4	4	--	--	50	50	100
04	UEE415C	Transformers and Induction Machine	4	4	--	--	50	50	100
05	UEE422C	Renewable Energy Sources	4	4	--	--	50	50	100
06	UEE416H	Management and Entrepreneurship	3	3	-	-	50	50	100
07	UEE418L	Transformer and Induction Machine Lab	1.5	--	--	3	50	50	100
08	UEE427L	Linear IC's Lab	1.5	--	--	3	50	50	100
09	UMA001M	Advanced Mathematics-I	--	4	--	--	50	50	100*
10	UHS226M	Constitution of India	--	2	--	--	50	50	100
Total			**26**	**29**	**--**	**6**	**500**	**500**	**1000**

***Advanced Mathematics –I** is a mandatory subject only for students admitted to 3rd Semester through lateral entry scheme. (Diploma quota)

Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject.

Constitution of India is a mandatory subject for lateral entry students. Question Paper will be of Objective type. Students have to pass the subject compulsorily, however marks will not be considered for awarding Grade / Class /Rank.

Legend for Scheme	**L**	Lecturer	**T**	Tutorial	**P**	Practical	**M**	Mandatory
Legend in Subject code	**C**	Core	**E**	Elective	**C**	Credits		

Department of Electrical and Electronics Engineering
Scheme of Teaching and Examination
B.E. (E and E) V SEMESTER (For the academic year 2017 -18)

Sl No	Subject Code	Subjects	C	Hours /Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE521C	Generation Transmission and Distribution	4	4			50	50	100
02	UEE512C	DC Machines and Synchronous Machines	4	4	-	-	50	50	100
03	UEE513C	Control Systems	4	4	-	-	50	50	100
04	UEE514C	Digital Signal Processing	4	4	-	-	50	50	100
05	UEE_ _XE	Elective – 1	3	3	-	-	50	50	100
06	UEE_ _XE	Elective – 2	3	3	-	-	50	50	100
07	UEE515L	D.C. Machine and Synchronous Machine Laboratory	1.5	-	-	3	50	50	100
08	UEE526L	Digital Signal Processing Lab	1.5	-	-	3	50	50	100
09	UMA002M	Advanced Mathematics-II	-	4	-	-	50	50	100*
Total			**25**	**26**	**-**	**6**	450	450	900

***Advanced Mathematics –II** is a mandatory subject only for students admitted to 3rd Semester through lateral entry scheme. (Diploma quota) Passing the subject is compulsory, however marks will not be considered for awarding grade /class. A PP/NP grade will be awarded for passing/not passing the subject. The SEE is conducted for 100 Marks and scaled down to 50 Marks.

Legend for Scheme	**L**	Lecturer	**T**	Tutorial	**P**	Practical	**M**	Mandatory
Legend in Subject code	**C**	Core	**E**	Elective	**C**	Credits		

List of Electives (Group A)	
UEE541E	Micro Electro Mechanical Systems
UEE542E	Biomedical Instrumentation
UEE543E	Testing and Commissioning of Electrical Equipments
UEE544E	Operational Research
UEE545E	Electrical Engineering Materials
UEE546E	Field Theory

Department of Electrical and Electronics Engineering
Scheme of Teaching and Examination
B.E. (E and E) VI SEMESTER (For the academic year 2017 -18)

Sl. No	Subject Code	Subjects	C	Hours/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE611C	Power System Analysis and Stability	4	4	-	-	50	50	100
02	UEE612C	Microcontrollers	4	4	-	-	50	50	100
03	UEE623C	Power Electronics	4	4	-	-	50	50	100
04	UEE624C	Electrical Power Utilization and Drives	4	4	-	-	50	50	100
05	UEE_ _XE	Elective – 3	3	3	-	-	50	50	100
06	UEE_ _XE	Elective – 4	3	3	-	-	50	50	100
07	UEE615L	Microcontrollers Laboratory	1.5	-	-	3	50	50	100
08	UEE626L	Power Electronics and Control system Simulation Laboratory	1.5	-	-	3	50	50	100
		Total	**25**	**22**	**-**	**6**	400	400	800

- **The SEE is conducted for 100 Marks and scaled down to 50 Marks.**

Legend for Scheme	**L**	Lecturer	**T**	Tutorial	**P**	Practical
Legend in Subject code	**C**	Core	**E**	Elective	**C**	Credits

List of Electives (Group B)	
UEE641E	**VLSI Design**
UEE642E	**Reactive Power management**
UEE643E	**Power System Planning**
UEE644E	**Modern Control Theory**
UEE645E	**Artificial Intelligence and Neural Network**
UEE646E	**Advanced Power Electronics**

Department of Electrical and Electronics Engineering
Scheme of Teaching and Examination
B.E. (E and E) VII SEMESTER (For the academic Year 2018 -19)

Sl. No	Subject Code	Subjects	C	Hours/ Week			Exam Marks		
				L	T	P	CIE	SEE	Total
01	UEE701C	Computer Applications to Power System	4	4	-	-	50	50	100
02	UEE702C	High Voltage, Switchgear and Protection	4	4	-	-	50	50	100
03	UEE_ _XE	Elective – 5	4	4	-	-	50	50	100
04	UEE_ _XE	Elective – 6	4	4	-	-	50	50	100
05	UEE704L	Power System Simulation Lab	1.5	-	-	3	50	50	100
06	UEE705L	High Voltage and Relay Lab	1.5	-	-	3	50	50	100
07	UEE706P	Project Phase -I	5	-	-		50	50	100
		Total	**24**	**16**	**-**	**6**	350	350	700

Legend for Scheme	**L**	Lecturer	**T**	Tutorial	**P**	Practical
Legend in Subject code	**C**	Core	**E**	Elective	**C**	Credits

List of Electives (Group C)	
UEE741E	Electrical Machine Drives
UEE742E	Electrical Machine Design
UEE743E	Embedded System and PLC
UEE744E	Operating Systems
UEE745E	Environmental Impacts of Power generation
UEE721E/UEE746E	Energy Conservation, Audit and Demand Side Management

Department of Electrical and Electronics Engineering

Scheme of Teaching and Examination

B.E. (E and E) VIII SEMESTER (For the academic Year 2018 -19)

Sl.No	Subject Code	Subjects	C	Hours/ Week		Exam Marks		
				L	T	CIE	SEE	Total
01	UEE_ _XE	Elective - 7	4	4	-	50	50	100
02	UEE_ _XE	Elective - 8	4	4	-	50	50	100
03	UEE_ _XE	Elective - 9	4	4		50	50	100
04	UEE811P	Project Phase - II	12	-	-	50	50	100
		Total	**24**	**8**	**-**	**200**	**200**	**400**

Legend for Scheme	**L**	Lecturer	**T**	Tutorial	**P**	Practical	**C**	Credits
Legend in Subject code	**C**	Core	**E**	Elective	**S**	Seminar	**I**	Industrial Visit

(Group D)	
UEE841E	Power System Operation and Control
UEE842E	Power System Dynamics and Stability
UEE843E	Data Base management Systems
UEE844E	Solar photovoltaic System Design
UEE845E	Flexible AC Transmission Systems
UEE846E	Speech Signal processing
UEE847E	Over Voltages in Power Systems
UEE848E	HVDC Transmission
UEE849E	Advances in Instrumentation

Sub (5 & 6)

Scheme of Teaching and Examination
M.Tech in Power & Energy Systems
(For the academic year 2017–18)

I Semester

Sl.	Sub Code	Subject Name	Credits	Examination Marks		
				CIE	SEE	Total
1	PPE121C	Power System Dynamics	4	50	50	100
2	PPE122C	Wind Energy Conversion Systems	4	50	50	100
3	PPE123C	Probability and Statistics	4	50	50	100
4	PPEXXXE	Elective – I	4	50	50	100
5	PPEXXXE	Elective – II	4	50	50	100
6	PPEXXXE	Elective – III	4	50	50	100
7	PPE124L	Power and Energy Systems Lab – I	2	50	50	100
			26	**350**	**350**	**700**

II Semester

Sl.	Sub Code	Subject Name	Credits	Examination Marks		
				CIE	SEE	Total
1	PPE221C	Solar Energy Conversion Systems	4	50	50	100
2	PPE222C	Flexible AC Transmission System	4	50	50	100
3	PPE223C	Power Electronics Applications to Electric Energy Systems	4	50	50	100
4	PPEXXXE	Elective – IV	4	50	50	100
5	PPEXXXE	Elective – V	4	50	50	100
6	PPEXXXE	Elective – VI	4	50	50	100
7	PPE224L	Power and Energy Systems Lab – II	2	50	50	100
			26	**350**	**350**	**700**

III Semester

Sl.	Sub Code	Subject Name	Credits	Examination Marks		
				CIE	SEE	Total
1	PPE311I	Industrial Training	6	50	50	100
2	PPE312P	Project Work Phase – I	16	50	50	100
3	PPE324L	Power and Energy Lab – III	2	50	50	100
		Total	**24**	**150**	**150**	**300**

IV Semester

Sl.	Sub Code	Subject Name	Credits	Examination Marks		
				CIE	SEE	Total
1	PPE411P	Project Work Phase – II	24	50	50	100
		Total	**24**	**50**	**50**	**100**

Elective Subjects (04 Credits)

Elective
PPE003E - Power System SCADA
PPE004E - Electric Power quality
PPE027E - Power System Deregulation
PPE019E - Computer Control of Energy Systems

Elective
PPE006E - Advanced Power Electronics
PPE008E - Advanced Electric Drives
PPE014E - Foundation for Energy Engineering – I
PPE026E - Energy Management Systems and Planning

Elective
PPE010E - Power System Instrumentation
PPE029E - Soft Computing
PPE030E - DSP Applications to Power Systems
PPE032E - Micro grids and Smartgrids

Elective
PPE017E - Environmental Impacts of Energy Conversion Systems
PPE020E - Power and Energy System Planning
PPE028E - EHV Transmission Systems
PPE031E - Sustainable Energy Technologies in Agriculture Engineering

Elective
PPE002E - AI Applications in Power Systems
PPE016E - Suggested Topics in Energy Conversion Systems
PPE025E - Linear Algebra
PPE012E - Power System Reliability Engineering

Elective
PPE015E - Foundation for Energy Engineering – II
PPE018E - Energy Conservation in Industrial Systems
PPE024E - System Simulation and Modeling
PPE033E - HVDC Transmission Systems

DEPARTMENT OF ELCTRONICS AND INSTRUMENTATION ENGINEERING
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

A meeting of Board of Studies in E&IE department was held on 01-07-2017, in the department to discuss:

1. Scheme and syllabus of 2014 -15 admitted students.
2. Scheme and syllabus of 2015 - 16 admitted students.
3. Scheme and syllabus of 2016 - 17 admitted students.
4. Scheme of 2017—18 admitted students.

Resolution:

1. For 2014-15 admitted students, change in the subject code from UIT to UEI.
2. Change in Biomedical and Virtual Instrumentation: 4 to 3 credits; for 2015-16 admitted batch.
3. A 2 credit course "Smart Sensors" is introduced at VI sem level for lateral admitted students; for 2015-16 admitted batch.
4. "Basic Circuit Laboratory" and "Measurement Laboratory" which was an audit course for lateral entry students are changed to credit course for 2016-17 admitted batch and a 2 credit course "Smart Sensor" is removed.
5. Discussion was made on the scheme for 2017-18 admitted batch.

Following members were present:

1. Dr. B. G. Sheeparamatti
2. Dr. H. S. Mohana
3. Mr. Anand S. Kop
4. Prof. R. S. Allurkar
5. Prof. Chayalakshmi C. L.
6. Prof. M. A. Sutagundar
7. Prof. M. G. Kamabalimath
8. Prof. S. B. Kumbalavati
9. Mr. Basavakumar Jigalur



CHAIRMAN
BoS in E&IE Dept.,
Basaveshwar Engg. College (Autonomous)
Bagalkot – 587102, Karnataka, India

DEPARTMENT OF ELCTRONICS AND INSTRUMENTATION ENGINEERING
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

A meeting of Board of Studies (BoS) in Electronics and Instrumentation Engineering department was held on 07-07-2018, in the department to discuss:

1. Scheme for 2018-19 admitted batch.
2. Scheme for 2017-18 admitted batch.
3. Detailed syllabus of III to VIII semester for the students admitted to 2017-18 batch.

Resolutions:

1. New scheme of III to VIII semester for 175 credits of 2018-19 batch was discussed and finalized.
2. Scheme of III to VIII semester for 2017-18 batch admitted students was discussed and finalized. The same scheme which was there for 2016-17 batch admitted students was adopted for 2017-18 batch also.
3. The detailed syllabus of III to VIII semester for the students admitted to 2017-18 batch was discussed with minor modifications.
4. A chapter titled "Introduction to Instrumentation System" is introduced in the subject "Basic Electronics" which is common for all first year students and the same is approved.

Following members were present:

1. Dr. Mallikarjunswamy M. S.
2. Dr. Prashanth Kumar H.
3. Mr. Shivasharan Nagalikar
4. Dr. B. G. Sheeparamatti
5. Prof. R. S. Allurkar
6. Prof. Chayalakshmi C. L.
7. Prof. K. Bhat
8. Prof. Poorna B. B.
9. Prof. M. G. Kamabalimath
10. Prof. S. B. Kumbalavati
11. Ms. Lekhana Joshi
12. Mr. Mahesh I. G.



CHAIRMAN
BoS in E&IE Dept.,
Basaveshwar Engg. College (Autonomous)
Bagalkot – 587102, Karnataka, India

DEPARTMENT OF ELCTRONICS AND INSTRUMENTATION ENGINEERING
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

A meeting of Board of Studies (BoS) was held on 22-06-2019 at 09:30 am.

The Agenda of the meeting:

1. Minutes of previous meeting held on 07-07-2018.
2. Post – facto approval:
   a. UEI755L – Lab course – change of credit from 1.5 to 1.0 for 2016-17, 2017-18 admitted batch.
   b. UHS001N, UHS002N, UHS003N – Soft Skill course each of 1.0 credit for 2017-18 admitted batch. There by adjustment of 3 credits, made through – UEI556L and UEI557L change of credit from 1.5 to 1.0; UEI653C change of credit from 4.0 to 3.0; Laser and Optical Instrumentation from core(4 credits) to department elective (3 credits).
   c. UHS003N – 1.0 credit skill development course for 2016-17 admitted batch. 1.0 credit adjustment because of this as Laser and Optical Instrumentation from core (4 credits) to department elective (3 credits)
   d. MOOC/NPTEL – online course by different batch students during academic year -2018 -19 as audit course.
   e. 3 credit course offered by HAL during academic year -2018-19 for 2016-17 admitted batch in place of department elective at VII sem during academic year – 2019-20.
   f. Approval for resolution made in local BoS held on 20-08-2018.
3. Approval for scheme of evaluation of III to VIII semester B.E. (E&IE) of 175 credit program for 2018-19 admitted batch.
4. Approval of syllabus for III and IV semester B. E. (E&IE) of 175 credit program for 2018-19 admitted batch.
5. For students admitted in and before 2017-18 academic year, any arrear course to be run in parallel with 175 credits batch (admitted during 2018-19). However, if the credit and syllabus content of any course in both schemes are same, equivalency can be given.
6. Discussions and deliberations on online course for academic year 2019-20.
7. 20 credit online courses requirement for B. E. (Honorary award).
8. Any other matter with the permission of chair.

Resolution:

1. Chairman has welcomed all the members to the meeting and presented the academic activities and developments taken place after the previous BoS meeting held on 07-07-2018.
2. The minutes of last BoS meeting held on 07-07-2018 were read and approved.
3. The minutes of local BoS meeting held on 20-08-2018 were approved.
4. Post facto approval for NPTEL – MOOC online course during academic year 2018-19 as audit course.
5. Post facto approval for the course on avionics offered by HAL, Bangalore for 3 credits (40hrs syllabus) and it is to be considered as "Special Session semester" for those students.
6. The scheme of 3rd semester to 8th semester B. E. in E&IE of 175 credits scheme admitted to program during academic year 2018-19.
7. The syllabus of 3rd and 4th semester B. E. E&IE of 175 credits scheme (total) admitted to B. E. program in E&IE during academic year 2018-19.
8. The meeting was concluded with vote of thanks presented by Prof. R. S. Allurkar.
9. Extended discussions: Post Lunch,
   a) Induction program for I year B. E. students
      - Total 21 days of which 11 days in odd/even and remaining 10 days in even/odd semester respectively.
      - On par with institute method/modalities approved in Joint Board meetings.
   b) 100 Activity Points: To be discussed at institute level by Joint Board and to be followed afterwards.
   c) NBA observes comment – BoS inputs are not taken effectively in curriculum formation 19 members expressed satisfaction of involvements.
   d) CO – PO Mapping process is approved.

Following members were present:

1. Prof. K. Bhat
2. Dr. Prashanth Kumar H.
   (NITK, Suratkal)
3. Dr. Mallikarjunswamy M. S.
   (SJCE, Mysore)
4. Mr. Shivasharan Nagalikar
   (TI, Bangaluru)
5. Prof. R. S. Allurkar
6. Prof. M. A. Sutagundar
7. Prof. M. G. Kamabalimath
8. Prof. Poorna B. B.
9. Prof. S. B. Kumbalavati
10. Ms. Shilpa Kudachi
11. Ms. Kajal Rathi



CHAIRMAN
BoS in E&IE Dept.,
Basaveshwar Engg. College (Autonomous)
Bagalkot – 587102, Karnataka, India

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Proceedings of the Board of Studies (BOS) Meeting held at 4.00 pm on Saturday, 11th October 2021 Through Video Conferencing

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Proceedings of the Board of Studies (BOS) meeting held at 4.00 pm on Monday, 11th October 2021 through video conferencing

	Sub:1	**The chairman of Board of Studies Dr. V.S Puranik, HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies.**
	Sub:2	**To apprise of the activities from 03.07.2020 to 10.10.2021**
	Resolution:	Before taking up the regular agenda, the chairman briefly reported about the academic and developmental activities that took place in the department since last meeting of the BOS which was held on 3rd July 2021.

ACTIVITIES

Sl.No	Name of the Faculty	Workshop/ FDP Attended/lectures delivered	Date
1	Dr.S.M.Pharsiyawar	Lecturers Delivered- "Entrepreneurship Development" in B.V.V.S. Polytechnic, Bagalkot	16-07-2021
2	Dr.S.M.Pharsiyawar	Lecturers Delivered –"Prototype validation and converting prototype in to startup" in B.V.V.S. Polytechnic, Bagalkot	20-07-2021

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.VivekKhazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

			3	Dr.C.M.Javalagi	Participated in three days online workshop on "sustainability in materials, manufacturing and logistics opportunities and challenges" organized by SIT, Tumakur	20-22 September 2021
			4	Dr.C.M.Javalagi	Attended a online FDP on "Advanced concepts of outcome-based education" organized by In pods India pvt Ltd, Pune	6 -8 October 2021
	Sub: 3	**To read and approve the minutes of Board of Studies meeting held on 03.07.2021**				
	Resolution:	The minutes of the previous BOS meeting held on 03.07.2021 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in **Annexure-1**				
	Sub: 4	**Post facto approval for reduction in internship duration from 6 weeks to 4 weeks for third year students due to pandemic for the academic year 2020-2021 only**				
	Resolution:	Dr S.M Pharsiyawar explained the need for reduction in internship duration from 6 weeks to 4 weeks for third year students due to pandemic for the academic year 2020-2021 only. It was resolved to approve reduction in internship duration from 6 weeks to 4 weeks for third year students for the academic year 2020-2021 only.				
	Sub: 5	**To discuss and approve the scheme of teaching and minor courses**				

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.VivekKhazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

		for the students admitted to first year in 2021-22 as per NEP-2020 (third to eighth semester for 160 credits)
	Resolution:	Dr C.M Javalagi presented the scheme of teaching and minor courses for the students going to be admitted to first year in 2021-22 as per NEP-2020 (third to eighth semester for 160 credits). For the proper distribution of the credits and subjects to cover in the areas of technology, management and production, it was appreciated by the BOS members. After discussion it was resolved to approve with modification, the scheme of teaching for the students admitted to first year 2021-22 from third to eighth semester as in **Annexure 2**
	Sub:6	**Any other subjects with permission of chair**
	Resolution	The BOS committee suggested the following: ❖ Python programming syllabus to be set as per the requirement of the industries ❖ Inclusion of self study component for each semester ❖ Focus to be given on personality development courses. ❖ Subjects to be offered based on the industry requirement (Where our students are going to be absorbed). ❖ Minimum eligibility criteria should be given for minor courses offered to other departments A thorough discussion was held on above suggestions and resolved to prepare and seek approval in the next meeting.
	Sub: 7	Dr.S.T Dundur thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.VivekKhazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

ANNEXURE-I

The minutes of the BOS meeting held on 03.07.2021

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Proceedings of the Meeting of the Board of Studies (BOS) held at 11.00 am on Saturday, 3rd July 2021 Through Video Conferencing

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
Proceedings of the meeting of the Board of Studies (BOS)
held at 11.00 am on Saturday, 3rd July 2021
through video conferencing

Sub:1

The chairman of Board of Studies Dr. V.S Puranik, HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies.
The committee was also observed one minute silence for untimely demise of Mr C.T Nagaraj, member BOS as a mark of respect to the departed soul.

Sub:2

Before taking up the regular agenda, the chairman briefly reported about the academic and developmental activities that took place in the department since last meeting of the BOS which was held on 4th July 2020.

ACTIVITIES

Sl .No	Name of the Faculty	Workshop, FDPs	Date
1	Dr V.S Puranik	FDP on Universal Human Values for Student Induction Program NIT Patna	23-27 November 2020
2		Delivered a invited talk on " Six-Sigma" at Basaveshwar Engineering College(A), Bagalkot	9th July 2020
3	Dr.C.M.Javalagi	Online Faculty Development Programme on "Industry 4.0: Smart Manufacturing for Future" Conducted by S I T, Tumkur	27th to 29th July 2020
4		Online Faculty Development Programme FDP on " Six-Sigma"	6th to 10th July 2020

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	s/d Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
s/d Dr. Rathan Raj K.J	s/d Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
s/d Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

S/d: Consent letter with signature recieved

				by Basaveshwar Engineering College(A), Bagalkot	
		5		Conducted one day online workshop on NAAC Preparations for TCE Gadag as a Part of "Paramarsh" Scheme of UGC	16 July 2020
		6		Participated in FDP on "Outcome Based Education" organized by Trinity Institute of Professional Studies, Dwarka, New Delhi.	8th and 9th Sept 2020
		7		Delivered a invited talk on Need for outcome based Education and "AICTE - Examination Reform Policy "Conducted by SPIU-NPIU.	7 to 8 December 2020
		8		Conducted two days Workshop on "AICTE- Examination Reform Policy" to the faculty of school of Engineering, Cochin University Science and Technology	18 to 19 February 2021
		9		Delivered a invited talk on Reform in Examination for Quality in product in an FDP conducted by SDM CET Dharwad. The FDP was titled accreditation an accelerator for "Quality improvement in Engineering Education"	22-02-2021 and 22-04-2021
		10	Dr.D.G.Mallapur	Faculty Development Programme on "Recent Innovations in Mechanical Engineering and Scope for Entrepreneurship" at Nawab Shah Alam Khan CET Hyderabad, Telangana.	29th June to 5th July 2020
		11		FDP (On Line) on "Applications of Thermodynamics" conducted by Dept of Mechanical Engg, PESITM, Shivamogga	13 to 17 July 2020
		12		FDP (On Line) on "Current Trends in Mechanical Engineering" conducted by S J M Institute of Technology, Chitradurga.	22 to 25 July 2020

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		13	Dr.D.D.Chillal	FDP (On Line) on "Recent Advances in Renewable Energy and Energy Efficiency Technologys" conducted by Mahatma Gandhi Institute of Technology,Hyderabad	21-25 July 2020
		14	Dr.C.M.Javalagi	Book Chapter on Theoretical & Statistical Analysis of Inventory & Warehouse Management in Supply Chain Management – A Case Study on Small Scale Industries. Published in Advances in Manufacturing and Industrial Engineering. Publisher: Springer Singapore	**2 February 2021**
		15	Dr.S.M.Pharsiyawar Coordinator, Dr.S.T.Dundur,Dr.V.S.Puranik, Dr.C.M.Javalagi, Dr.D.G.Mallapur with Sri.KallayyaM.Karikanti, Sri.ArjunR.Madalgeri Teaching and Non-Teaching Staff participated.	One week awareness Campaign "Stop Corona Save the Country" under AICTE 100 activity points Program	**17 to 23 March 2021**
		16	Dr.S.M.Pharsiyawar	Project feasibility report for Sri Praveen Pujari to establish Soya Tofu and carbonated beverages manufacturing unit.	**28 March 2021**

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

	Sub: 3	**To read and approve the minutes of Board of Studies meeting held on 04.07.2020**
	Resolution:	The minutes of the previous BOS meeting held on 04.07.2020 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in **Annexure-1**
	Sub: 4	**To discuss and approve the syllabus for VII and VIII semester for students admitted to first year in 2018-19**
	Resolution:	Dr C.M Javalagi and Dr D.G Mallapur presented the syllabus for VII and VIII semester respectively for students admitted to first year in 2018-19. A thorough discussion was held and few suggestions such as addition of queuing model, inventory management and lean manufacturing in operation management subject were made by the BOS committee members. However clarification was given by the chairman that the queuing model topic is already included in operations research subject (VI Semester) and inventory management in materials management (elective). Further, it was agreed upon to re-visit the subject of operation management considering above suggestions for incorporating the same. Then, it was resolved to approve the syllabus of teaching for the students admitted to first year in 2018-19 (Seventh and Eighth semester syllabus) as in **Annexure 2**
	Sub: 5	**Ratification of the subject titled Sanskritika Kannada/Balike Kannada admitted to first year in 2020-21 and also 2019-20**
	Resolution:	Dr S.M Pharsiyawar presented the syllabus of Sanskritika Kannada/Balike Kannada.After discussion it was resolved to approve the syllabus of Sanskritika Kannada/Balike Kannada of teaching for the students admitted

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		to first year 2020-21as in **Annexure 3**
	Sub: 6	**To approve the subject titled Universal Human Values for the students admitted to first year in 2020-21 and 2021-22**
	Resolution:	After discussion it was resolved to approve subject titled Universal Human Values for the students admitted to first year in 2020-21 and 2021-22
	Sub: 7	**To discuss and approve the scheme of teaching for the students admitted to first year in 2021-22 (175 credits)**
	Resolution:	Dr S.M Pharsiyawar presented the scheme of teaching for the students admitted to first year in 2021-22 (175 credits**).** For the proper distribution of the credits and subjects to cover in the areas of technology, management and production, it was appreciated by the BOS members. After discussion it was resolved to approve the scheme of teaching for the students admitted to first year 2021-22 from third to eighth semester as in **Annexure 4**
	Sub:11	**Any other subjects with permission of chair**
	Resolution	The BOS committee suggested the following: ❖ New elective subjects like Artificial Intelligence and Machine Learning should be included in the syllabus. It will help students in their placements. ❖ Inclusion of Optimization and Heuristics as open elective for other departments ❖ Department should subscribe manufacturing journal titled "Journal of Intelligent Manufacturing", which will help the students to prepare for technical seminars. ❖ Focus to be given on NEP. There is need to change from conventional thinking to new ways of thinking. ❖ Need to focus on the sustainability of the department by changing

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Bundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		its approach and staying relevant to the companies. A thorough discussion was held on above suggestions and resolved to prepare and seek approval in the next meeting.
	Sub: 13	Dr.S.T Dundur thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman

Professor & Head
Department of Industrial and Production Engineering
Basaveshwar Engineering College,
BAGALKOT-587102

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
Department of Industrial and Production Engineering

Ref: BEC/IPE/2020-21/ Date: 08-07-2021

To,

The Principal
Basaveshwar Engineering College (A)
Bagalkot-587103

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **3rd July 2021** at **11.00am** through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you,

BOS Member
Dr. N. Nagesha
D.M.E., B.E., M.E.M., Ph.D.(IISc)
FIE, MISTE, MIIPE, MQCFI, MIIM, MCSI
Professor & Chairman
Dept. of Industrial & Production Engg.
University BDT College of Engineering
(A Constituent College of VTU, Belagavi)
DAVANAGERE - 577 004

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
Department of Industrial and Production Engineering

Ref: BEC/IPE/2020-21/ Date: 08-07-2021

To,

The Principal
Basaveshwar Engineering College (A)
Bagalkot-587103

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **3rd July 2021** at **11.00am** through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you,

BOS Member

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
Department of Industrial and Production Engineering

Ref: BEC/IPE/2020-21/

Date: 08-07-2021

To,

The Principal
Basaveshwar Engineering College (A)
Bagalkot-587103

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **3rd July 2021** at **11.00am** through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you,

BOS Member
Shreedhar. B. Kalyanshetti
Director
Combustion Concepts Pvt. Ltd.,
Mumbai.

ANNEXURE-II

The scheme of teaching and minor courses for the students going to be admitted to first year in 2021-22 as per NEP-2020 (third to eighth semester for 160 credits)

Break-up of credits for B.E
Applicable to 2021-22 batch (160 credits)

Proposed for Department of Industrial and Production Engineering

Proposed Curriculum Framework for BEC (2021-2022)

Course Name : B. E **Course Duration: Min. 4 years &Max. 8 years**
Course structure : Integrating Arts with STEM (Science Technology Engineering Maths)
Program Credits : 160 with avg. of 20 Credits/sem.

S. N.	Category	AICTE Propos.	VTU Propos.	BEC Propos.
1.	**HSMC:** HSS, Management courses, Kannada, English, Const., EV (VTU and BEC: 4 English, 1 Kannada, 1 Const., 1 EV, 3 HRM left to dept)	12	10	**10**
2.	**BSC:** Basic Science Courses (Physics, Chemistry and Mathematics)	25	23	**23**
3.	**ESC:** Engineering Science Courses (Basic Elect/electronics/computer/mechanics/workshop/drawing etc.)	24	20	**20**
4.	**PCC:** Professional Core Courses	48	46	**48**
5.	**PEC:** Professional Elective Courses relevant to the branch with at least one course either fully or partially supported by industry.	18	09	**12**
6.	**OEC**: Open Electives Courses/ Subjects from other technical/arts/commerce & **AEC**: (1 Innovation and Design thinking, 1 ___, 3 SS, 2 Biology or RM, 3 MOOCS, 2 Dept. specific)	18	6+11 (AEC)	**9+ 12 =21**
7.	Mini (2) and Major projects(8) /seminar(1)/summer internships (2+2) and Research/Industrial Internships (10)	15	33	**25**
8.	Mandatory Credit course: UHV :1, Non-credit courses: Yoga, NSS, Bridge course maths 1 and 2 (lateral Entry)	No Credits	04	**01**
	Total	**160**	**160**	**160**

Credit split-up for Undergraduate program

Break-up of credits for B.E (Common to all Branches)
Applicable to 2021-22 batch (160 credits)
Proposed for BEC

Sem.	BSC	ESC	HSSM	AEC	PCC	PEC	OEC	Proj.	Int.	Sem.	Mand. (UHV)	Total
1.	07	10	02	01								**20**
2.	07	10	02	01								**20**
3.	03		01	1(Dep)	12				02		01	**20**
4.	03		01	1 (SS)	15							**20**
5.			01	1 (ss)	10	03	03		02			**20**
6.	03			1 (SS)	08	03	03	02				**20**
7.			03	1 (Dep)	03	06	03	08				**24**
8.				3 (MOOCS) 2 (Dep)					10	01		**16**
Tot.	**23**	**20**	**10**	**12**	**48**	**12**	**09**	**10**	**14**	**01**	**01**	**160**

Salient features

- For award of Certificate at the end of first year, a student has to earn a minimum of 40 credits.
- For award of Diploma at the end of second year, a student has to earn a minimum of 80 credits.
- For award of Bachelor of Engineering (B.E) at the end of fourth year, a student has to earn a minimum of 160 credits.
- For award of Bachelor of Engineering (B.E honors) at the end of fourth year, a student has to earn a minimum of 160 + 18 (online) = 178 credits.
- For award of Bachelor of Engineering (B.E) with major and minor streams at the end of fourth year, a student has to earn a minimum of 160 + 18 (blended with a minimum of 12 credits in offline mode, courses should be mandatorily outside the department) = 178 credits.

Break-up of credits for B.E
Applicable to 2021-22 batch (160 credits)
Proposed for Industrial and production Engineering

Credit distribution for the students admitted to first year in **2021-22**

Sem	BSC	ESC	HSSM	AEC	Professional Core (PCC)	Professional Elective (PEC)	Open Elective (OEC)	UHV (MAND)	Mini Project+ / Project+ / Seminar+ / Internship	Total
I	07	10	02	01						20
II	07	10	02	01						20
III	03		01	1(Dep)	12			01	I-02	20
IV	03		01	1(SS)	15					20
V			01	1(SS)	10	03	03		I-02	20
VI	03			1(SS)	08	03	03		MP-02	20
VII			03	1(Dep)	03	06	03		P-08	24
VIII				3* Moocs 2(DEP)					I-10+1S	16
Total	23	20	10	12	48	12	09	01	25	**160**

*As per the VTU guidelines, mandatory credits to be earned through MOOCS from the 4th Sem onwards

BVVS

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

SCHEME OF TEACHING AND EXAMINATION

Academic Year : 2021-2022

Ist Semester B.E. (Common to all Branches)

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
1.	BSC		Engg. Maths	03				50	50	100
2.	BSC		Engg. Physics	03				50	50	100
3.	ESC		Basic Electrical Engg	03				50	50	100
4.	ESC		Basic Electronics Engg	03				50	50	100
5.	ESC		Programming with C	03				50	50	100
6.	BSC		Physics Lab	01				50	50	100
7.	ESC		C Programming Lab	01				50	50	100
8.	HSSM		Technical English -I	02				50	50	100
9.	AEC		Ability Enhancement Course	01				50	50	100
			Total	**20**				**450**	**450**	**900**

BVVS

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

SCHEME OF TEACHING AND EXAMINATION

Academic Year : 2021-2022

IInd Semester B.E. (Common to all Branches)

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
1.	BSC		Engineering Maths	03				50	50	100
2.	BSC		Engg. Chemistry	03				50	50	100
3.	ESC		Elements of Mechanical Engg	03				50	50	100
4.	ESC		Engg. Mechanics	03				50	50	100
5.	ESC		CAED (Integrated Lab)	03				50	50	100
6.	BSC		Chemistry Lab	01				50	50	100
7.	ESC		Basic Engg. Practice Lab	01				50	50	100
8.	HSSM		Technical English -II	02				50	50	100
9.	AEC		Ability Enhancement Course	01				50	50	100
			Total	**20**				**450**	**450**	**900**

IIIrd Semester B.E. (IPE)

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
1.	BSC		Maths –III (Statistics for Engineers)	03				50	50	100
2.	PCC		Mechanics of Materials	03				50	50	100
3.	PCC		Fundamentals of Materials Science and Engineering	03				50	50	100
4.	PCC		Machine Tools Technology (Integrated)	03	2	0	2	50	50	100
5.	PCC		Material Science and Testing Lab	01				50	50	100
6.	PCC		Computer Aided Machine Drawing Lab	02				50	50	100
7.	INT		Summer Internship - I	02				50	50	100
8.	AEC		Creativity and Innovation	01				50	50	100
9.	UHV		Universal Human Values	01				50	50	100
10.	HSSM		SK/BK or CI	01				50	50	100
			Total	**20**				**550**	**550**	**1100**

IVth Semester B.E. (IPE)

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
1.	BSC		Maths -IV	03	03	0	0	50	50	100
2.	PCC		Industrial Engineering and Management	04	03	0	0	50	50	100
3.	PCC		Industrial Metrology and Quality Control	03	03	0	0	50	50	100
4	PCC		Theory of Machines	03	03	0	0	50	50	100
5.	PCC		Design of Machine Elements	03	02	02	-	50	50	100
6.	PCC		Industrial Engineering Lab	01	0	0	01	50	50	100
7.	PCC		Industrial Metrology and Quality Control Lab	01	0	0	01	50	50	100
8.	AEC		Soft Skill-I	01	01	0	0	50	50	100
9.	HSMC		SK/BK or CI	01	02	0	0	50	50	100
			Total	**20**	**15**	**02**	**03**	**550**	**550**	**1100**

Vth Semester B.E. (IPE)

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
1.	PCC		Theory of Metal Cutting	03				50	50	100
2.	PCC		Operations Research	03	0	0	0	50	50	100
3	PC C		Digital Design and Manufacturing	03						
3.	OEC		Open Elective -I	03				50	50	100
4.	PEC		Professional Elective Course-1	03				50	50	100
5.	PCC		Digital Design and Manufacturing Lab	01				50	50	100
6.	INT		Summer Internship – II	02				50	50	100
7.	HSSM		Environmental Studies	01				50	50	100
8.	AEC		Soft Skills -II	01				50	50	100
			Total	**20**				**450**	**450**	**900**

VIth Semester B.E. (IPE)

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
1.	BSC		Mathematical Modeling and Simulation	03				50	50	100
2.	PCC		Operations Management	03				50	50	100
3.	PCC		Hydraulics and Pneumatics	03				50	50	100
4.	PEC		Professional Elective Course - II	03				50	50	100
5.	OEC		Open Elective – II	03				50	50	100
6.	PCC		Python Programming Lab	02				50	50	100
7.	AEC		Soft Skill-III	01				50	50	100
8.	MP		Mini Project	02				50	50	100
			Total	**20**				**450**	**450**	**900**

Academic Year : 2021-2022

VIIth/VIIIth Semester B.E. (Branch Name), Group – 1*

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
	HSSM		Entrepreneurship Development	03						
	PCC		Theory of Metal Forming	03						
1.	PEC		Professional Elective Course-II	03				50	50	100
2.	PEC		Professional Elective Course -III	03				50	50	100
3.	OEC		Open Elective-III	03				50	50	100
5.	Project		Project Work	08				50	50	100
6.	AEC		Comprehensive Examination	01				50	50	100
			Total	**24**				**300**	**300**	**600**

OR

Sl. No	Category	Subject Code	Subject Title	Credits	HOURS/ WEEK			EXAMINATION MARKS		
					L	T	P	CIE	SEE	TOTAL
1.	AEC		MOOCs*	03						
2	AEC		Research Methodology & IPR/ Design Thinking	02						
2.	Seminar		Technical Seminar	01				100	--	100
3.	INT		Research/Industrial Internship	10				100	100	200
			Total	**16**				**200**	**100**	**300**

- **7th and 8th semesters are swapped between group 1 and group 2 students**
- *** Offered between 3rd to 6th semester**

Minor Courses in Industrial and Production Engineering Department

Students can select subjects from other branches.

E.g. If Computer science Engineering student selects subjects from IPE Engineering under this scheme, he/she will get Major degree of Computer Science with minor degree of Industrial and production Engineering.

Student from ANY department is ELIGIBLE to apply for Minor from ANY OTHER DEPARTMENT.

Student can select one subject per semester from the list of subjects of a branch of which he or she want to peruse minor degree. All courses **(blended with a minimum of 12 credits in offline mode, courses should be mandatorily outside the department)** = **178 credits.**

Basaveshwar Engineering College, Bagalkot
Department of Industrial & Production Engineering
List of Courses (Minor in IPE)

Sl.No.	Stream (Industrial Engineering and Business Management)	
	Compulsory Courses	**Credits**
1	Principles of Management	03
2	Optimization Techniques for Business	03
	Other Courses (Select any FOUR from below courses)	
3	Supply Chain Management	03
4	Organizational Behavior	03
5	Quality Assurance and Reliability	03
6	Human Factors Engineering	03
7	Marketing Management	03
8	Project Management	03
9	Process Improvement Engineering	03
10	Business Analytics	03

Total Credits Required for Minor degree=18 credits

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Proceedings of the Meeting of the Board of Studies (BOS) held at 11.00 am on Saturday, 3rd July 2021 Through Video Conferencing

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
Proceedings of the meeting of the Board of Studies (BOS)
held at 11.00 am on Saturday, 3rd July 2021
through video conferencing

Sub:1

The chairman of Board of Studies Dr. V.S Puranik, HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies.
The committee was also observed one minute silence for untimely demise of Mr C.T Nagaraj, member BOS as a mark of respect to the departed soul.

Sub:2

Before taking up the regular agenda, the chairman briefly reported about the academic and developmental activities that took place in the department since last meeting of the BOS which was held on 4th July 2020.

ACTIVITIES

Sl .No	Name of the Faculty	Workshop, FDPs	Date
1	Dr V.S Puranik	FDP on Universal Human Values for Student Induction Program NIT Patna	23-27 November 2020
2		Delivered a invited talk on " Six-Sigma" at Basaveshwar Engineering College(A), Bagalkot	9th July 2020
3	Dr.C.M.Javalagi	Online Faculty Development Programme on "Industry 4.0: Smart Manufacturing for Future" Conducted by S I T, Tumkur	27th to 29th July 2020
4		Online Faculty Development Programme FDP on " Six-Sigma"	6th to 10th July 2020

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	s/d Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
s/d Dr. Rathan Raj K.J	s/d Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
s/d Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

S/d: Consent letter with signature recieved

				by Basaveshwar Engineering College(A), Bagalkot	
		5		Conducted one day online workshop on NAAC Preparations for TCE Gadag as a Part of "Paramarsh" Scheme of UGC	16 July 2020
		6		Participated in FDP on "Outcome Based Education" organized by Trinity Institute of Professional Studies, Dwarka, New Delhi.	8th and 9th Sept 2020
		7		Delivered a invited talk on Need for outcome based Education and "AICTE - Examination Reform Policy "Conducted by SPIU-NPIU.	7 to 8 December 2020
		8		Conducted two days Workshop on "AICTE- Examination Reform Policy" to the faculty of school of Engineering, Cochin University Science and Technology	18 to 19 February 2021
		9		Delivered a invited talk on Reform in Examination for Quality in product in an FDP conducted by SDM CET Dharwad. The FDP was titled accreditation an accelerator for "Quality improvement in Engineering Education"	22-02-2021 and 22-04-2021
		10	Dr.D.G.Mallapur	Faculty Development Programme on "Recent Innovations in Mechanical Engineering and Scope for Entrepreneurship" at Nawab Shah Alam Khan CET Hyderabad, Telangana.	29th June to 5th July 2020
		11		FDP (On Line) on "Applications of Thermodynamics" conducted by Dept of Mechanical Engg, PESITM, Shivamogga	13 to 17 July 2020
		12		FDP (On Line) on "Current Trends in Mechanical Engineering" conducted by S J M Institute of Technology, Chitradurga.	22 to 25 July 2020

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		13	Dr.D.D.Chillal	FDP (On Line) on "Recent Advances in Renewable Energy and Energy Efficiency Technologys" conducted by Mahatma Gandhi Institute of Technology,Hyderabad	21-25 July 2020
		14	Dr.C.M.Javalagi	Book Chapter on Theoretical & Statistical Analysis of Inventory & Warehouse Management in Supply Chain Management – A Case Study on Small Scale Industries. Published in Advances in Manufacturing and Industrial Engineering. Publisher: Springer Singapore	**2 February 2021**
		15	Dr.S.M.Pharsiyawar Coordinator, Dr.S.T.Dundur,Dr.V.S.Puranik, Dr.C.M.Javalagi, Dr.D.G.Mallapur with Sri.KallayyaM.Karikanti, Sri.ArjunR.Madalgeri Teaching and Non-Teaching Staff participated.	One week awareness Campaign "Stop Corona Save the Country" under AICTE 100 activity points Program	**17 to 23 March 2021**
		16	Dr.S.M.Pharsiyawar	Project feasibility report for Sri Praveen Pujari to establish Soya Tofu and carbonated beverages manufacturing unit.	**28 March 2021**

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

	Sub: 3	**To read and approve the minutes of Board of Studies meeting held on 04.07.2020**
	Resolution:	The minutes of the previous BOS meeting held on 04.07.2020 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in **Annexure-1**
	Sub: 4	**To discuss and approve the syllabus for VII and VIII semester for students admitted to first year in 2018-19**
	Resolution:	Dr C.M Javalagi and Dr D.G Mallapur presented the syllabus for VII and VIII semester respectively for students admitted to first year in 2018-19. A thorough discussion was held and few suggestions such as addition of queuing model, inventory management and lean manufacturing in operation management subject were made by the BOS committee members. However clarification was given by the chairman that the queuing model topic is already included in operations research subject (VI Semester) and inventory management in materials management (elective). Further, it was agreed upon to re-visit the subject of operation management considering above suggestions for incorporating the same. Then, it was resolved to approve the syllabus of teaching for the students admitted to first year in 2018-19 (Seventh and Eighth semester syllabus) as in **Annexure 2**
	Sub: 5	**Ratification of the subject titled Sanskritika Kannada/Balike Kannada admitted to first year in 2020-21 and also 2019-20**
	Resolution:	Dr S.M Pharsiyawar presented the syllabus of Sanskritika Kannada/Balike Kannada.After discussion it was resolved to approve the syllabus of Sanskritika Kannada/Balike Kannada of teaching for the students admitted

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		to first year 2020-21as in **Annexure 3**
	Sub: 6	**To approve the subject titled Universal Human Values for the students admitted to first year in 2020-21 and 2021-22**
	Resolution:	After discussion it was resolved to approve subject titled Universal Human Values for the students admitted to first year in 2020-21 and 2021-22
	Sub: 7	**To discuss and approve the scheme of teaching for the students admitted to first year in 2021-22 (175 credits)**
	Resolution:	Dr S.M Pharsiyawar presented the scheme of teaching for the students admitted to first year in 2021-22 (175 credits**).** For the proper distribution of the credits and subjects to cover in the areas of technology, management and production, it was appreciated by the BOS members. After discussion it was resolved to approve the scheme of teaching for the students admitted to first year 2021-22 from third to eighth semester as in **Annexure 4**
	Sub:11	**Any other subjects with permission of chair**
	Resolution	The BOS committee suggested the following: ❖ New elective subjects like Artificial Intelligence and Machine Learning should be included in the syllabus. It will help students in their placements. ❖ Inclusion of Optimization and Heuristics as open elective for other departments ❖ Department should subscribe manufacturing journal titled "Journal of Intelligent Manufacturing", which will help the students to prepare for technical seminars. ❖ Focus to be given on NEP. There is need to change from conventional thinking to new ways of thinking. ❖ Need to focus on the sustainability of the department by changing

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Bundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		its approach and staying relevant to the companies. A thorough discussion was held on above suggestions and resolved to prepare and seek approval in the next meeting.
	Sub: 13	Dr.S.T Dundur thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman

Professor & Head
Department of Industrial and Production Engineering
Basaveshwar Engineering College,
BAGALKOT-587102

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.VivekKhazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
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BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
Department of Industrial and Production Engineering

Ref: BEC/IPE/2020-21/ Date: 08-07-2021

To,

The Principal
Basaveshwar Engineering College (A)
Bagalkot-587103

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **3rd July 2021** at **11.00am** through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you,

N. Nagesha

BOS Member
Dr. N. Nagesha
D.M.E., B.E., M.E.M., Ph.D.(IISc)
F.I.E., M.I.S.T.E., M.I.I.P.E., M.Q.C.F.I., M.I.I.M., M.C.S.I.
Professor & Chairman
Dept. of Industrial & Production Engg.
University BDT College of Engineering
(A Constituent College of VTU, Belagavi)
DAVANAGERE - 577 004

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
Department of Industrial and Production Engineering

Ref: BEC/IPE/2020-21/ Date: 08-07-2021

To,

The Principal
Basaveshwar Engineering College (A)
Bagalkot-587103

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BOS Member

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
Department of Industrial and Production Engineering

Ref: BEC/IPE/2020-21/ Date: 08-07-2021

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Thanking you,

BOS Member
Shreedhar. B. Kalyanshetti
Director
Combustion Concepts Pvt. Ltd.,
Mumbai.

Annexure-1

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Proceedings of the meeting of the Board of Studies (BOS) held at 10.30 am on Monday, 4th July 2020 through video conferencing

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
Proceedings of the meeting of the Board of Studies (BOS)
held at 10.30 am on Monday, 4th July 2020
through video conferencing

Sub:1 The chairman of Board of Studies Dr. V.S Puranik HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies. Chairman also explained history of the department and laboratory facilities available in the department with the help of slides.

Sub: 2 Before taking up the regular agenda, the chairman briefly reported about the academic developmental activities that took place in the department since last meeting of the BOS which was held on 24th June 2019.

1. Dr S.M Pharsiyawar Associate professor Department of IPE awarded with PhD degree

LIST OF PhD SCHOLARS AWARDED

Candidate's Name	Research Topic	Guide
RAJENDRA KADI	EXPERIMENTAL INVESTIGATION ON SURFACE INTERGRITY AUSTENITIC STAINLESS STEEL	Dr ST Dundur
NINGOMBAM SANJEEV KUMAR	A STUDY ON MANAGEMENT OF SOCIAL ENTERPRISES IN KARNATAKA	Dr V.S Puranik

3. **WORK SHOP ORGANIZED**

Sr. No	Workshop organized Date	Name of the Faculty
01	AICTE Examination Reforms Policy for BEC faculty 14-16 February 2020	Dr.C.M.Javalagi
02	E-workshop - AICTE Reform Policy on	Dr.C.M.Javalagi

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.Vivek Khazode	s/d Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
s/d Dr. Rathan Raj K.J	s/d Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
s/d Dr. N. Nagesha	s/d Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

* s/d = Consent letter with Signature received.

Examination for BEC faculty6-7 may 2020

Sr. No	Workshop, FDP Attended	Date	Name of the Faculty
1	Attended Industry Institute Interaction Cell Bangalore	13th July 2019	Dr.V.S.Puranik Dr C.M Javalagi Dr.S.M.Pharsiyawar
2	Attended Conference at The institute of Engineering , Kolkata, India,West Bengal Centre	23-24, Nov 2019	Dr. S. T. Dundur
3	Attended FDP on AICTE-Training for Experts at Chennai	24th Feb.2020	Dr. S. T.Dundur
4	Attended FDP on AICTE- Examination Reform Policy at BVB CET, Hubli	20-22, Feb. 2020	Dr. C. M. Javalagi
5	Attended FDP on FDP on Current Practices and Critical Issue for OBE in Engineering / Institution (AICTE Sponsored) at BEC-Bagalkot	27-01-2020 to 07-02-2020	Dr. C. M. Javalagi
6	Attended FDP on AICTE- Examination Reform Policy At BEC Bagalkot	14-15 Feb.2020	Dr. S. M. Pharsiyawar
7	Attended – Allterrian Vehicle (ATVC) Vadodara. Gujarat	15-19 Feb 2020	Dr. D. D. Chillal

	Sub: 3	**To read and approve the minutes of Board of Studies meeting held on 24.06.2019**
	Resolution:	The minutes of the previous BOS meeting held on 24.06.2019 were circulated to all members. There were no comments received, hence

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.Vivek Khazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		resolutions were accepted and approved by the Board. The minutes are as in **Annexure-1**
	Sub: 4	**Ratification of modified scheme of teaching for the students admitted to first year during 2018-19 (175 credits)**
	Resolution:	After discussion it was resolved to approve modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester as in **Annexure-2**
	Sub: 5	**To discuss and approve the syllabus for V and VI semester for students admitted to first year in 2018-19**
	Resolution:	Dr D.G Mallapur and Dr S.M Pharsiyawar presented the syllabus for V and VI semester respectively for students admitted to first year in 2018-19. A thorough discussion was held and few suggestions like addition of Timer-Pro software to upgrade Industrial engineering laboratory and Introduction of special casting techniques as course which include plastic moulding methods were made by the BOS committee members which were agreed upon for incorporation. Then After it was resolved to approve the syllabus of teaching for the students admitted to first year in 2018-19 (Fifth and Sixth semester syllabus) as in **Annexure 4**
	Sub: 6	**To discuss and approve the scheme of teaching for the students admitted to first year in 2020-21 (175 credits)**
	Resolution:	Dr D.D Chillal presented the scheme of teaching for the students admitted to first year in 2020-21 (175 credits**).**After discussion it was resolved to approve scheme of teaching for the students admitted to first year 2020-21 from third to eighth semester as in **Annexure 5**
	Sub: 7	**To discuss and approve the structure of the course/ subject file**
	Resolution:	Dr C.M Javalagi presented to discuss and approve the structure of the course/ subject file as per the College exam reforms committee report guidelines**.** After discussion it was resolved to approve the structure of the course/ subject file as in **Annexure 6**

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.Vivek Khazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

	Sub:8	**To discuss and approve the assessment rubrics for Technical seminar, Internship, Mini project and project phase I & II**
	Resolution:	Dr C.M Javalagi presented to discuss and approve the assessment rubrics for Technical seminar, Internship, Mini project and project phase I & II as per the College exam reforms committee report guidelines. After discussion it was resolved to approve the assessment rubrics for Technical seminar, Internship, Mini project and project phase I & II
	Sub:9	**To discuss about the introduction of online mode of teaching from the year 2020-21**
	Resolution:	Chairman presented to discuss about the introduction of online mode of teaching from the year 2020-21 as per the College exam reforms committee report guidelines. After discussion it was resolved to approve the introduction of online mode of teaching from the year 2020-21
	Sub:10	**To discuss about the introduction of two or more virtual experiments in each laboratory course**
	Resolution:	Chairman presented to discuss about the introduction of two or more virtual experiments in each laboratory course as per the College exam reforms committee guidelines .After discussion it was resolved to approve the introduction of two or more virtual experiments in each laboratory course. However committee concluded that the virtual experiments may be introduced based on the types of laboratories wherever it is possible.
	Sub:11	**Any other subjects with permission of chair**
	Resolution	The committee suggested the following: ❖ Review the list of elective subjects offered for last five years

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.Vivek Khazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

		and also collects information from past students placed in different areas to introduce new elective subjects which will help students in their placements. ❖ Introduction of simulation softwares for casting and gating design. ❖ To balance the electives for three areas namely technology, management and production. A thorough discussion was held on above suggestions and resolved to prepare and seek approval in the next meeting.
	Sub: 13	Dr.S.T Dundur thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman
Professor & Head
Department of Industrial and Production Engineering
Basaveshwar Engineering College,
BAGALKOT-587102

Name and Signature of BOS members present

Dr. V.S.Puranik	Prof.Vivek Khazode	Mr. S B Kalyanshetti	Dr. D.G.Mallapur	Dr.V.G.Akkimardi
Dr. Rathan Raj K.J	Mr.V. S. KORI	Dr. S.T.Dundur	Dr. S. M.Pharsiyawar	Prakash mokhashi
Dr. N. Nagesha	Mr.C. T. Nagaraj.	Dr. C.M.Javalagi	Dr..D.D.Chillal	Kavyashree Kulkarni

To,

The Principal
Basaveshwar Engineering College
Bagalkot-587104

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **04th July 2020 at 11.00** am through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you

Date: 15-7-2020

BOS Member

C.T. Nagaraj
9986035571
SACL (TVS Group)
Hosur. T.N.

To,

The Principal
Basaveshwar Engineering College
Bagalkot-587104

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **04th July 2020 at 11.00** am through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you

Date: 15-7-2020

BOS Member 15/7/20

Dr. N. Nagesha
D.M.E.,B.E.,M.E.M., Ph.D.(IISc)
F.I.E., M.I.S.T.E., M.I.I.P.E., M.I.Q.C.E.I., M.I.I.E., M.C.S.I.
Professor & Chairman
Dept. of Industrial & Production Engg.
University BDT College of Engineering
(A Constituent College of VTU, Belagavi)
DAVANAGERE - 577 004

To,

The Principal
Basaveshwar Engineering College
Bagalkot-587104

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **04th July 2020 at 11.00** am through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you

Date: 15-7-2020

DR. RAMESH RAJ
BOS Member

To,

The Principal
Basaveshwar Engineering College
Bagalkot-587104

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **04th July 2020 at 11.00** am through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you

Date: 15-7-2020

BOS Member

Shreedhar. B. Kalyanshetti

To,

The Principal
Basaveshwar Engineering College
Bagalkot-587104

Respected Sir,

Sub: Approval of resolutions made in BOS meeting in Industrial and Production Engineering Department.

With reference to the subject cited above I wish to inform you that the Board of Studies meeting of the Department of Industrial and Production Engineering was held on **04th July 2020 at 11.00** am through video conferencing (VC). All the resolutions mentioned in the proceeding are discussed and approved in the BOS meeting.

Thanking you

Date: 15-7-2020



BOS Member

Annexure -I

Minutes of Board of Studies Meeting held on 24.06.2019

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
Proceedings of the meeting of the Board of Studies (BOS)
held at 10.30 am on Monday, 24th June 2019
at Old Board room

<table>
<tr><td></td><td>Sub:1</td><td>The chairman of Board of Studies Dr. V.S Puranik HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies.</td></tr>
<tr><td></td><td>Sub2</td><td>Before taking up the regular agenda, the chairman briefly reported about the academic developmental activities that took place in the department since last meeting of the BoS which was held on 30th June 2019. The chairman also briefed the following

i) NBA accreditation extended from 2019 to 2022
ii) The list of PhD Research Scholar
<table>
<tr><td>Candidate's Name</td><td>Research Topic</td><td>Guide</td></tr>
<tr><td>Vijaykumar Hiremath</td><td>Investigation Machining Parameters under Cryogenic conductors.</td><td>Dr ST Dundur</td></tr>
<tr><td>Maheshwar C</td><td>ERP implementation medium and small scale industries in Karnataka</td><td>Dr. C.M Javalagi</td></tr>
<tr><td>Dilip Gurunath Sondur</td><td>Studies on mechanical and tribological properties of as cast, cast aged and forge aged Al25Mg$_2$Si2Cu4Fe alloy.</td><td>Dr D.G Mallapur</td></tr>
<tr><td>Mohammad Saleem D. Harlapur</td><td>Studies on mechanical and tribological properties of as cast, cast aged and forge aged Al25Mg$_2$Si2Cu4Ni alloy.</td><td>Dr D.G Mallapur</td></tr>
</table>
iii)SDP on Finite Element analysis coordinated by Dr ST DUNDUR</td></tr>
<tr><td></td><td>Sub: 3</td><td>Confirmation of the previous minutes of the meeting of the Board of Studies held on 30.06.2019</td></tr>
<tr><td></td><td>Resolution:</td><td>The minutes of the previous BoS meeting held on 30.06.2018 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in Annexure-1</td></tr>
<tr><td></td><td>Sub: 4</td><td>Approval of minutes of Local BOS meeting held on 24.08.2018</td></tr>
<tr><td></td><td>Resolution:</td><td>The minutes of the previous Local BoS meeting held on 24.08.2018 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in Annexure-2</td></tr>
</table>

	Sub: 5	**Chairman BoS, presented a list for Post facto approval for the following subjects for the student studying from III sem to VIII sem of 200 credits and also approval for the students of 175 credits admitted to first year in 2018-19 from third to eighth semester** **i. Fundamentals of Quantitative Aptitude and Soft Skills (4th Semester)** **ii. Advanced Quantitative Aptitude and Soft Skills (5th Semester)** **iii. Career Planning and Professional Skills (6th Semester)** **iv. Naval Architecture and Marine Engineering (Teaching from Industry persons)** **v. Piping Engineering (Teaching from Industry persons)** vi. **NPTL / MOOCS online certificate courses**
	Resolution:	Fundamentals of Quantitative Aptitude and Soft Skills Advanced Quantitative Aptitude and Soft Skills Career Planning and Professional Skills Naval Architecture and Marine Engineering (Teaching from Industry persons) Piping Engineering and MOOCS and NPTL were discussed by the members and committee made no objection for students taking up the courses. Board Accepted the proposal and resolved for students continue to take up the courses
	Sub: 6	**The chairman presented modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester**
	Resolution:	After discussion it was resolved to approve modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester as in **Annexure 3**
	Sub: 7	**The chairman presented to discuss and approve on the syllabus of teaching for the students admitted to first year in 2018-19 from third to eighth semester with CO PO mapping**
	Resolution:	After discussion it was resolved to approve the syllabus of teaching for the students admitted to first year in 2018-19 (Third and Fourth sem syllabus)

		as in **Annexure 4** and from fifth to eighth semester will take up in next BOS with suitable modification in syllabus as discussed in the meeting
	Sub:8	**Permission given to the students to take the subjects in summer to those who have not completed 200 credits based on the student's request letter**
	Resolution:	After discussion it was resolved to approve for the students to take the subjects in summer to those who have not completed 200 credits.
	Sub: 13	**D.D Chillal**, thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman

Annexure -II

Scheme of Teaching for the Students Admitted to the First Year during 2018-19

Basaveshwar Engineering College (A), Bagalkot
Department of Industrial & Production Engineering

(SCHEME OF TEACHING FOR STUDENTS ADMITTED TO FIRST YEAR IN 2018-19)

III Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UMA301C	Engineering Mathematics –III	3	2	2	0	50	50	100
2	UIP302C	Material Science & Metallurgy	3	3	0	0	50	50	100
3	UIP330C	Engineering Thermodynamics and Fluid Mechanics	4	3	2	0	50	50	100
4	UIP320C	Strength of Materials	4	3	2	0	50	50	100
5	UIP321C	Machine Tools Technology	4	4	0	0	50	50	100
6	UIP316L	Metallography and Material Testing Laboratory	1.5	0	0	3	50	50	100
7	UIP322L	Machine Shop Practice	1.5	0	0	3	50	50	100
8	UMA330M	Bridge Course Mathematics-I *	0	3	0	0	50	50	100
9	UBT133M	Environmental Studies *	0	2	0	0	50	50	100
		Total	21	15	6	6	450	450	900

*For lateral Entry students

IV Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP401C	Mathematics –IV	3	2	2	0	50	50	100
2	UIP414C	Kinematics of Machines	4	3	2	0	50	50	100
3	UIP425C	Foundry and welding Technology	3	3	0	0	50	50	100
4	UIP431C	Metrology & Measurement	4	4	0	0	50	50	100
5	UIP465L	Computer Aided Machine Drawing	3	1	0	4	50	50	100
6	UHS001N	Fundamentals of Quantitative Aptitude and Soft Skills /BBC-I	1	1	0	0	50	50	100
7	UIP435L	Foundry and Welding Practice Lab	1.5	0	0	3	50	50	100
8	UIP432L	Metrology & Measurements Laboratory	1.5	0	0	3	50	50	100
9	UMA430M	Bridge Course Mathematics-II *	0	3	0	0	50	50	100
10	UHS226M	Constitution of India *	0	2	0	0	50	50	100
		Total	21	14	4	10	500	500	1000

* For lateral entry students

V Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP501C	Design of Machine Elements	4	3	2	0	50	50	100
2	UIP502C	Industrial Engineering	4	4	0	0	50	50	100
3	UIP513C	Quality Assurance & Reliability	4	3	2	0	50	50	100
4	UIP501H	Management and Entrepreneurship	4	4	0	0	50	50	100
5	UHS002N	Advanced FQAS / BBC-II	1	1	0	0	50	50	100
6	UIP523C	Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
8	UIP542L	Metal Cutting Lab	1	0	0	3	50	50	100
		Programming Laboratory	2	1	0	2	50	50	100
	UIP532L	Industrial Engineering Lab	1	0	0	2	50	50	100
		Total	24	18	2	8	450	450	450

VI Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP601C	Operations Research	4	3	2	0	50	50	100
2	UIP630C	Finite Element Methods	4	3	2	0	50	50	100
	UIP640C	Digital Design and Manufacturing	3	3	0	0	50	50	100
4		Elective I	3	3	0	0	50	50	100
5		Open Elective 1	3	3	0	0	50	50	100
6	UHS003N	Career Planning and Professional Skills / BBC-III	1	1	0	0	50	50	100
7	UIP633P	Mini Project	3	0	0	6	50	50	100
	UIP632L	Digital Manufacturing Lab.	1	0	0	3	50	50	100
9	UIP622L	Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	23	17	6	10	450	450	900

VII Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP730C	Operations Management	4	3	2	0	50	50	100
2	UIP720C	Theory of Metal Forming	4	3	2	0	50	50	100
3		Elective-II	3	3	0	0	50	50	100
4		Elective -III	3	3	0	0	50	50	100
5		Open Elective 2	3	3	0	0	50	50	100
6	UIP710L	Internship	2	0	0	4	50	50	100
7	UIP723L	Software applications Laboratory	1	0	0	2	50	50	100
8	UIP713P	Project- Phase I	5	0	0	10	50	50	100
		Total	25	15	4	16	400	400	800

VIII Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Elective-IV	3	3	0	0	50	50	100
2		Elective-V	3	3	0	0	50	50	100
3		Elective-VI	3	3	0	0	50	50	100
4	UIP804P	Project- Phase II	12	0	0	24	50	50	100
		Total	21	9	0	24	200	200	400

Annexure -III

Syllabus of V and VI Semester for Students Admitted to First Year in 2018-19

Basaveshwar Engineering College (A), Bagalkot
DEPARTMENT OF INDUSTRIAL & PRODUCTION ENGINEERING

V Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP501C	Design of Machine Elements	4	3	2	0	50	50	100
2	UIP502C	Industrial Engineering	4	4	0	0	50	50	100
3	UIP513C	Quality Assurance & Reliability	4	3	2	0	50	50	100
4	UIP501H	Management and Entrepreneurship	4	4	0	0	50	50	100
5	UHS002N	Advanced FQAS / BBC-II	1	1	0	0	50	50	100
6	UIP523C	Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
8	UIP542L	Metal Cutting Lab	1	0	0	3	50	50	100
		Programming Laboratory	2	1	0	2	50	50	100
	UIP532L	Industrial Engineering Lab	1	0	0	2	50	50	100
		Total	24	18	2	8	450	450	900

DESIGN OF MACHINE ELEMENTS [04 Credits] [L-T-P:3-2-0]

UNIT – I

Stress analysis: Static **s**trength, Static loads and factor of safety, Theories of failure-maximum normal stress theory, maximum shear stress theory, distortion energy theory, stress concentration, Stress concentration factor, Fatigue, Endurance limit, Factors influencing endurance limit, Goodman and Soderberg relationship, Combined loading.

16 Hrs.

UNIT – II

Design of shafts: Design of shaft for pure torsion, pure bending, combined loading, design for strength & rigidity, shafts under fluctuating loads.

Design of Keys: Types of keys, Strength of rectangular and square keys.

Design of Coupling: couplings-design rigid flange coupling and bushed pin type flexible coupling. **16 Hrs.**

UNIT – III

Design of joints: Riveted Joints -Types, rivet materials, Failures of Riveted joints, Efficiency, Welded Joints - Types, Strength of butt and fillet welds. Threaded fasteners, Cotter and Knuckle joints. **16 Hrs.**

UNIT – IV

Design of gears: Introduction to gears, Design of spur gear, stresses in gear tooth, Lewis equation, form factor, dynamic and wear load.

Design of bearings: Mechanisms of Lubrication - Viscosity, bearing modulus, coefficient of friction, minimum oil film thickness-Heat Generated, Heat dissipated, bearing materials, lubricants and properties. Examples of journal bearing and thrust bearing design, Ball and Roller Bearings: Bearing life, equivalent bearing load, selection of bearings of different types.

16 Hrs.

Reference Books:

1. *Design of Machine Elements* -V. B. Bandhari, -Tata McGraw Hill Publishing Co. Ltd., New – Delhi, 2000.
2. *Machine Design*-Robert .L, Norton -Pearson Education Asia, New Delhi, 2001.
3. *Elements of Machine Design*-N. C. Pandey and C. S. Shah, 2002 -Chorotar Publishing House
4. *Machine Design*-R. K. Jain, Khanna Publications, New Delhi.
5. *Machine Component & Design*-William Orthwan, Jaico Publishing Co.
6. *Design Data Hand Book*-K. Mahadevan and Balaveera Reddy, CBS Publication.

INDUSTRIAL ENGINEERING [04 Credits] [L-T-P:4-0-0]

UNIT-I

Introduction to Industrial Engineering: Definition, history and development of industrial engineering, present state of industrial engineering, contribution to industrial engineering, activities and approach of industrial engineering, objectives and functions of industrial engineering, place of
industrial engineering in an organization. **02 Hrs.**

Productivity: Definition of productivity, productivity in individual enterprises, task of management, productivity of materials, land, building, machine and power.
Measurement of productivity, factors affecting the productivity, productivity improvement programmes, wages and incentives (simple numerical problems). **05 Hrs.**

Work study: Definition, objective and scope of work study, Human factors in work study, Work study and. management, work study and supervision,
work study and worker **06 Hrs.**

UNIT-II

Introduction to method study: Definition, objective and scope of method study, activity recording and examination aids. Charts to record moments in
shop operation – process charts, flow process charts, travel chart and multiple activity charts.(With simple problems) **07 Hrs.**

Micro and memo motion study: Charts to record moment at work place – principles of motion economy, classification of moments, two handed process chart, SIMO
chart, and micro motion study. Development, definition and installation of the improved method, brief concept about synthetic motion studies. **06 Hrs.**

UNIT-III

Introduction to work measurement: Definition, objective and benefit of work measurement. Work measurement techniques. Work sampling: need, confidence levels,
sample size determinations, random observation, conducting study with simple problems. **06 Hrs.**

Time study: Time Study, Definition, time study equipment, selection of job, steps in time study. Breaking jobs into elements, recording information. Rating & standard Rating, standard performance, scale of rating, factors affecting the rate of working, allowances and standard time determination. Predetermined motion time study –
Method time measurement (MTM)**.** **07 Hrs.**

UNIT-IV

Ergonomics: Introduction, areas of study under ergonomics, system approach to ergonomics model, Man-machine system: Components of man-machine system and their functions – work capabilities of industrial worker, study of development of stress in human body and their consequences, computer based Ergonomics

04Hrs.

Design of man-machine system: Fatigue in industrial workers. Quantitative/ qualitative representation and alphanumeric displays. Controls and their design criteria, control types, relation between controls and displays, layouts of panels and machines. Design of work places, influence of climate on human efficiency, influence of
noise, vibration and light. **05 Hrs.**

Industrial Engineering application: Introduction to Service Sector: Various Services: i) Hotel ii) Health Care iii) Bank iv) Retail Marketing / Department Stores v) Urban bodies, vi) Education vii) Construction
viii) Transport and Communication ix) Government. Content of Product Vs. Services. **04 Hrs.**

Text Books:

1. ILO, *Introduction to work study*– ILO, III (Revised)Edition, 2007, ISBN:81-204- 0602-8
2. *Motion and Time study*- Ralph M Barnes, John Wiley, 8th Edition,1985.
3. *Engineered work Measurement*- Wledon, ELBS , 1991 Marvin E. Mundel- Motion and Time study, PHI, 1st edition

References books:

1. *Human Factors in Engineering Design* - S Sanders and E J McCormick, 6th Edition,
McGraw Hill, ISBN:0-07-100319-3
2. *Work Study and Ergonomics*- S Dalela and Sourabh, – Chand Publishers, 3rd edition.
3. Industrial Engineering Hand book – Maynard

: QUALITY ASSURANCE & RELIABILITY ENGINEERING [04 Credits] [L-T-P:4-0-0]

UNIT-I

Introduction: Historical evolution of quality concepts, definition of quality, quality function, dimensions of quality, quality engineering terminology, statistical methods for quality, quality costs – four categories costs and hidden costs. quality of design and conformance, brief discussion on sporadic and chronic quality problems, quality control and quality improvement, seven quality control tools, quality function deployment, introduction to measurement system analysis
(MSA). **06 Hrs.**

Quality Assurance: Definition and concept of quality assurance, departmental assurance activities. quality audit concept, structuring the audit program, planning and . performing the audit activities, audit reporting, ingredients of a quality
programengineering, place of industrial engineering in an organization **06 Hrs.**

UNIT-II

Statistical Process Control:Introduction to statistical process control – chance and assignable causes of variation. Basic principles of control charts, choice of.
control limits, sample size and sampling frequency, rational subgroups. Analysis of patterns of control charts. Case Studies on application of SPC **06 Hrs.**

Control Charts For Variables: Controls charts for X bar and Range, statistical basis of the charts, development and use of X bar and R charts, interpretation of charts. Control charts for X bar and standard deviation (S), development and use of X bar and S chart. Brief discussion on – Pre control X bar and S control charts with variable sample size, control charts for individual measurements, cusum chart, moving-range charts. Process capability – definition, standardized formula,
methods of estimating process capability, relation to product tolerance. **07 Hrs.**

UNIT-III

Control Charts for Attributes: Controls chart for fraction non- conforming (defectives) development and operation of control chart, brief discussion on variable sample size. Control chart for non-conformities (defects) – development and operation of control chart for constant sample size and variable sample size. Choice between variables and attributes control charts. Guidelines for implementing control charts. Acceptance Sampling: Concept of accepting sampling, economics of inspection, **08 Hrs.**

UNIT-IV

Acceptance Sampling: Concept of accepting sampling, economics of inspection, Acceptance plans – single, double and multiple sampling. Operating characteristic curves – construction and use. Determinations of average outgoing quality, average outgoing quality level, average total inspection, production risk and consumer risk, published sampling plans. **07 Hrs.**

Reliability and Life Testing: Failure modes of components, definition of reliability, MTBF, failure rate, common failure rate curve, types of failure, reliability evaluation in simple cases of exponential failures in series, parallel and series-parallel device configurations, redundancy and improvement factors
evaluations. Numerical examples. **10 Hrs.**

Assignments: Students have to use the software packages like MS Excel, SPSS, Origin to solve the assignment problems. **02 Hrs.**

Text Books:

1. Introduction to statistical Quality Control, D C Montgomery John Wiley and Sons, 4th Edition.SBN:0- 471-31648-2
2. Statistical Quality Control, Grant and Leavenworth, McGraw Hill, 7th Edition.ISBN:00-70-435-553

Reference Books:

1. Quality Planning & Analysis, J M Juran, Frank M Gryna, Tata McGraw Hill, 3rdEdn. ISBN:978-007-462- 1790
2. Reliability and Maintainability Engineering, Charles E. Ebeling, McGraw Hill International Edition, MLM1004, ISBN007115248.
3. Quality Control, Prentice Hall, Dale H. Besterfield, 7thedn, 2003, ISBN-10: 0131131273. Fundamentals of Quality Control and Improvement, AmitavaMitra, Prentice hall, 2nd Edition, 1998, ISBN – 10: 0136450863

UIP430H: MANAGEMENT AND ENTREPRENEURSHIP [04 Credits] (L:T:P-3:2:0)

UNIT-I

Management Introduction: Definition of Management: its nature and purpose, Patterns of Management analysis: A management theory jungle? The systems approach to the management process, functions of a manager. **04 Hrs**

The Nature and Purpose of Planning: Introduction, Types of plans, Steps in planning, Planning process, Nature of Objectives, Concept of Management by Objectives (MBO), Process of MBO, Benefits and weaknesses of MBO, How to set objectives. **04 Hrs**

Decision making*:* Introduction, importance and limitations of decision-making, Evaluation of alternatives, Selecting an alternative, programmed and non-programmed decisions, decision making under certainty, uncertainty and risk. **05 Hrs**

UNIT-II

Nature and Purpose of Organizing: Formal and Informal organization, organization levels and the span of management, Departmentation-by time, by function, by geography, by customer, by product, by process or equipment, Matrix organization, Strategic Business UNITs (SBUs) **04 Hrs**

Staffing: Authority and power, Line and staff concept, Definition, Systems approach to HRM, situational factors affecting staffing, Selection: matching the person with the job, skills and personal characteristics required by managers, matching qualifications with position requirements, System approach to selection, position requirements and job design, skills and characteristics needed by managers, selection process, techniques, and instruments. **05 Hrs**

Human Factors and Motivation: Introduction, motivation & motivators, process of motivation, Maslow's hierarchy of needs, Hertzberg's motivation-hygiene theory, Vroom's expectancy theory, Equity theory, McClelland's needs theory, special motivational techniques **04 Hrs**

UNIT-III

Leadership: Definition, Ingredients of Leadership, Trait approach to leadership, Leadership behavior and styles, Managerial grid, Situational or contingency approach to leadership **04 Hrs**

Controlling: Basic control process, critical control points, standards and benchmarking, control as a feedback system, real time information and control, preventive control, control of overall performance, requirements for effective controls, budget as a control device **05 Hrs**

Introduction to Entrepreneurship: Entrepreneurship, Importance of Entrepreneurship, Concepts of Entrepreneurship, Characteristics of a Successful Entrepreneur, Classification of Entrepreneurs, Myths of Entrepreneurship **04 Hrs**

UNIT-IV

Institutions Supporting Small Business Enterprises: An Introduction about Central level Institutions, State level institutions, Other Agencies and Industry Associations. **06 Hrs**

Setting Up a Small Business Enterprise: Identifying the Business Opportunity, Business Opportunities in Various Sectors, and Formalities (including Business Plan) for Setting Up of a Small Business Enterprise, Environment Pollution Related Clearances. **07 Hrs**

Reference Books:

1. Harold Koontz , Heinz Weihrich and A Ramachandra Aryasril, "*Principles of Management*", Tata McGraw Hill Int. Book Co,ISBN-10:0-07-058192-4.
2. Poornima M. Charantimath, Entrepreneurship Development and Small Business Enterprises, Pearson Education India, October 22, 2005, ISBN-13: 978-81-7758-260-4, ISBN-10: 81-7758-260-7
3. Harold Koontz and Heinz Weihrich, "*Essentials of Management- An international perspective*", **Eidth Edition**, Tata McGraw Hill Companies, ISBN 13: 978-0-07-014495-8, ISBN 10:0-07-014495-8.
4. Heinz Weihrich and Harold Koontz , "*Management: A Global Perspective*", 10 Edition ,McGraw Hill Int. Edition,ISBN:0-07-069170-3.
5. P.C.Tripathi and P.N.Reddy " *Principles of Management*" 4 Edition, Tata McGraw Hill Int. Book Co, ISBN:0-07-022088-3.
6. Stephen Robbins, " *Management*",
7. Heinz Weihrich , Mark V Cannice and Harold Koontz , "*Management: A Global and Entrepreneural Perspective*", 12 Edition ,McGraw Hill Int. Edition,ISBN:0-0-07-066019-0.

ADVANCED FQAS / BBC-II

OVERVIEW	
Semester	5
Course Objectives	The course objectives for the semester are as follows: 1. Cover advanced topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills. 3. Hone career skills and industry awareness. 4. Develop awareness of career paths and competitive exams. 5.
Course Outcome	After the course, the students will be able to: 1. Answer multiple choice questions from topics in: a. quantitative aptitude,verbal aptitude, and reasoning aptitude. 2. Use tools and techniques learnt in soft skills modules to: a. build confidence and self-esteem. 3. Speak knowledgeable about career paths and competitive exams. 4.

Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	6	3
Reasoning Aptitude (RA)	6	3
Verbal Aptitude (VA)	6	3
Soft Skills (SS)	6	3
Career Skills (CS)	6	3
Total	30	15

DETAILS

Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quantitative and Reasoning Aptitude Skills Training			
1.	QA	Speed Maths	2
2.	QA	Areas and Volumes	2
3.	QA	Concept Review	2
4.	RA	Number Series and Letter Series	2
5.	RA	Coding and Decoding	2
6.	RA	Concept Review	2
UNIT II –Verbal Aptitude Skills Training			
7.	VA	Reading Comprehension	2
8.	VA	Listening Comprehension	2
9.	VA	Concept Review	2
Unit III – Career Skills			
10.	CS	Orientation to competitive exams, such as GATE, GRE, GMAT, CAT, UPSC, SSC, and Bank PO.	2
11.	CS	Group Discussion – Simulation	2
12.	CS	Orientation to career paths, such as core engineering, IT engineering, public sector, banking, sales and marketing, and entrepreneurship.	2
Unit IV – Soft Skills			
13.	SS	Dressing and Grooming	2
14.	SS	Professional Etiquette	2
15.	SS	E-mail Writing	2

UIP650C: THEORY OF METAL CUTTING AND TOOL DESIGN [03 Credits] [L-T-P:3-0-0]

UNIT-I

Theory of metal cutting - Cutting tools, tool geometry, concept of speed, feed and depth of cut.

Mechanics of metal cutting - Mechanism of chip formation, orthogonal and oblique cutting, types of chips, determination of shear plane angle, forces and energy calculations (Merchant's Analysis), power and energy relationship, velocity relationship, shear strain, force measurement using dynamometers.

Geometry of cutting tools: Introduction to single and multi point cutting tools, tools nomenclature and effect of cutting parameters on tool geometry. **10 Hrs.**

UNIT-II

Tool wear and tool life - Wear mechanisms, types of tool wear, tool life criteria, tool life equation of Taylor, tool life testing, factors affecting tool life and problems.

Machinability - Machinability and criteria for machinability, surface finish and surface integrity.

Heat generation - Sources of heat generation, regions of heat generation, heat in the primary and secondary zone, heat at the tool/work interface, temperature distribution and determination of cutting temperature.

Economic of cutting tools - Economics of machining, criteria for minimum cost and maximum production and simple problems. **10 Hrs.**

UNIT-III

Design of single point cutting tools - Introduction to design of single point cutting tools and multipoint point cutting tools, design of shank and problems related to shank design, shank determination for single point tool and thickness design and problems.

Design of multi point cutting tools - Drill geometry, design of drill bit, milling cutter nomenclature and its design criteria. **12 Hrs.**

UNIT-IV

Jigs and Fixtures - Fundamentals of jigs and fixtures, significance and purpose of jigs and fixtures and their functions in manufacturing processes, principles of design of jigs and fixtures and uses, classification of jigs and fixtures, principles of location and clamping, types of clamping and work holding devices, typical examples of jigs and fixtures.

Design of jigs and fixtures - General guidelines and procedures for design of jigs and fixtures, design and selection of standard elements, analysis of number of clamping
forces required and their magnitude, concept of modular fixtures and tool presetting fixtures. **10 Hrs.**

Text Books:

1. Fundamentals of Metal Cutting and Machine Tools - B. L. Juneja, G. S. Sekhon and Nitin Seth, New Age International Publishers, second addition, 2008. ISBN: 81-224-1467-2.
2. Production Engineering - P C. Sharma, Khanna Publishers. ISBN: 81-219-0421-8.
3. Machine tools and Tool Design - P. C. Sharma, ISBN: 81-219-2362-X.
4. Manufacturing Technology - Metal Cutting and Machine Tools - PN Rao 3/e, TMH, New Delhi, 2013

Reference books:

1. Metal Cutting Principles - 1st Edition, Milton C. Shaw and I.B.H.
2. Tool Design - Donaldson, LeGain, Goold, New Central Book Agency.
3. Metal Cutting and Tool Design - Dr. B. J. Ranganath, Vikas Publishing House.
4. Introduction to Jigs and fixtures design, M. H. A. Kempster, ISBN: 81-856-1785-6.
5. Fundamentals of Metal Machining and Machine Tools - G. Boothroyd, McGraw Hill, 2000
6. Metal Cutting: Theory and Practice - Bhattacharya A New Central Book Agency, Kolkata, 2007

UIP632L: METAL CUTTING AND PRODUCT ASSEMBLY LABORATORY[01 Credits] [L-T-P:0-0-2]

PART-A

1. Acceptance tests on machines.
2. Determination of cutting forces and analysis of merchant's circle during turning operation using lathe tool dynamometer:
   (a) By keeping speed as a constant parameter and
   (b) By keeping feed a constant parameter.
3. Determination of cutting forces during milling operation using milling tool dynamometer.
4. Measurement of cutting tool temperature using thermo-couples.
5. Determination of chip-reduction co-efficient during metal cutting operation on machines.
6. Measurement of finish of machined surface.

PART-B

Disassembly and Assembly of the following machine parts:

1. Lathe tail stock
2. Swivel vice
3. Screw jack
4. Lathe check
5. Tool head of shaper

SCHEME OF EXAMINATION

One Question from Part A	:	20 Marks
One Question from Part B	:	20 Marks
Viva-Voice	:	10 Marks
Total	:	**50 Marks**

UIP522L: INDUSTRIAL ENGINEERING LABORATORY[01 Credit] [L-T-P:0-0-2]

PART – A

Method study

1. Recording Techniques: Preparing the following charts and diagrams - Outline process chart -
2. Multiple Activity Chart - Flow process chart - Flow diagram and - String diagram
3. Experiments on the Application of principle of motion economy Two handed process chart
4. Exercises on conducting method study

PART – B

Work measurement

1. Rating practice using walking simulator, pin board assembly, deck of cards, marble collection activity
2. Determining the standard time for simple operations using stopwatch time study
3. Exercises on estimating standard time using PMTS.
4. Experiments on office work measurement through work sampling
5. Measurement of parameters (heart beat rate) using walking simulator
6. Measurement of parameters (heart beat rate, calorie) using Ergometer
7. Effect of Noise, Light on human efficiency in work environments.

Reference Books:

1. Work Study - Ralph & Barnes 2. Introduction to Work Study - ILO

SCHEME OF EXAMINATION

One Question from Part A : 15 Marks
One Question from Part B : 25 Marks

Viva-Voice : 10 Marks
Total : 50 Marks

Basaveshwar Engineering College (A), Bagalkot
Department of Industrial & Production Engineering

VI Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP601C	Operations Research	4	3	2	0	50	50	100
2	UIP630C	Finite Element Methods	4	3	2	0	50	50	100
	UIP640C	Digital Design and Manufacturing	3	3	0	0	50	50	100
4		Elective I	3	3	0	0	50	50	100
5		Open Elective 1	3	3	0	0	50	50	100
6	UHS003N	Career Planning and Professional Skills / BBC-III	1	1	0	0	50	50	100
7	UIP633P	Mini Project	3	0	0	6	50	50	100
	UIP632L	Digital Manufacturing Lab.	1	0	0	3	50	50	100
9	UIP622L	Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	23	17	6	10	450	450	900

OPERATIONS RESEARCH [04 Credits] [L-T-P:3-2-0]

UNIT –I

Introduction: Definition of OR, Application of OR to engineering and Managerial problems, Features of OR models, Limitation of OR. Models of OR.

Linear Programming: Definition, mathematical formulation, standard form, Solution space, solution – feasible, basic feasible, optimal, infeasible, multiple, optimal, Redundancy, Degeneracy. Graphical method Simplex method, variants of simplex algorithm – Artificial basis techniques, Duality, Solution of LPP using duality concept. **13 Hrs.**

UNIT –II

Transportation Problem: Formulation of transportation model, Basic feasible solution using different methods (North-West corner, Least Cost, Vogel's Approximation Method) Optimality Methods. Unbalanced transportation problem, Degeneracy in transportation problems, Variants in Transportation Problems.

Aignment Problem: Formulation of the Assignment problem, unbalanced assignment problem, traveling alesman problem **13 Hrs.**

UNIT – III

Queuing Theory: Queuing system and their characteristics, The M/M/I Queuing system, Steady state performance analysing of M/M/1 queuing model. M/M/K/ Model.

Project Management Using Network Analysis: Network construction, determination of critical path and duration, floats. PERT- Estimation of project duration and variance. **13 Hrs.**

UNIT – IV

Replacement Analysis: Introduction, reasons for replacement, Individual Replacement of machinery or equipment with/without value of money, Group Replacement Policies, Problems.

Game Theory: Formulations of games, Two person zero sum game, games with and without saddle point, graphical solutions (2x n, mx2 game), dominance property. **13 Hrs.**

Assignments:

Students have to submit their assignments using OR software packages.

Text Books:

1. *Operation Research and Introduction*-Taha H A, Prentice Hall of India, 6th edition, 1999.ISBN-81-203-1222-8
2. *Principles of Operations Research*- Philips, Ravindram and Soleberg– Theory and Practice, PHI, 2nd Edition, 2007.ISBN:978-81-265-1256-0

Reference Books:

1. *Introduction to Operation Research*- Hiller and Libermann, McGraw Hill 6th edn.,2009.ISBN-13:978-0-7-060092-8
2. *Operations Research*, S.D. Sharma, Kedarnath, Ramnath&Co, 6TH EDN.2009.ISBN-978-81-907011-0-5
3. *Operations Research* Theory and Application- J K Sharma,Pearson Education Pvt Ltd , 4thEdn, ISBN-10:0230-63885-6
4. *Operations Research*– KanthiSwarup& others, Sultan chand and Sons. 1992.14th Edn., 2009.ISBN978-81-8854-719-5

UIP620C: FINITE ELEMENT METHODS [04 Credits] [L-T-P:3-2-0]

UNIT – I

Introduction to FEM: Need for use of FEM – Advantages and Disadvantages of FEM. Matrix algebra – Terminologies relating to matrices, methods of solution of linear algebraic equations. Eigen values and Eigen vectors, Simple numeric Gaussian Quadrature – 1 pt. 2pt and 3pt formula. **07 Hrs.**

Basics of theory of elasticity: Definition of stress and strain, stress-strain relations; Strain-displacement relations in 2D and 3D Cartesian and polar coordinates. **05 Hrs.**

UNIT – II

Continuum methods: Variational methods Rayleigh-Ritz methods applied to simple problems on axially loaded members cantilever. Simply supported and fixed beam with point loads and UDL. Galerkin method as applied to simple elasticity problem. **06 Hrs.**

FEM - Basic **definitions:** Displacement method Nodal degrees of freedom different coordinate systems shape functions. Lagrangian polynomial; complete Formulation of bar-truss beam- triangular-quadrilateral Tetrahedral hexahedral elements. **07 Hrs.**

UNIT – III

Boundary conditions: SPC and MPC. Methods of handling boundary conditions eliminating method-penalty method. Simple numericals, isoparametric, sub parametric, super parametric elements Convergence criteria – requirements of convergence of a displacement model. **07 Hrs.**

Higher order elements: bar – triangular-quadrilateral elements. Tetrahedral and hexahedral elements (non-Formulation) – Pascal triangle – Pascal pyramid. **06 Hrs.**

UNIT – IV

Higher Order Elements: (cont) Introduction to axis symmetric problems-formulation of axis symmetric triangular element. **06 Hrs.**

Dynamic Analysis: Formulating-element mass matrix for 1D and 2D element, computation of Eigen value and vector for simple one Dimensional analysis. **07 Hrs.**

Text Books:

1. *Fundamentals of Finite Element Method*- Hutton – McGraw Hill, 2004.
2. *Introduction to Finite Elements in Engineering*– Chandraupatla and Belegundu – Pearson edn, 2002.

Reference Books:

1. *Finite Element Method*– J.N.Reddy, Tat McGraw Hill edition 2002.
2. *A First course in Finite Element methods*- Daryl.L.Logon, Thomson Learning 3rd edi. 2001.
3. *Concepts & applications of FEA*- Robert Cook etal – Jonhwilley& sons 2002.
4. *Finite Element Analysis*- Chandrupatla, University press, 2002.
5. *Finite Element Procedures*- Bathe K.J. Prentice-Hall International Inc. 2006

DIGITAL DESIGN AND MANUFACTURING [03 Credits] [L-T-P:3-0-0]

UNIT-I

Digital Manufacturing: Development Course of Manufacturing and Manufacturing Science, Definition of Digital Manufacturing, Features and Development of Digital Manufacturing,

Architecture of Digital Manufacturing System:

Basic Architecture Model of Digital Manufacturing System, The Definition of Digital Manufacturing System, Organization Model of Digital Manufacturing System, Function Model of Digital Manufacturing System, Information Model of Digital Manufacturing System, Operation and Control Model of Digital Manufacturing System.

CAD Modeling: Design process and role of CAD, Types and applications of design models, Three dimensional modeling schemes, Wire frames and surface representation schemes, Solid modeling - Parametric modeling, Assembly modeling. **13 Hrs.**

UNIT-II

CAD/CAM: Computers in industrial manufacturing, Design process, Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Advantages and disadvantages CAD and CAM

Computer control in NC: Introduction and basic components of an NC system, NC procedure, NC co- ordinate systems, NC motion control systems, applications of Numerical control and Economics of numerical control Introduction, problems with conventional NC, NC controller technology, CNC, DNC, combined CNC and DNC systems.

CNC Programming: Part programming fundamentals, Manual part programming methods, Preparatory functions (G), Miscellaneous functions (M), Program number, Tool length compensation, Canned cycle, Cutter radius. compensation, milling and Drilling programming problems **13 Hrs.**

Unit-III

Reverse Engineering: Introduction to Reverse Engineering, Basic Theory of Reverse Engineering, Application of Reverse Engineering in Digital Manufacturing, Applications of 3D Scanner.

Digital factory and virtual manufacturing: Introduction, Scope, Methods and Tools Used in Virtual Manufacturing, Benefits. Virtual factory simulation.

Product life cycle management:Introduction, PLM softwares, Outsourcing chain, PLM and Concurrent Engineering, other advantages of PLM, components of PLM software. **13 Hrs.**

UNIT-IV

Internet of Things: Introduction, Applications, IoT data management requirements, Architecture of IoT, Technological challenges, Issues in implementing IoT.

Additive Manufacturing: Introduction to Additive manufacturing (AM), The Generic AM Process, Why use the term Additive manufacturing? The Benefits of AM, Distinction between AM and CNC machining, Development of AM Technology, Classification of AM Processes **13 Hrs.**

Text Books:

1. Ian Gibson, David W. Rosen, and Brent Stucker, *Additive Manufacturing Technologies:Rapid Prototyping to Direct Digital Manufacturing*, Springer New York, 2010, ISBN: 978-1-4419-1119-3 e-ISBN: 978-1-4419-1120-9, DOI 10.1007/978-1-4419-1120-9
2. Zude Zhou, Shane (Shengquan) Xie, Dejun Chen, *Fundamentals of Digital Manufacturing* Science, Springer, 1012, ISBN 978-0-85729-563-7 e-ISBN 978-0-85729-564-4, DOI 10.1007/978-0-85729-564-4
3. P. Radhakrishnan, S. Subramanian, V. Raju, *CAD/CAM/CIM*, 3rd Ed. 2008,New Age International (P) Ltd., ISBN (13) : 978-81-224-2711-0
4. P.N. Rao, *CAD / CAM Principles and Applications*, TMH, New Delhi, 3rd Edition, 2002.

Reference Books:

1. Ibrahim Zeid, *CAD/CAM theory and practice*. McGraw-Hill Higher Education, 1991.
2. Mikell P-groover, Emory W. Zimrners, *CAD/CAM*, Jr Pearson Education inc, 2003.
3. N. Hopkinson, R.J.M. Hague and P.M. Dickens, Editors, *Rapid Manufacturing: An Industrial Revolution for the Digital Age*, 2006, John Wiley & Sons, Ltd, ISBN-13 978-0-470-01613-8

UHS003N: CAREER PLANNING AND PROFESSIONAL SKILLS [1 Credits] [L-T-P:1-0-0]

OVERVIEW		
Semester	6	
Course Objectives	The course objectives for the first semester are as follows: 1. Cover fundamental topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills	
Course Outcome	After the course, the students will be able to do the following: 1. Answer multiple choice questions from fundamental topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Implement the tools and techniques learned in the soft skill session to build confidence and self-esteem	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	4	2
Reasoning Aptitude (RA)	4	2
Verbal Aptitude (VA)	4	2
Soft Skills (SS)	12	6
Career Skills (CS)	6	3
Total	30	15

DETAILS			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quant and Reasoning Aptitude Training			
1.	QA	Number Properties	2
2.	QA	Percentages	2
3.	RA	Linear and Circular Arrangement	2
4.	RA	Order and Rank	2
UNIT II – VerbalAptitude Training			
5.	VA	Parts of Speech	2
6.	VA	Reading Comprehension	2
UNIT III – Career Skills Training			
7.	CS	Introduction to Interview Etiquette	2
8.	CS	Introduction to GD Etiquette	2
9.	CS	Introduction to Resume Writing	2
UNIT IV – Soft Skills Training			
10.	SS	Six-Step Planning Process	2
11.	SS	Problem Solving through Design Thinking	2
12.	SS	Conflict Resolution through Assertiveness and Cooperation Matrix	2
13.	SS	Confidence through Body Language	2
14.	SS	Preparing and Delivering a Presentation	2
15.	SS	Self-Motivation	2

References:

- **ETHNUS**

UIP633P: MINI PROJECT [3 Credits] [L-T-P:0-06]

Number of students per batch: Maximum 2
Evaluation

CIE : 50 Marks
SEE : 50 Marks

Continuous evaluation of project by guide: 30 Marks

CIE marks are also allotted based on two presentations
CIEI: Presentation 1 along with 1st CIE and
(Presentation 1) should include: [10 marks by Department Committee (DC)]

- **Finalization of topic**
- **About the project**
- **Objectives of project**

CIE II:(Presentation 2) along with laboratory CIE:(10 marks by DC)

- Literature review (If any)
- Methodology of Project
- Result and Discussion
- Future Scope

Evaluation of CIE I and II should done by department committee consisting of

- HOD or his Nominee
- Guide
- Project Coordinator

Mode of Evaluation	Continuous Evaluation	Presentation1	Presentation2
Marks	30	10	10
Allotted by	Guide	DC	DC

SEE:
Students have to submit project diary.
The evaluation of the SEE will be based on write up (10 marks) + Demo (15 marks) + Presentation (15 marks) and Viva – Voce (10 marks)

Evaluation Committee

- HOD or his nominee
- External Examiner
- Project Coordinator

UIP531L: DIGITAL MANUFACTURING LABORATORY [01 Credit] [L-T-P:0-0-2]

Part - A

1. Writing and execution of manual programmes using ISO codes for machining of simple part in

   a. Turning (2 exercises)

   b. Taper turning (2 exercises)

2. Simple part programmes and execution using tool radius compensation and canned cycles

(4 Exercises)

Part - B

1. Writing and execution of simple milling part programmes, with radius compensation and
   a. Curved cycles (4 exercises)
2. Manual programming of the robot for pick and place operations (2 exercises)

Part - C

1. Design, modelling and printing (additive manufacturing) of 3D objects and parts (DEMO)
2. Study on 3D Scanner
3. Simulation of Virtual real factory

References:

1 CAD / CAM Principles and Applications - P.N. Rao, TMH, New Delhi, 2002.
2 Robotics – AppuKuttan K. K., I K International Publishing House Private Limited
3 N. Hopkinson, R.J.M. Hague and P.M. Dickens, Editors, Rapid Manufacturing: An Industrial Revolution for the Digital Age, 2006, John Wiley & Sons, Ltd, ISBN-13 978-0-470-01613-8
4 Zude Zhou, Shane (Shengquan) Xie, Dejun Chen, Fundamentals of Digital Manufacturing Science, Springer, 1012, ISBN 978-0-85729-563-7 e-ISBN 978-0-85729-564-4, DOI 10.1007/978-0-85729-564-4

SCHEME OF EXAMINATION

One Question from Part A	: 25 Marks
One Question from Part B	: 15 Marks
Viva-Voice	: 10 Marks
Total	**: 50 Marks**

UIP622L: FINITE ELEMENT ANALYSIS LAB. [1 Credits] [L-T-P:0-0-2]

PART - A

Study of a FEA package and modelling stress analysis of

1. Bars of constant cross section area, tapered cross section area and stepped bars.
2. Trusses – (Minimum 2 exercises).
3. Beams – Simply supported, cantilever, beams with UDL, beams with varying load etc.

PART - B

1. Stress analysis of a rectangular plate with a circular hole.
2. Thermal Analysis – 2D problem with conduction and convection boundary conditions.
3. Fluid flow Analysis – Potential distribution in the 2 – D bodies.
4. Dynamic Analysis.
    1) Fixed – fixed beam for natural frequency determination.
    2) Bar subjected to forcing function.
    3) Fixed – fixed beam subjected to forcing function.

One Question from Part A	:	20 Marks(05 Write up +15)
One Question from Part B	:	20 Marks(05 Write up +15)
Viva-Voice	:	10 Marks
Total	**:**	**50 Marks**

Annexure -IV

Scheme of Teaching for the Students Admitted to First Year in 2020-21

Basaveshwar Engineering College (A), Bagalkot

Department of Industrial Production Engineering

Credit Distribution and Scheme for the students admitted to first year for the academic year 2020-21

Credit distribution for the students admitted to first year in **2020-21**

Sem	HSS	Basic Science	Engineering Science	Professional Core	Department Elective	Open Elective	MOOCS/ Swayam	Mini Project+ / Project+ / Seminar+ / Internship	Total
I		9.5	10.5						20
II		9.5	10.5						20
III	2	3		16					21
IV	5	3		15					23
V	1			17	0	3			21
VI	1			13	3	3		2MP	22
VII				7	8	3		2I+3P-I	23
VIII				0	9			12P-II+1S	22
Online Courses MOOCS							3*		03
Total	9	25	21	68	20	9	3*	20	175

*Mandatory credits to be earned through MOOCS from any semester/s (preferably 4th Sem onwards)

III Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	BS	Engineering Mathematics – III	3	2	2	0	50	50	100
2	Core	Material Science & Metallurgy	3	3	0	0	50	50	100
3	Core	Engineering Thermodynamics and Fluid Mechanics	4	3	2	0	50	50	100
4	Core	Strength of Materials	4	3	2	0	50	50	100
5	Core	Machine Tools Technology	3	3	0	0	50	50	100
6	HSS	Creativity and Innovation	2	2	0	0	50	50	50
7	Core	Metallography and Material Testing Laboratory	1	0	0	3	50	50	100
8	Core	Machine Shop Practice	1	0	0	3	50	50	100
9	UMA330M	Bridge Course Mathematics-I	0	3	0	0	50	50	100
10	UBT133M	Environmental Studies	0	2	0	0	50	50	100
11		Kannada							
		Total	21	15	6	6	500	500	1000

IV Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	BS	Mathematics –IV	3	2	2	0	50	50	100
2	Core	Kinematics of Machines	4	3	2	0	50	50	100
3	Core	Foundry and welding Technology	3	3	0	0	50	50	100
4	Core	Metrology & Measurement	3	3	0	0	50	50	100
5	HSS	Management and Entrepreneurship	4	4	0	0	50	50	100
6	Core	Computer Aided Machine Drawing	3	1	0	4	50	50	100
7	HSS	Fundamentals of Quantitative Aptitude and Soft Skills /BBC-I	1	1	0	0	50	50	100
8	Core	Foundry and Welding Practice Lab	1	0	0	3	50	50	100
9	Core	Metrology & Measurements Laboratory	1	0	0	3	50	50	100
10	UMA430M	Bridge Course Mathematics-II	0	3	0	0	50	50	100
11	UHS226M	Constitution of India	0	2	0	0	50	50	100
		Total	23	17	4	10	550	550	1100

V SEMESTER

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Design of Machine Elements	4	3	2	0	50	50	100
2	Core	Industrial Engineering	3	4	0	0	50	50	100
3	Core	Quality Assurance & Reliability	3	3	2	0	50	50	100
4	Open Elective	Open elective -1	3	4	0	0	50	50	100
5	HSS	Advanced FQAS / BBC-II	1	1	0	0	50	50	100
6	Core	Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
8	Core	Metal Cutting and Product Assembly Lab	1	0	0	3	50	50	100
9	Core	Programming Laboratory	2	1	0	2	50	50	100
10	Core	Industrial Engineering Lab	1	0	0	2	50	50	100
11		Advanced Mathematics-II							
		Total	21	19	4	7	450	450	900

VI Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Operations Research	4	3	2	0	50	50	100
2	Core	Finite Element Methods	4	3	2	0	50	50	100
	Core	Digital Design and Manufacturing	3	3	0	0	50	50	100
4	Dept Elective	Elective I	3	3	0	0	50	50	100
5	Open Elective	Open Elective -II	3	3	0	0	50	50	100
6	HSS	Career Planning and Professional Skills / BBC-III	1	1	0	0	50	50	100
7	Mini Project	Mini Project	2	0	0	4	50	50	100
	Core	Digital Manufacturing Lab.	1	0	0	2	50	50	100
9	Core	Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	22	16	4	8	450	450	900

VII Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Operations Management	3	3	0	0	50	50	100
2	Core	Theory of Metal Forming	4	3	2	0	50	50	100
3	Dept Elective	Elective-II	3	3	0	0	50	50	100
4	Dept Elective	Elective III	3	3	0	0	50	50	100
	Dept Elective	Elective-IV	2	2	0	0	50	50	100
5	Open Elective	Open Elective-III	3	3	0	0	50	50	100
6	I	Internship	2	0	0	4	50	50	100
8	Project	Project- Phase I	3	0	0	6	50	50	100
		Total	23	17	2	10	400	400	800

VIII Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Dept Elective	Elective-V	3	3	0	0	50	50	100
2	Dept Elective	Elective-VI	3	3	0	0	50	50	100
3	Dept Elective	Elective-VII	3	3	0	0	50	50	100
4	S	Seminar	1	0	0	2	50	50	100
5	P	Project- Phase II	12	0	0	24	50	50	100
		Total	22	9	0	26	250	250	500

Annexure -V

MODEL COURSE PLAN

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

MODEL COURSE PLAN

Title of Course	**:**		**Course Code**	**:**	
Credits	**:**		**Contact Hours/ Week**	**:**	
Total Hours	**:**		**Tutorial Hours**	**:**	
CIE Marks	**:**		**SEE Marks**	**:**	
Semester	**:**		**Year**	**:**	

Prerequisites:

Course Objectives:

	The Course objectives are:
1	
2	
3	
4	
5	
6	

Course Outcomes:

	At the end of the course the student should be able to:
1	
2	
3	
4	
5	
6	

Course Articulation Matrix: Mapping of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO 7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO1	PSO2	PSO3
No	Programme Outcomes / Course Outcomes															
The students will be able to:																
1																
2																
3																
4																
5																
6																

Competencies Addressed in the course and Corresponding Performance Indicators

Programme Outcome: Any of 1 to 12 PO's:

Competency	Indicators

PO1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Unit Learning Outcomes (ULO):

Unit Learning Outcome (ULO)	CO	BLL	PI addressed

Course Content:

Hours Required	Topic to be covered	Mode of Delivery
01		Chalk and talk in classroom/Lecture combined with discussions/Lecture with a quiz/ Tutorial/ Assignments/ Demonstration/ Invited lectures/ Group Assignment/ Project / Seminars, Presentations/Group Discussion/Asynchronous Discussion
01		
01		
01		
01		
01		
01		

Review Questions:

Review Questions	ULO	BLL	PI addressed

Evaluation Scheme:

Assessment	Marks	Weightage
CIE-I	20	20
CIE-II	20	20
Assignments/ Quizzes/ Case Study/ Course Project/ Term Paper/Field Work	10	10
SEE	100	50
Total	150	100

Details of Assignment:

Assignment	Marks (10)	CO	PI	CA	PO
Assignment 1					
Assignment 2					
..					
..					
Assignment *n*					

Annexure-2

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

SCHEME OF TEACHING AND EXAMINATION
B.E. (I&PE)VII SEMESTER

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP730C	Operations Management	4	3	2	0	50	50	100
2	UIP740C	Theory of Metal Forming	4	3	2	0	50	50	100
3		Elective-II	3	3	0	0	50	50	100
4		Elective -III	3	3	0	0	50	50	100
5		Open Elective 2	3	3	0	0	50	50	100
6	UIP710L	Internship	2	0	0	4	50	50	100
7	UIP723L	Software applications Laboratory	1	0	0	2	50	50	100
8	UIP713P	Project- Phase I	5	0	0	10	50	50	100
		Total	25	15	4	16	400	400	800

: OPERATIONS MANAGEMENT [Credits: 03] [L-T-P: 2-2-0]

No	Programme Outcomes Course Outcomes Students will be able to:	Engineering knowledge	Problem analysis	Design/development of solutions:	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Project management and finance	Life-long learning	The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.	Use the knowledge and skills of industrial engineering to model and analyze the real-life problems to develop solutions	Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
1	Demonstrate how operations management is important for an organization and analyze the facility location decisions		**2**	**2**	**2**							**1**		**2**	**3**	
2	Evaluate forecasting methods and apply them to real life problems		**2**	**3**	**3**	**2**						**1**		**2**	**3**	
3	Evaluate aggregate planning and analyze different aggregate planning methods		**2**	**3**	**3**	**2**						**1**	**1**	**2**	**2**	
4	Illustrate the method and importance of materials requirements planning and controlling		**2**	**3**	**3**	**2**						**2**	**1**	**3**	**3**	
5	Analyze the flow shop and job shop scheduling with different methods		**2**	**3**	**3**	**3**						**1**	**1**	**2**	**2**	

UIP730C: OPERATIONS MANAGEMENT [Credits: 04][L-T-P: 3-2-0]	
UNIT-I	
Operations Management Concepts: Introduction, historical developments, functions of operations management, Environment of operations. Operations system decisions.	
	03 Hrs.
System Design and Capacity Planning: Introduction, manufacturing and service systems, design and system capacity, capacity planning,	**03 Hrs.**
Facility Location and Layout: Location planning for goods and services. Economic analysis (Location break-even analysis, cost minimization), and qualitative factor analysis. Facility layout, analysis and selection of layout (minimizing cost in job shop layout, line balancing in assembly line layout). Determination of layout, types of layouts, computer application of layouts.	
	04 Hrs.
(10 hours Teaching +5 hours Tutorial)	
UNIT-II	
Forecasting: Introduction, factors affecting forecast, short, medium and long-range forecasts, their uses. Classification of forecasting methods. Linear regression and correlation methods, exponential smoothing, moving average methods, time series analysis method of estimating the component of time	
series, judgmental forecasting methods.	**05 Hrs.**
Aggregate Planning: Objective of aggregate planning, aggregate planning problem, variables subject to control, cost and benefit of control. Aggregate planning methods - policy guidelines, graphic and charting methods, transportation method of solving APP, master scheduling objective, master scheduling methods	
	05 Hrs.
(10 hours Teaching +7 hours Tutorial)	
UNIT-III	
Material Requirements Planning: Underlying concepts, System parameters, MRP Logic, MRP implementation	
	05 Hrs.
Design of service systems: Characteristic aspects, Customer Contact in Service Systems, Complexity and Divergence in Service Systems, Service Positioning, Service Blueprinting, Other Aspects of Addressing Capacity Issues in Services, Service Quality	
	05 Hrs.
(10 hours Teaching +7 hours Tutorial)	

UNIT-IV	
Scheduling and Controlling: Introduction, objectives of scheduling, scheduling strategies, scheduling and loading guidelines. Brief discussion on scheduling	
methodology - Gantt charts, schedule boards and priority decision rules. Priority and Capacity control.	**04 Hrs.**
Single Machine Scheduling: Concept, measures of performance, SPT rules. Weighted mean flow time, EDD rules, minimizing total tardiness,	
	03 Hrs.
Flow Shop Scheduling: Introduction, Johnson's problem, CDS heuristic,Palmer's heuristic.	
Job shop scheduling: Types of schedules, heuristic procedure, 2 jobs M machine scheduling.	**03 Hrs.**
(10 hours Teaching +7 hours Tutorial)	
Total: 40 hours of Teaching + 26 hours of Tutorial	

Text Books:

1. Operations Management- Monks, J.G., McGraw-Hill International Editions, 1987.
2. Operations Management- Theory and Practice, B. Mahadevan, Third Edition, Pearson Publication
   ISBN 978-93-325-4752-0
   eISBN 978-93-325-4171-9
2. Production and Operations Management- Pannerselvam. R, 2nd edition PHI. ISBN 978-81-203-2767-2

Reference Books:

1. Modern Production/Operations Management- Buffa, Wiely Eastern Ltd., 4th edition
2. Production and Operations Management- Chary, S.N, Tata-McGraw Hill., 3rd edition
3. Operations management - James Dilworth. PHI, 3rd edition
4. Operations Management – Lee J Karjewski and Larry P Ritzman, strategy and Analysis, 6th Edn, Pearson Education Asia
5. Productions & operations management - Adam & Ebert.5th editionPHI

Online Resource:http://nptel.ac.in/syllabus/110102015/
EBooks: http://bookboon.com/en/operations-management-ebook
MOOC Course: https://courses.edx.org/courses/course- v1:IIMBx+ OM101.1x + 2T2016/info

Text Books:

1. Operations Management- Monks, J.G., McGraw-Hill International Editions, 1987.
2. Production and Operations Management- Pannerselvam. R, 2nd edition PHI.
3. Productions & operations management - Adam & Ebert.5th edition PHI

Reference Books:

1. Modern Production/Operations Management- Buffa, Wiely Eastern Ltd., 4th edition
2. Production and Operations Management- Chary, S.N, Tata-McGraw Hill., 3rd edition
3. Operations management - James Dilworth. PHI, 3rd edition
4. Operations Management – Lee J Karjewski and Larry P Ritzman, strategy and Analysis, 6th Edn, Pearson Education Asia

Online Resource: http://nptel.ac.in/syllabus/110102015/
EBooks: http://bookboon.com/en/operations-management-ebook
MOOC Course: https://courses.edx.org/courses/course- v1:IIMBx+ OM101.1x + 2T2016/info

UIP740C: THEORY OF METL FORMING [04 Credits] [L-T-P:3-2-0]

Table: Correlation Matrix of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	**Programme Outcomes** **Course Outcomes**	**Engineering knowledge**	**Problem analysis**	**Design / Development of solutions**	**Conduct investigations of complex problems**	**Modern tool usage**	**The engineer and society**	**Environment and sustainability**	**Ethics**	**Individual and team work**	**Communication**	**Project management and finance**	**Life-long learning**	**The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.**	**Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions**	**Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices**
The students will be able to:																
1	Attain proficiency in basic metal forming processes/techniques and analyze stress, strain, yielding of material according to different yield theory for a given state of stress	3	2	1	2	2					1			3	1	2
2	Explain principle of forging, determination of pressure distribution, forging load its application and illustrate about the rolling process/operation using different analysis approach to calculate force and pressure distribution	3	2	1	2	2					1			3	1	2
3	Understand and evaluate process of excursion its analysis on the process mechanics and evaluate the variables affecting rod and wire drawing processes and	3	2	1	2	2					1			3	1	2
4	Describe the manufacturing of tube drawing process and its analysis and get well acquaintance with high energy rate forming.	3	2	1	2	2					1			3	1	2

UIP740C: THEORY OF METAL FORMIMG [04 Credits] [L-T-P:3-2-0]

UNIT I

Theory of metal forming processes - Classification of forming processes, flow curve, true stress and true strain, notion of stress, normal and shear stress, stress tensor, components of stress tensor, principal stresses, stress invariants, spherical and deviator stress tensors, yield criteria, von -mises and tresca yield criterion, spherical and deviator stress tensors and related problems.

4 hours tutorials to be taken **10 Hrs.**

UNIT II

Forging - Classification of forging processes, forging equipment, forging analysis - calculation of pressure distribution - in case of forging of a rectangular plate and forging of a circular disc in sticking, sliding and mixed conditions, forging defects and related problems, **Rolling** - Classification of rolling processes, rolling mills, forces and geometrical relationships in rolling, calculation of pressure distribution case of rolling of a strip (rolling analysis), defects in rolled products and related problems.

8 hours tutorials to be taken **10 Hrs.**

UNIT III

Extrusion - Classification of extrusion processes, hot extrusion, hydrostatic extrusion, analysis of extrusion process - extrusion of cylindrical rod and strip with friction and related problems, **Drawing of rods, wires** - Rod and wiredrawing process, analysis of drawing process - drawing of cylindrical rod and strip with friction and related problems.

8 hours tutorials to be taken **10 Hrs.**

UNIT IV

Tube drawing process - Introduction and analysis of tube drawing process and related problems, **High energy rate forming** - Introduction to HERF, explosive forming, electro hydraulic forming and electromagnetic forming.

5 hours tutorials to be taken **10 Hrs.**

Text Books:

1. Theory of Plasticity and Metal Forming Processes by Dr. Sadhu Singh, Khanna Publishers, New Delhi
2. Mechanical Metallurgy by George E. Dieter, Adapted by David Bacon, (SI Metric Edition), McGraw-Hill Book Company and
3. Introduction to Industrial Mechanical Working Process by G. W. Rowe.

Reference Books:

1. Theory of Metal Forming and Metal cutting by K. P. Sinha and S. C. Prasad, Dhanpat Rai & Sons, New Delhi.
2. Metal Forming Processes by G. R. Nagral, Khanna Publishers, New Delhi
3. Metal Forming Technology by Dr. R. Narayanasamy, Ahuja Book Company Pvt. Ltd., New Delhi
4. ASM-Metals handbook and
5. Fundamentals of Working of Metals, Sach G, Pergamon press.

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

DEPARTMENT ELECTIVES

Subject Code	Department Electives	Prerequisites*
UIP001E	Control System Engineering	
UIP002E	Plant Engineering and Industrial Safety	
UIP003E	Non-Destructive Testing	
UIP004E	Database Management System	
UIP005E	Machine Tool Design	
UIP006E	Materials Management	
UIP007E	Advanced Foundry Technology	
UIP008E	Industrial Robotics	
UIP009E	Intellectual Property Rights	
UIP010E	Management Information System	
UIP011E	Energy Management	
UIP012E	Marketing Management	
UIP013E	Automation In Manufacturing	
UIP014E	Concurrent Engineering	
UIP015E	Dynamics of Machines	UIP414 C
UIP016E	Facility Planning & Design	UIP601C
UIP017E	Computer Integrated Manufacturing	UIP512C,
UIP018E	Composite Materials &Processing	UIP302
UIP019E	Project Management	UIP601C, UIP416C
UIP020E	Maintenance Engineering	
UIP021E	Advanced Operations Research	UIP601C
UIP022E	Non-Conventional Machining Processes	
UIP023E	Mechanical Vibrations	
UIP024E	Business Dynamics	UIP416C
UIP025E	Supply Chain Mgmt.	UIP416C,
UIP026E	Strategic Management	UIP416C
UIP027E	Total Quality Management	
UIP028E	Just In Time Manufacturing	UIP416C
UIP029E	Business Process Reengineering and Benchmarking	UIP416C
UIP030E	Design of Experiments	UIP513C
UIP031E	Design for Manufacturing	
UIP032E	Heuristics and Optimization Techniques	
UIP033E	Air craft industry and air craft systems	
UIP034E	Design of Machine Elements-II	
UIP035E	Enterprise Resource Planning	
UIP036E	Industry 4.0	
UIP037E	Internet of Things	
UIP038E	Mechatronics	

*** For fulfilling prerequisites, the candidate must have registered at least once for that subject**

2) Assessment Rubrics for Internships and Technical Seminars, Mini-Project, Major Project Phase I&II of BE program

2.1 Internship

2.1.1 Internship Guidelines

- **Step 1:** Request Letter/ Email from the office of Training & Placement cell of the college should go to industry to allot various slots of 4-6 weeks during summer vacation.
- **Step 2:** Industry will confirm the training slots and the number of seats allocated for internships via Confirmation Letter/ Email.
- **Step 3:** Students on joining Training at the concerned Industry / Organization, submit the Joining Report/ Letters / Email.
- **Step 4:** Students undergo industrial training at the concerned Industry / Organization.
- **Step 5:** Students will submit training report after completion of internship.
- **Step 6:** Training Certificate to be obtained from industry.
- **Step 7:** List of students who have completed their internship successfully will be issued by Training and Placement Cell.

2.1.2 Internship Report

2.1.2.1 Student's Diary/ DailyLog

Student's Diary and Internship Report should be submitted by the students along with attendance record and an evaluation sheet duly signed and stamped by the industry to the Institute immediately after the completion of the training. It will be evaluated on the basis of the following criteria:

- Regularity in maintenance of thediary.
- Adequacy & quality of information recorded.
- Drawings, sketches and datarecorded.
- Thought process and recording techniques used.
- Organization of theinformation.

2.1.2.2 Internship Report

The Internship report will be evaluated on the basis of following criteria:

- Originality.
- Adequacy and purposeful write-up.
- Organization, format, drawings, sketches, style, language etc.
- Variety and relevance of learning experience.
- Practical applications, relationships with basic theory and concepts taught in the course.

The industrial training of the students will be evaluated in three stages:

1. Evaluation by Industry.
2. Evaluation through seminar presentation and
3. Viva-voce at the Institute.

2.1.3 Evaluation Through Seminar Presentation/Viva-Voce at The Institute

The student will give a seminar based on his training report, before an expert committee constituted by the concerned department as per norms of the institute. The evaluation will be based on the following criteria:

- Quality of content presented.
- Proper planning for presentation.
- Effectiveness of presentation.
- Depth of knowledge and skills.
- Attendance record, daily diary, departmental reports shall also be analyzed along with the Internship Report.

Evaluation of Internship – Grading Rubric (Industry)

Evaluation Dimensions	Performance Rating			Maximum Score
	Needs Improvement	Meets Expectations	Excellent	
	0-1	2-3	4-6	
Internship Evaluation Dimensions – Grading Criteria				
Quality of Work	Work was done in a careless manner and was of erratic quality; Work assignments were usually late and required review; Made numerous errors	With a few minor exceptions, adequately performed most work requirements; Most work assignments submitted in a timely manner; Made occasional errors	Thoroughly and accurately performed all work requirements; Submitted all work assignments on time; Made few if any errors	10
Ability to Learn	Asked few questions and rarely sought out additional information Unable or slow to understand new concepts, ideas, and work assignments; Unable or unwilling to recognize mistakes and was not receptive to making needed changes and improvements	Asked relevant questions and sought out additional information from appropriate sources; Acceptable understanding of new concepts, ideas, and work assignments; Willing to take responsibility for mistakes and to make needed changes and improvements	Consistently asked relevant questions and sought out additional information from appropriate sources; Quickly understood new concepts, ideas, and work assignments; Always willing to take responsibility for mistakes and to make needed changes and improvements	10
Initiative and Creativity	Had little observable drive and required close supervision; Showed little interest in meeting standards; Did not seek out additional work and frequently procrastinated in completing assignments; suggested no new ideas or options	Worked without extensive supervision; Found problems to solve and sometimes asked for additional work assignments; Set his/her own goals and, tried to exceed requirements; offered some creative ideas	A self-starter; Consistently sought new challenges and asked for additional work assignments; Regularly approached and solved problems independently; Frequently proposed innovative and creative ideas, solutions, and/or options	10
Character Traits	Regularly exhibited a negative attitude; Dishonest and/or showed a lack of integrity on several occasions; Unable to recognize and/or was insensitive to ethical and diversity issues; Displayed significant lapses in ethical and professional behavior	Except in a few minor instances, demonstrated a positive attitude; Regularly exhibited honesty and integrity in the workplace; Usually aware of and sensitive to ethical and diversity issues on the job; Normally behaved in an ethical and professional manner	Exceptionally positive attitude; Consistently exhibited honesty and integrity in the workplace; Keenly aware of and deeply sensitive to ethical and diversity issues on the job; Always behaved in an ethical and professional manner	10

Evaluation Dimensions	Performance Rating			Maximum Score
	Needs Improvement 0-1	Meets Expectations 2-3	Excellent 4-6	
Internship Evaluation Dimensions – Grading Criteria				
Dependability	Generally unreliable in completing work assignments; Did not follow instructions and procedures promptly or accurately; Careless, and work needed constant follow-up; required close supervision	Generally reliable in completing tasks; Normally followed instructions and procedures; Usually attentive to detail, but work had to be reviewed occasionally; Functioned with only moderate supervision	Consistently reliable in completing work assignments; Always followed instructions and procedures well; Careful and extremely attentive to detail; Required little or minimum supervision	10
Organizational Fit	Unwilling or unable to understand and support the organization's mission, vision, and goals; Exhibited difficulty in adapting to organizational norms, expectations, and culture; Frequently seemed to disregard appropriate authority and decision-making channels	Adequately understood and supported the organization's mission, vision, and goals; Satisfactorily adapted to organizational norms, expectations, and culture; Generally functioned within appropriate authority and decision-making channels	Completely understood and fully supported the organization's mission, vision, and goals; Readily and successfully adapted to organizational norms, expectations, and culture; Consistently functioned within appropriate authority and decision-making channels	10
Response to Supervision	Rarely sought supervision when necessary; Unwilling to accept constructive criticism and advice; Seldom implemented supervisor suggestions; Unwilling to explore personal strengths and areas for improvement	Sought supervision when necessary; Receptive to constructive criticism and advice; Implemented supervisor suggestions in most cases; Willing to explore personal strengths and areas for improvement	Actively sought supervision when necessary; Always receptive to constructive criticism and advice; Successfully implemented supervisor suggestions when offered; Always willing to explore personal strengths and areas for improvement	10

Evaluation of Internship – Grading Rubric (Department Evaluation Committee/Faculty)				
Evaluation Dimensions	**Performance Rating**			Maximum **Score**
	Needs Improvement	**Meets Expectations**	**Excellent**	
	0-1	**2-3**	**4-6**	
Internship Evaluation Dimensions – Grading Criteria				
Demonstration of experience	Offers little in the way of illustrating experiences Fails to adequately address how the experiences relate to the competencies.	Addresses the activities and experiences, but not so clearly and concisely	Well addressed activities and experiences as well as relating them to the program competencies.	10
Report	Unedited and difficult to read It is littered with grammatical and typographical errors, demonstrating little effort to producing a quality report. No reference is made to practical application. Lacks evidence and internship experience	Well-written for the most part but still has somewhat detracting errors that could have been fixed with additional editing prior to submission. Key concepts related to the selected evidence and internship experience are inaccurate or incomplete. Some helpful practical applications are included.	Has been carefully edited and is free or nearly free of any grammatical or typographical errors. Well-organized report is easy to read and understand and stands alone as a quality piece of writing. An accurate and complete reflection of key concepts related to the selected evidence and internship experience Practical applications are included to illuminate issues.	10
Presentation	Information is lacking/unclear and communicated in such a way that the audience cannot understand the purpose of the evidence work and internship experiences.	Information is presented in a clear manner but still lacks practical experience	Information is communicated in a thorough manner and ideas are expressed in such a way that the audience can clearly understand the evidence work and internship experiences.	10

Summary of Internship Evaluation (Industry Representative)	
Evaluation Criteria	**Score from the above tables**
Quality of Work	10
Ability to Learn	10
Initiative and Creativity	10
Character Traits	10
Dependability	10
Organizational Fit	10
Response to Supervision	10
	70
Internship Guide	
Demonstration of experience	10
Report	10
Presentation	10
	30
Total Score	**100**

UIP723L: SOFTWARE APPLICATIONS LABORATORY[Credits :01][L-T-P: 0-0-2]

LIST OF Exercises

1. Data Definition, Table Creation, Constraints,
2. Insert, Select Commands, Update and Delete Commands.
3. Nested Queries and Join Queries
4. Views
5. High level programming language extensions (Control structures, Procedures and Functions).
6. Front end Tools
7. Forms
8. Triggers
9. Menu Design
10. Reports.
11. Database Design and implementation (Mini Project)

2.4 Rubrics for Project Phase-I &II (VII + VIII Semester)

SEMESTER VII

Rubrics for	Phase	Period (Duration)	Rubric #	Marks	Evaluation by
CIE	Evaluation-I	Before one month from the start of 7th semester of BE Program	R1	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s)
	Evaluation-II	Before 15 days from the last working day of 7th semester of BE Program	R2	15	
	Evaluation by guide	In the last week of working days	R3	20	Guide(s)
SEE	Semester End Examination	During SEE of 7th semester of BE Program	R4	50	Committee consisting of HOD/Nominee + Project Coordinator + External Examiner

SEMESTER VIII

Rubrics for	Phase	Period (Duration)	Rubric #	Marks	Evaluation by
CIE	Evaluation-I	Before one month from the start of 8th semester of BE Program	R5	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s)
	Evaluation-II	Before 15 days from the last working day of 8th semester of BE Program	R6	15	
	Evaluation by guide		R7	20	Guide(s)
SEE	Semester End Examination	During SEE of 8th semester of BE Program	R8	50	Committee consisting of HOD/Nominee + Project Coordinator + External Examiner

The evaluation criteria may vary *marginally* (maximum of 5%) from the perspective of different disciplines but the structure/stages of evaluation and allotted marks for each stage of evaluation in both 7th and 8th semesters must be same for all the branches across the institute.

R1. Synopsis presentation (Before one month from the start of 7th semester of BE): Total Marks of 15

Evaluation Criteria	Score/Marks			Total Marks	Evaluation By
	Poor (Needs Improvement) (1)	**Average (Acceptable) (3)**	**Very good (Proficient) (5)**		
Motivation And Rationale behind the work	• Less motivated and has less desire to achieve a goal, accomplish a task, or work • Need for the process /product which offers viable solutions to accomplish a work towards expectations in a challenging and interesting area is not good	• Moderately motivated and has some interest to achieve a goal, accomplish a task, or work • Need for the process /product which offers viable solutions to accomplish a work towards expectations in a challenging and interesting area is okay and acceptable	• Highly motivated and desirous to achieve a goal, accomplish a task, or work • Need for the process /product which offers viable solutions to accomplish a work towards expectations in a challenging and interesting area is good	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s) Each will evaluate for 15 marks and average of all three is the marks awarded
Literature review	• Less technical papers are reviewed and less relevant	• Few technical papers are reviewed and moderately relevant	• At least 3 technical papers from reputed journals are made and reviews are quite relevant to the project work		
Presentation	• Slides contain some errors, Not legible, flow is okay, body language is minimal, Response to the audience questions and comments are not good	• Slides are error free, flow is good, body language is acceptable, Responds to the audience questions and comments	• Slides are error free, quite legible, flow is good, body language is good, Responds accurately to the audience questions and comments		

R2. Internal Evaluation (Before 15 days from the last working day of 7th semester of BE): Total Marks of 15

Evaluation Criteria	Score/Marks			Total Marks	Evaluation By
	Poor (Needs Improvement) (1)	**Average (Acceptable) (3)**	**Very good (Proficient) (5)**		
Proposed design methodology	• Division of problem into modules and but improper selection of design approaches and design methodology and not properly justified	• Division of problem into modules and but improper selection of design approaches and design methodology and not properly justified	• Division of problem into modules and good selection of design approaches, appropriate design methodology with proper justification	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s) Each will evaluate for 15 marks and average of all three is the marks awarded
Preliminary/Conceptual Design work	• Very less efforts are made towards preliminary and conceptual design works to accomplish the work	• Efforts are made towards preliminary and conceptual design works to accomplish the work but some are not clear	• Preliminary and conceptual design works are carried and are in proper direction to accomplish the project work		
Presentation and Report	• Slides are not organized, and Question-answer is poor, report has errors and not systematic	• Slides are good but not neatly arranged, delivery is good, Question-answer is average • Report is not organized systematically	• Slides are neat, delivery is good, Question-answer is very good, gestures and body languages are perfect • Report is organized, and is according to the specified format • References and citations are appropriate		

R3. Evaluation by the guide (Towards the end of 7th semester of BE): Total Marks of 20

Evaluation Criteria	Score/Marks			Total Marks	Evaluation By
	Poor (1)	Average (3)	Excellent (5)		
Objectives and Feasibility study	• Many possible objectives are left out and very few are stated • Design steps are not feasible to accomplish all the objectives	• Some objectives are stated clearly and some possible objectives are left out • Design steps are less feasible to accomplish all the objectives	• All the objectives are clearly and neatly stated • Design steps to be followed to solve the defined problem are feasible to accomplish all the objectives	20	Guide(s)
Survey and Problem identification	• Topics are surveyed randomly and less relevant to societal and environmental problem	• Topics are surveyed and not fully relevant to society and environment problem	• Extensive survey is made and socially and environmentally relevant problem is identified		
Involvement in the work and ability to work in team	• Less involved in the work	• Would have involved still more	• Sincerely involved in the work and very hard working and has good interest		
Individual Contribution and Peer/Guide interaction	• Lesser involvement and contribution • Rarely met the guide and met on guide's call	• Contributed to the work to some extent • Met the guide for interaction and Sincere and obedient to the guide's call and suggestions	• Good interaction and contributed in a big way • Met the guide for interaction and Sincere and obedient to the guide's call and suggestions • More frequently met the guide for interaction and Sincere and obedient to the guide's call and suggestions		

R4: SEE Evaluation for Project Phase-I (During SEE of 7th semester of BE): Total Marks of 50

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (4)	Acceptable (Average) (6)	Satisfactory (Good) (8)	Proficient (Excellent) (10)		
Identification of Problem Domain and Detailed analysis of Feasibility	• Moderate explanation of the purpose and need of the project • Explanation of the specifications and the limitations of the existing systems not very satisfactory; limited information	• Average explanation of the purpose and need of the project; • Moderate study of the existing systems; collects some basic information	• Good explanation of the purpose and need of the project • Collects a great deal of information and good study of the existing systems	• Detailed and extensive explanation of the purpose and need of the project	50	HOD/nomination + Project coordinator + External examiner Each will evaluate for 50 marks and average of all three is the marks awarded
Objectives and Methodology of Project Proposal	• Only Some objectives of the proposed work are well defined; Steps to be followed to solve the defined problem are not specified properly	• Incomplete justification to the objectives proposed; Steps are mentioned but unclear; without justification to objectives	• Good justification to the objectives; Methodology to be followed is specified but detailing is not done	• All objectives of the proposed work are well defined; Steps to be followed to solve the defined problem are clearly specified • Detailed and extensive explanation of the specifications and the limitations of the existing systems		
Design Methodology	• Partial division of problem into modules and inappropriate selection of computing framework	• Division of problem into modules but inappropriate selection of computing Framework	• Division of problem into modules and good selection of computing framework • Design methodology not properly justified	• Division of problem into modules and good selection of computing framework • Appropriate design methodology and		

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (4)	**Acceptable (Average) (6)**	**Satisfactory (Good) (8)**	**Proficient (Excellent) (10)**		
	• Design methodology not defined properly	• Design methodology not defined properly		properly justified		
Planning of Project Work	• Time frame not properly specified	• Time frame properly specified, but not being Followed	• Time frame properly specified but being followed partly	• Time frame properly specified and being followed		
Presentation	• Contents of presentations are appropriate but not well Arranged • Eye contact with few people and unclear Voice	• Contents of presentations are appropriate but not well Arranged • Eye contact with few people and unclear Voice	• Contents of presentations are appropriate but not well arranged • Satisfactory demonstration, clear voice with good spoken language but eye contact not proper	• Contents of presentations are appropriate and well arranged • Proper eye contact with audience and clear voice with good spoken language		

SCHEME OF TEACHING AND EXAMINATION

B.E. (I&PE) VIII SEMESTER

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Elective-IV	3	3	0	0	50	50	100
2		Elective-V	3	3	0	0	50	50	100
3		Elective-VI	3	3	0	0	50	50	100
6	UIP804P	Project- Phase II	12	0	0	24	50	50	100
	Total		21	0	0	24	200	200	400

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

DEPARTMENT ELECTIVES

Subject Code	Department Electives	Prerequisites*
UIP001E	Control System Engineering	
UIP002E	Plant Engineering and Industrial Safety	
UIP003E	Non-Destructive Testing	
UIP004E	Database Management System	
UIP005E	Machine Tool Design	
UIP006E	Materials Management	
UIP007E	Advanced Foundry Technology	
UIP008E	Industrial Robotics	
UIP009E	Intellectual Property Rights	
UIP010E	Management Information System	
UIP011E	Energy Management	
UIP012E	Marketing Management	
UIP013E	Automation In Manufacturing	
UIP014E	Concurrent Engineering	
UIP015E	Dynamics of Machines	UIP414 C
UIP016E	Facility Planning & Design	UIP601C
UIP017E	Computer Integrated Manufacturing	UIP512C,
UIP018E	Composite Materials &Processing	UIP302
UIP019E	Project Management	UIP601C, UIP416C
UIP020E	Maintenance Engineering	
UIP021E	Advanced Operations Research	UIP601C
UIP022E	Non-Conventional Machining Processes	
UIP023E	Mechanical Vibrations	
UIP024E	Business Dynamics	UIP416C
UIP025E	Supply Chain Mgmt.	UIP416C,
UIP026E	Strategic Management	UIP416C
UIP027E	Total Quality Management	
UIP028E	Just In Time Manufacturing	UIP416C
UIP029E	Business Process Reengineering and Benchmarking	UIP416C
UIP030E	Design of Experiments	UIP513C
UIP031E	Design for Manufacturing	
UIP032E	Heuristics and Optimization Techniques	
UIP033E	Air craft industry and air craft systems	
UIP034E	Design of Machine Elements-II	
UIP035E	Enterprise Resource Planning	
UIP036E	Industry 4.0	
UIP037E	Internet of Things	
UIP038E	Mechatronics	

*** For fulfilling prerequisites, the candidate must have registered at least once for that subject**

2.4 Rubrics for Project Phase-I &II (VII + VIII Semester)

SEMESTER VII

Rubrics for	Phase	Period (Duration)	Rubric #	Marks	Evaluation by
CIE	Evaluation-I	Before one month from the start of 7th semester of BE Program	R1	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s)
	Evaluation-II	Before 15 days from the last working day of 7th semester of BE Program	R2	15	
	Evaluation by guide	In the last week of working days	R3	20	Guide(s)
SEE	Semester End Examination	During SEE of 7th semester of BE Program	R4	50	Committee consisting of HOD/Nominee + Project Coordinator + External Examiner

SEMESTER VIII

Rubrics for	Phase	Period (Duration)	Rubric #	Marks	Evaluation by
CIE	Evaluation-I	Before one month from the start of 8th semester of BE Program	R5	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s)
	Evaluation-II	Before 15 days from the last working day of 8th semester of BE Program	R6	15	
	Evaluation by guide		R7	20	Guide(s)
SEE	Semester End Examination	During SEE of 8th semester of BE Program	R8	50	Committee consisting of HOD/Nominee + Project Coordinator + External Examiner

The evaluation criteria may vary *marginally* (maximum of 5%) from the perspective of different disciplines but the structure/stages of evaluation and allotted marks for each stage of evaluation in both 7th and 8th semesters must be same for all the branches across the institute.

R5: Project work progress review-I (Before one month from the start of 8th semester of BE): Total Marks of 15

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Design methodology and planning of project work	• Division of problem into modules and improper selection of computing framework • Design methodology not properly justified • Time schedule is not clear	• Division of problem into modules and improper selection of computing framework • Design methodology not properly justified • Time schedule is specified	• Division of problem into modules and good selection of computing framework • Design methodology not properly justified, • Time schedule is specified	• Division of problem into modules and good selection of computing framework, • Appropriate design methodology and properly justification • Time frame properly specified	15	HOD (or nomination) + Project coordinator + Guide(s) Each will evaluate for 15 marks and average of all three is the marks awarded
Description of Concepts and Technical Details	• Inappropriate explanation of the key concepts and poor description of the technical requirements of the project	• Incomplete explanation of the key concepts and in-sufficient description of the technical requirements of the project	• Complete explanation of the key concepts but in-sufficient description of the technical requirements of the project	• Complete explanation of the key concepts and strong description of the technical requirements of the project		
Demonstration and presentation	• Contents of presentations are not appropriate and Demonstration not satisfactory	• Contents of presentations are appropriate but not well arranged, eye contact with few people and unclear Voice	• Contents of presentations are appropriate but not well arranged, satisfactory demonstration, clear voice with good spoken language but eye contact not proper	• Good demonstration of work so far carried-out, Contents of presentations are appropriate and well arranged, Proper eye contact with audience and clear voice with good spoken language		

R6: Project work progress review -II (Before 15 days from the last working day of 8th semester of BE): Total Marks of 15

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Incorporation of Suggestions made in the previous review	• All major changes are made as per modifications suggested during previous evaluation	• All major changes are made as per modifications suggested during previous evaluation	• Changes are made as per modifications suggested during previous evaluation and good justification	• Changes are made as per modifications suggested during the previous evaluation and new innovations added	15	HOD (or nomination) + Project coordinator + Guide(s) Each will evaluate for 15 marks and average of all three is the marks awarded
Discussion and Conclusion	• Results are not presented properly, Project work is not summarized and concluded • Future extensions in the project are not specified	• Results presented are not much satisfactory, Project work summary and conclusion not very appropriate • Future extensions in the project are not specified	• Results are presented in good manner, Project work summary and conclusion not very appropriate • Future extensions in the project are specified	• Results are presented in very appropriate manner, Project work is well summarized and concluded, • Future extensions in the project are well specified		
Demonstration and Presentation	• Modules are not in proper working form that further leads to failure of integrated system, Contents of presentations are not appropriate and not well delivered • Poor eye contact with audience and unclear voice	• Modules are working well in isolation and properly demonstrated, Modules of project are not properly integrated, Contents of presentations are appropriate but not well delivered • Eye contact with only few people and unclear voice	• Each module working well and properly demonstrated, Integration of all modules not done and system working is not very satisfactory, Contents of presentations are appropriate and well delivered, Clear voice with good spoken language but less eye contact with audience	• Each module working well and properly demonstrated, All modules of project are well integrated and system working is accurate, neatly presented with proper eye contact with audience and clear voice with good spoken language		

R7: Evaluation by the guide (Towards the end of 8th semester of BE): Total Marks of 20

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Technical Knowledge gained through project work	• Poor knowledge and no awareness related to project	• Lacks sufficient knowledge and Awareness	• Fair knowledge and awareness related to the project	• Extensive knowledge and awareness related to the project	20	Guide(s)
Regularity and Attendance	• Irregular and inconsistent in work	• Reports to the guide but lacks Consistency	• Reports to the guide very often but not very consistent	• Reports to the guide regularly and consistent in work		
Incorporation of Suggestions made in the previous review	• All major changes are made as per modifications suggested during previous evaluation	• All major changes are made as per modifications suggested during previous evaluation	• Changes are made as per modifications suggested during previous evaluation and good justification	• Changes are made as per modifications suggested during the previous evaluation and new innovations added		
Organization and structure of Project Report	• Project report not prepared according to the specified format, References and citations are not appropriate	• Project report is according to the specified format but some mistakes, Insufficient references and citations	• Project report is according to the specified format, References and citations are appropriate but not mentioned well	• Project report is according to the specified format, References and citations are appropriate and well mentioned		

R8: SEE Evaluation for Project Phase-II (During SEE of 8th semester of BE): Total Marks of 50

Evaluation Criteria	Score				Total Marks	Evaluation By
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Presentation	• Contents of presentations are not appropriate and not well delivered, Poor eye contact with audience and unclear voice	• Contents of presentations are appropriate but not well delivered, Eye contact with only few people and unclear voice	• Contents of presentations are appropriate and well delivered, Clear voice with good spoken language but less eye contact with audience	• Contents of presentations are appropriate and well delivered, Proper eye contact with audience and clear voice with good spoken language	50	HOD/ nomination + Project coordinator + External Examiner Each will evaluate for 50 marks and average of all three will be taken
Designs and implementation	• Proper design methodology is not followed resulting into poor design , No modern tools are used to implement, Work contributes very less to the world	• Proper design methodology is followed, Design lacks, very less modern tools are used to implement, the work contributes to the world in little way	• Proper design methodology is followed, Design is done but not perfect, few modern tools are used to implement, the work contributes to the world in some way	• Proper design methodology is followed, Design is perfect, Modern tools are used to implement, the work contributes to the world in greater way		
Results and Demonstration	• Some of the defined objectives are achieved • Modules are not in proper working form that further leads to failure of integrated system	• All defined objectives are achieved • Modules are working well in isolation and properly demonstrated • Modules of project are not properly integrated	• All defined objectives are achieved and working well and demonstrated • Integration of all modules not done and system working is not very satisfactory	• All defined objectives are achieved and evident from the results • Each module working well and properly demonstrated • All modules of project are well integrated and system working is accurate		

Evaluation Criteria	Score				Total Marks	Evaluation By
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Project report	• Project report not prepared according to the specified format • References and citations are not appropriate	• Project report is according to the specified format but some mistakes • In-sufficient references and citations	• Project report is according to the specified format • References and citations not mentioned well	• Project report is according to the specified format • References and citations are appropriate and well mentioned		
Viva - Voce	• Answered few questions related to design, implementation and applications of project work	• Answered some questions related to design, implementation and applications of project work	• Answered 80% of the questions related to design, implementation and applications of project work	• Answered all the questions related to design, implementation and applications of project work		

Annexure-3

UHS388C/UHS488C: Samskrutika Kannada
1 Credit (2-0-0)
(AU,BT,CV,IP,ME,CS,EC,EE,EI,IS,AIML BRANCHES)

ಕೋರ್ಸ್ ಉದ್ದೇಶಗಳು:

1 'ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ' ಪಠ್ಯದ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಕನ್ನಡ ನಾಡು, ನುಡಿ, ಭಾಷೆ, ಮತ್ತುಕನ್ನಡಿಗರ ಸಾಂಸ್ಕೃತಿಕ ಬದುಕಿನ ಬಗೆಗೆ ಅರಿವು ಮೂಡಿಸುವುದು.

2 ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಕನ್ನಡ ಭಾಷೆ ಹಾಗೂ ಅದಕ್ಕೆ ಪೂರಕವಾಗಿರುವ ಕನ್ನಡ ವ್ಯಾಕರಣಾಂಶಗಳ ಬಗೆಗೆ ಅರುವು ಮೂಡಿಸುವುದು. ಪ್ರಾದೇಶಿಕ ಭಾಷೆಯಲ್ಲಿಅರ್ಜಿ ಮತ್ತು ಪತ್ರವ್ಯವಹಾರಗಳನ್ನು ಸಮರ್ಥವಾಗಿ ನಿರ್ವಹಿಸಲು ಪ್ರೇರೇಪಿಸುವುದು. .

3 ತಂತ್ರಿಕಅಧ್ಯಯನದ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಕನ್ನಡ ಭಾಷೆಯ ಬರವಣಿಗೆ ಮತ್ತು ಬರವಣಿಗೆಯಲ್ಲಾಗುವ ದೋಷಗಳನ್ನು ಗುರುತಿಸುವ ಸಾಮರ್ಥ್ಯವನ್ನು ನೀಡುವುದು.

4 ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಅಡಗಿರುವ ಸೂಪ್ತ ಪ್ರತಿಭೆಯನ್ನು ಅನಾವರಣಗೊಳಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿಅವರಲ್ಲಿ ಕಲೆ, ಬರವಣಿಗೆ ಮತ್ತು ಭಾಷಾಂತರಕಲೆಯಲ್ಲಿಆಸಕ್ತಿಯನ್ನು ಕೆರಳಿಸುವುದು.ಎಲ್ಲಕ್ಕೂ ಮೇಲಾಗಿ ಮಾನವೀಯ ಮೌಲ್ಯಗಳೊಂದಿಗೆ ಸರ್ವಾಂಗೀಣವಾಗಿ ಸಂವರ್ಧನೆಗೊಳಿಸಿ ಅವರನ್ನುರಾಷ್ಟ್ರದಅಮೂಲ್ಯ ಸಂತ್ತನ್ನಾಗಿ ರೂಪಿಸಿಸುವುದು.

ಭಾಗ: I ಕನ್ನಡ ನಾಡು, ನುಡಿ, ಸಂಸ್ಕೃತಿ ಮತ್ತು ವ್ಯಕ್ತಿಚಿತ್ರಣ **ಅವಧಿ: 6 ಗಂಟೆ**

1. ಕರ್ನಾಟಕ ಸಂಸ್ಕೃತಿ – ಹಂಪ ನಾಗರಾಜಯ್ಯ
2. ಕರ್ನಾಟಕಏಕೀಕರಣ :ಒಂದುಅಪೂರ್ವಚರಿತ್ರೆ– ಜಿ.ವೆಂಕಟಸುಬ್ಬಯ್ಯ
3. ಕನ್ನಡ ಭಾಷೆ ಮತ್ತುಕರ್ನಾಟಕ ಸಂಸ್ಕೃತಿ– ವಿತಾವಿ
4. ಡಾ.ಸರ್.ಎಂ.ವಿಶ್ವೇಶ್ವರಯ್ಯ : ವ್ಯಕ್ತಿ ಮತ್ತುಐತಿಹ್ಯ– ಎ.ಎನ್.ಮೂರ್ತಿರಾವ್

ಭಾಗ: II ಕಥೆ, ಪ್ರವಾಸಕಥೆ ಮತ್ತುಕರಕುಶಲ ಕಲೆ **ಅವಧಿ: 6 ಗಂಟೆ**

1. ಯುಗಾದಿ – ವಸುಧೇಂದ್ರ
2. ಮೆಗಾನೆ ಎಂಬ ಗಿರಿಜನ ಪರ್ವತ – ಹಿ. ಚಿ. ಬೋರಲಿಂಗಯ್ಯ
3. ಕರಕುಶಲ ಕಲೆಗಳು ಮತ್ತು ಪರಂಪರೆಯ ವಿಜ್ಞಾನ–ಕರಿಗೌಡ ಬೀಚನಹಳ್ಳಿ

ಭಾಗ: III ಕಾವ್ಯ **ಅವಧಿ: 7ಗಂಟೆ**

1. ವಚನಗಳು – ಬಸವಣ್ಣ, ಅಲ್ಲಮಪ್ರಭು, ಅಕ್ಕಮಹಾದೇವಿ
2. ಕೀರ್ತನೆಗಳು – ಪುರಂದರದಾಸರು, ಕನಕದಾಸರು
3. ತತ್ವಪದಗಳು – ಶಿಶುನಾಳ ಶರೀಫರು, ಬಾಲಲೀಲಾ ಮಹಾಂತ ಶಿವಯೋಗಿಗಳು
4. ಜನಪದಗೀತೆ, 5. ಮಂಕುತಿಮ್ಮನ ಕಗ್ಗ –ಡಿವಿಜಿ
6. ಬೆಳಗು – ಅಂಬಿಕಾತನಯದತ್ತ, 7.ಅನಿಕೇತನ – ಕುವೆಂಪು

ಭಾಗ: IV ಕಾವ್ಯ, ವಿಜ್ಞಾನ ಮತ್ತುತಂತ್ರಜ್ಞಾನ **ಅವಧಿ: 7ಗಂಟೆ**

ಕಾವ್ಯ

1. ಹೆಂಡತಿಯಕಾಗದ – ಕೆ.ಎಸ್.ನರಸಿಂಹಸ್ವಾಮಿ
2. ಮುಂಬೈ ಜಾತಕ–ಜಿ.ಎಸ್.ಶಿವರುದ್ರಪ್ಪ
3. ಆ ಮರ ಈ ಮರ–ಚಂದ್ರಶೇಖರಕಂಬಾರ
4. ಚೋಮನ ಮಕ್ಕಳ ಹಾಡು – ಸಿದ್ಧಲಿಂಗಯ್ಯ

ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ

1. 'ಕ' ಮತ್ತು 'ಬ' ಬರಹ ತಂತ್ರಾಂಶಗಳು, ಕಂಪ್ಯೂಟರ್ ಮುಖಾಂತರಕನ್ನಡದಟೈಪಿಂಗ್
2. ಕನ್ನಡ ಕಂಪ್ಯೂಟರ್ ಶಬ್ದಕೋಶ,
3. ತಾಂತ್ರಿಕ ಪದಕೋಶ

Total: L-26 Hours

ಪಠ್ಯಪುಸ್ತಕ:

ಸಾಂಸ್ಕೃತಿಕ ಕನ್ನಡ (ಸಂ), ಡಾ. ಹಿ.ಚಿ.ಬೋರಲಿಂಗಯ್ಯ, ಡಾ.ಎಲ್.ತಿಮ್ಮೇಶ, ಪ್ರೊ.ವಿ.ಕೇಶವಮೂರ್ತಿ, Prasaranga VTU, Belagavi, Karnataka, 2020.

ಕೋರ್ಸ್ ಫಲಿತಾಂಶಗಳು:

At the end of the course the student should be able to:

1. ವಿದ್ಯಾರ್ಥಿಗಳು ಬೌದ್ಧಿಕವಾಗಿ ಬೆಳೆಯುವುದರೊಂದಿಗೆ ನಮ್ಮ ನಾಡಿನ ಮತ್ತುದೇಶದ ಸಾಂಸ್ಕೃತಿಕ ವಾರಸುದಾರರಾಗಿ ಬೆಳೆದು ಸ್ವಾವಲಂಬಿಯಾಗಿ ಬದುಕು ಕಟ್ಟಿಕೊಳ್ಳುತ್ತಾರೆ
2. ಕನ್ನಡ ಭಾಷೆಯನ್ನು ಸಮರ್ಥವಾಗಿ ಮಾತನಾಡುವುದರೊಂದಿಗೆ, ಅನ್ಯರನ್ನು ಅರ್ಥೈಸಿಕೊಳ್ಳುವ ಮನೋಬಲ ಬೆಳೆಸಿಕೊಳ್ಳುತ್ತಾನೆ. ಇವತ್ತಿನ ಸಂಕೀರ್ಣವಾದ ಸಾಮಾಜಿಕ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಸೌಹಾರ್ದಯುತವಾದ ನಡುವಳಿಕೆಯೊಂದಿಗೆ ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಯಾಗಿ ರೂಪುಗೊಳ್ಳುತ್ತಾನೆ.
3. ಜಾಗತಿಕರಣದಇವತ್ತಿನ ಸಂದರ್ಭದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಸ್ವತಂತ್ರವಾಗಿಆಲೋಚಿಸುವ, ಸ್ವತಂತ್ರವಾಗಿ ಬರೆಯುವ, ಸ್ವತಂತ್ರವಾಗಿ ಚಿಂತನಶೀಲರಾಗುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಪಡೆದು, ಸಮಯೋಚಿತವಾಗಿ ಸೂಕ್ತ ನಿರ್ಧಾರಗಳನ್ನು ಕೈಗೊಳ್ಳುವಲ್ಲಿ ಈ ಅಧ್ಯಯನ ದೀಪಸ್ಥಂಬವಾಗಿದೆ.
4. ವಿದ್ಯಾರ್ಥಿಗಳು ಇಂದಿನ ಜಾಗತಿಕ ವಿದ್ಯಮಾನಗಳನ್ನು ಅರ್ಥೈಸಿಕೊಂಡು, ಸಮಾಜದಲ್ಲಿ ಸಂಘಜೀವಿಯಾಗಿ ಬೆಳೆಯುವ ಮನೋಬಲವನ್ನು ಮತ್ತುಆತ್ಮಸ್ಥೈರ್ಯವನ್ನುತುಂಬುವಲ್ಲಿ ಈ ಅಧ್ಯಯನ ಸೂಕ್ತವಾದ ಮಾರ್ಗದರ್ಶಿಕೆಯಾಗಿದೆ.
5. ತನ್ನ ಅಸ್ಮಿತೆಯ ಹುಡುಕಾಟದಲ್ಲಿರುವ ವ್ಯಕ್ತಿಗೆ, ಅದು ಈ ನೆಲದ ಸ್ವಾಭಿಮಾನ, ಭಾತೃತ್ವ, ಪ್ರೀತಿ, ಸೌಹಾರ್ದಯುತವಾದ ಮನಸ್ಸುಗಳಲ್ಲಿ ಇದೆಎಂಬುದನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳ ಅರಿತಕ್ಕೆತರುತ್ತದೆ.
6. ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಪರಿಸರ ಪ್ರಜ್ಞೆಯನ್ನು ಜಾಗೃತಗೊಳಿಸಿ, ದೈವಸೃಷ್ಟಿಯಾದ ಈ ಅಮೂಲ್ಯ ಸಂಪತ್ತನ್ನು ಹಿತ–ಮಿತವಾಗಿ ಬಳಸಿಕೊಂಡು ಮುಂದಿನ ತಲೆಮಾರಿಗೆಅದನ್ನು ಬಳುವಳಿಯಾಗಿ ಬಿಟ್ಟುಹೋಗುವಲ್ಲಿಜಾಗೃತನಾಗುತ್ತಾನೆ.

ಬಳಕೆ ಕನ್ನಡ

UHS389C/UHS489C Balake Kannada

1 Credit (2-0-0)

(AU,BT,CV,IP,ME,CS,EC,EE,EI,IS,AIML BRANCHES)

ಕೋರ್ಸ್ ಉದ್ದೇಶಗಳು:

1 'ಬಳಕೆ ಕನ್ನಡ 'ಪಠ್ಯದಅಧ್ಯಯನದಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳು ಕನ್ನಡ ಭಾಷೆಯನ್ನು ಅರ್ಥೈಸಿಕೊಂಡು, ಕನ್ನಡದಲ್ಲಿ ಸಂವಹನ ಮಾಡಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ.

2 ಕನ್ನಡ ವರ್ಣಮಾಲೆಯ ಬಗೆಗೆ ಅರಿವು ಮೂಡಿಸುವುದು ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಆಂತರಿಕ ಸಂವಹನ ಕ್ರಿಯೆಯನ್ನು ವೃದ್ಧಿಗೊಳಿಸುವುದು

3 ಕನ್ನಡ ಸಂಖ್ಯೆಗಳ ಬಗೆಗೆ ಅರಿವು ಮೂಡಿಸಿ, ಅವುಗಳನ್ನು ಸಮಯೋಚಿತವಾಗಿ ಬಳಸುವ ವಿದಾನವನ್ನು ಕಲಿಸಿಕೊಡುವುದು..

4 ನಮ್ಮ ನಾಡಿನ ಸಾಂಸ್ಕೃತಿಕ ವೈವಿಧ್ಯತೆಯನ್ನುಅರಿತು, ಅರ್ಥೈಸಿಕೊಂಡು ನಾಡವರೊಂದಿಗೆ ಸೌಹಾರ್ದಯುತವಾಗಿ ಬದುಕಲು ಕಲಿಸುವುದು.

Unit – I

Listening and Hearing 06 Hrs

Introduction: Activity -I

- Easy learning of a Kannada Language: A few tips
- Necessity of learning a local language:
- Tips to learn the language with easy methods.
- Hints for correct and polite conservation
- About Kannada Language (Kannada Bhashe)
- Eight Kannada authors who have won 'Jnanpith Award'
- Information about Karnataka State

Kelisikolluvudu mattu Alisuvudu: Activity -II

Listening to Kannada words and Sentences through different types of communications of day to day affairs. [Conversations in Kannada – Kannada Bhasheyalli Sambhashanegalu]

Conversation with

- With Friends – Snehitharodane-(ಸ್ನೇಹಿತರೊಡನೆ)
- With Teachers- (ಗುರುಗಳೊಡನೆ)
- In Shop, Market, Bus and Train(ಅಂಗಡಿ, ಮಾರುಕಟ್ಟೆ, ಬಸ್, ರೈಲು)
- In Hotel / Canteen(ಹೊಟೆಲ್/ಕ್ಯಾಂಟೀನ್‌ನಲ್ಲಿ)
- With Dependents(ಅವಲಂಬಿತರೊಡನೆ)
- In Hostel with Friends, Warden, Cooks and Security(ಹಾಸ್ಟೆಲ್‌ನಲ್ಲಿ)
- Vocabulary - Shabdakosha–ಶಬ್ದಕೋಶ
- Conversation - Sambhashane– ಸಂಭಾಷಣೆ- 1 (about City)
- Conversation - Sambhashane–ಸಂಭಾಷಣೆ-2(between Friends)
- Excersises to test their knowledge of understanding the Language.

Conversation with Teacher, House Owner and Roommate

- Vocabulary - Shabdakosha –ಶಬ್ದಕೋಶ
- Conversation - Sambhashane–ಸಂಭಾಷಣೆ- 1 (with Teacher)
- Conversation-Sambhashane–ಸಂಭಾಷಣೆ-2(With House Owner)
- Conversation-Sambhashane–ಸಂಭಾಷಣೆ- 3 (with Roommate)
- Excersises to test their knowledge of understanding the Kannada Wards and Sentenses in Conversation

Activity - III - Conversation with

- Vocabulary - Shabdakosha –ಶಬ್ದಕೋಶ
- Conversation - Sambhashane–ಸಂಭಾಷಣೆ-1 (with Teacher)
- Conversation-Sambhashane–ಸಂಭಾಷಣೆ-2 (with House Owner)
- Conversation-Sambhashane–ಸಂಭಾಷಣೆ-3 (with Roommate)
- Excersises to test their knowledge of understanding the Kannada Wards and Sentenses in Conversation

Activity - IV - Conversation with

- Vocabulary - Shabdakosha –ಶಬ್ದಕೋಶ
- Conversation - Sambhashane–ಸಂಭಾಷಣೆ-1 (with Teacher)
- Conversation-Sambhashane–ಸಂಭಾಷಣೆ-2 (with House Owner)
- Conversation-Sambhashane–ಸಂಭಾಷಣೆ-3 (with Roommate)
- Excersises to test their knowledge of understanding the Kannada Wards and Sentences in Conversation

Unit – II

Speaking and Asking 06Hrs

Maatanaadhuvudu mattu Keluvudu –ಮಾತನಾಡುವುದು ಮತ್ತು ಕೇಳುವುದು

[Kannada Words and Sentences in Conversation - Sambhashaneyalli Kannadada Padagalu mattu Vakyagalu - ಸಂಭಾಷಣೆಯಲ್ಲಿ ಕನ್ನಡದ ಪದಗಳು ಮತ್ತು ವಾಕ್ಯಗಳು]

In Speaking / Asking -Sambhashaneyalli–ಸಂಭಾಷಣೆಯಲ್ಲಿ

- Nouns - Naamapadagalu– ನಾಮಪದಗಳು
- Pronouns – Sarvanamapadagalu– ಸರ್ವನಾಮಪದಗಳು
- Adjectives – namavisheshanagalu - ನಾಮ ವಿಶೇಷಣಗಳು
- Verbs- Kriyapadagalu– ಕ್ರಿಯಾಪದಗಳು
- Adverbs - kriya visheshanagalu–ಕ್ರಿಯಾ ವಿಶೇಷಣಗಳು
- Conjunctions - Samyogagalu–ಸಂಯೋಗಗಳು
- Prepositions - Upasarga– ಉಪಸರ್ಗಗಳು

- Interrogative words and Sentences in Conversation – Sambhashaneyalli Prashnarthaka padagalu mattu vakyagalu–ಪ್ರಶ್ನಾರ್ಥಕ ಪದಗಳು ಮತ್ತು ವಾಕ್ಯಗಳು
- Vicharaneya/ Vicharisuva / Bedikeyavakyagalu (Enquiry / Request sentences in Conversation) - ವಿಚಾರಣೆಯ / ವಿಚಾರಿಸುವ / ಬೇಡಿಕೆಯ ವಾಕ್ಯಗಳು
- Excersises to test their knowledge of understanding the Kannada Wards and Sentenses in Conversation.

UNIT III

Reading – Ooduvudu – ಓದುವುದು 07Hrs

Kannada Wards and Sentenses in General Reading and Conversation- Samanya Sambhashaneyalli Kannadada Padagalu mattu Vakyagalu - ಸಂಭಾಷಣೆಯಲ್ಲಿ ಕನ್ನಡದ ಪದಗಳು ಮತ್ತು ವಾಕ್ಯಗಳು)

- Singular and Plural nouns in Conversation- SambhashaneyalliEkaavachana mattu Bhahuvachana - ಏಕವಚನ ಮತ್ತು ಬಹುವಚನ
- Gender in Conversation - Sambhashaneyalli Linga– ಲಿಂಗ
- Viruddha padagalu /Virodarthaka padagalu (Antonyms)– ವಿರುದ್ದ / ವಿರೋದಾರ್ಥಕ ಪದಗಳು.
- AsamanjasaUchcharane (Inappropriate Pronounciation) – ಅಸಮಂಜಸಉಚ್ಚಾರಣೆ
- SankhyaVyavasthe (Numbers system)- ಸಂಖ್ಯಾ ವ್ಯವಸ್ಥೆ
- Bhinnamshagalu (Fractions) –ಭಿನ್ನಾಂಶಗಳು
- Tindiya Hesarugalu/ Belagina upaharagala Hesarugalu - Menu (Names) of the breakfast Items –ತಿಂಡಿಯ ಹೆಸರುಗಳು
- Aaharakke sambandhisida padagalu / Aahara padarthagala Hesarugalu– (Names connected with food) –ಆಹಾರಕ್ಕೆ ಸಂಬಂದಿಸಿದ ಪದಗಳು.
- Samaya / Kalakke Sambhandhisida padhagalu (Words Relating to Time)– ಸಮಯ / ಕಾಲಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತಹ ಪದಗಳು
- Dikkugalige sambhadisida padhagalu (Words Relating to Directions) – ದಿಕ್ಕಿಗೆ ಸಂಬಂಧಿಸಿದಂತಹ ಪದಗಳು
- Manavana Bhavanegalige sambandisida Padagalu (Words Relating to Human's feelings and Emotions) –ಮಾನವನ ಭಾವನೆಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ಪದಗಳು
- Manavana shareerada bhagagalu / Angagalu (Parts of the Human body)- ಮಾನವನ ಶರೀರದ ಭಾಗಗಳು / ಅಂಗಗಳು
- Manava Sambhandhada / Sambhandhaakke sambhadisida padhagalu (Terms Relating to Human Relationship)– ಮಾನವ ಸಂಬಂದಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತಹ ಪದಗಳು
- Vaasada sstalakke sambhandisidanthaha padhagalu (Words Relating to Place of Living) - ವಾಸದ ಸ್ಥಳಕ್ಕೆ ಸಂಬಂದಿಸಿದಂತಹ ಪದಗಳು
- Saamanya Sambhashaneyalli Bhalasuvanthaha Padagala Patti (List of Words, used in the general conversation) – ಸಾಮಾನ್ಯ ಸಂಭಾಷಣೆಯಲ್ಲಿ ಬಳಸುವಂತಹ ಪದಗಳ ಪಟ್ಟಿ

- Additional Excersises to test their knowledge of understanding the Kannada words and sentences in their communication.

UNIT IV

Writing – Bareyuvudu – ಬರೆಯುವುದು 07Hrs

Kannada Alphabets and their Pronunciation – Kannada AksharaMale mattu uchcharane – ಕನ್ನಡ ಅಕ್ಷರಮಾಲೆ ಹಾಗೂ ಉಚ್ಚಾರಣೆ ಕನ್ನಡ ಅಕ್ಷರಾಭ್ಯಾಸ

- Kannada Aksharamale (ಕನ್ನಡ ಅಕ್ಷರಮಾಲೆ)
- Kannada stress letters - vattakshara (also often written as Ottakashara)
- Kannada khaghunitha (Pronounced as ka-gunitha)
- Excersises to test their knowledge of understanding the Kannada words.
- Pronunciation (Uchcharane), Memorisation and usage of the Kannada Letters
- VargeeyaVyanjanagalaUchcharane (Pronounciation of Structured Consonants) AvargeeyaVyanjanagalaUchcharane (Pronounciation of Unstructured Consonants) Excersises to test their knowledge of understanding the Kannada words.
- Excersises to test their knowledge of understanding the Kannada alphabets.
- Additional Excersises to test their knowledge of understanding the Kannada alphabets.

ಒಟ್ಟು: 26 ಗಂಟೆಗಳು

ಪಠ್ಯಪುಸ್ತಕ:

ಬಳಕೆ ಕನ್ನಡ (ಸಂ), ಡಾ.ಎಲ್.ತಿಮ್ಮೇಶ, ಪ್ರೊ. ವಿ. ಕೇಶವಮೂರ್ತಿ, Prasarang, VTU, Belagavi, Karnataka 2020.

ಕೋರ್ಸ್ ಫಲಿತಾಂಶಗಳು:

At the end of the course the student should be able to:

1 ವಿದ್ಯಾರ್ಥಿಗಳು ಕನ್ನಡ ಭಾಷೆಯನ್ನು ಸುಲಭವಾಗಿ ಅರ್ಥೈಸಿಕೊಂಡು, ಸಾಮಾಜಿಕವಾಗಿ, ಆರ್ಥಿಕವಾಗಿಆಯಾ ಪ್ರದೇಶದಜನರೊಂದಿಗೆಅನ್ಯೋನ್ಯವಾಗಿ ವ್ಯವಹರಿಸುತ್ತಾನೆ.

2 ಈ ಪಠ್ಯಾಧ್ಯಯನದಿಂದ ವಿದ್ಯಾರ್ಥಿಯುಆಯಾ ಪ್ರದೇಶಗಳ ನಂಬಿಕೆ, ಸಂಪ್ರದಾಯ ಮತ್ತು ಆಚರಣೆಗಳನ್ನು ಸುಲಭವಾಗಿ ಅರ್ಥಮಾಡಿಕೊಳ್ಳಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ.

3 ಕನ್ನಡ ಸಂಖ್ಯೆಗಳ ಪರಿಕಲ್ಪನೆಯಿಂದ ವಿದ್ಯಾರ್ಥಿಯು ವಾಣಿಜ್ಯ ವ್ಯವಹಾರಗಳನ್ನು ಸುಲಭವಾಗಿ ನೆವೇರಿಸಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ.

4 ಹಂತ ಹಂತವಾಗಿ ವಿದ್ಯಾರ್ಥಿಯು ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ಬರವಣಿಗೆಯಕಲೆಯನ್ನು ಮತ್ತು ಓದುವಕಲೆಯನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳುತ್ತಾನೆ.

5 ಕನ್ನಡ ಭಾಷೆಯ ನಿರಂತರ ಸಂಪರ್ಕದಿಂದ ವಿದ್ಯಾರ್ಥಿಯು ಸ್ವಂತಂತ್ರವಾಗಿಆಲೋಚಿಸುವ ಮತ್ತುಅಭಿವ್ಯಕ್ತಿಸುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳುತ್ತಾನೆ.

6 ಈ ಭಾಷೆಯ ಸಂಪರ್ಕದಿಂದಾಗಿ ವಿದ್ಯಾರ್ಥಿಯು ಕನ್ನಡ ಸಾಹಿತ್ಯ ಪ್ರಕಾರಗಳಾದ ಕತೆ, ಕವನ, ಕಾದಂಬರಿ, ನಾಟಕ ಮುಂತಾದ ಕ್ಷೇತ್ರಗಳಲ್ಲಿ ತನ್ನಅಭಿರುಚಿಯನ್ನು ಹೆಚ್ಚಿಸಿಕೊಳ್ಳುತ್ತಾನೆ.

Annexure-4

Basaveshwar Engineering College (A), Bagalkot

Department of Industrial Production Engineering

Credit Distribution and Scheme for the students admitted to first year for the academic year 2021-22

Credits breakdown for the B.E. Degree Curriculum

Course category	Min Credits	Max Credits	VTU Credits	Credits
Humanities and Social Science (HSS)	9	18	10	11
Basic Science	18	35	28	25
Engineering Science	18	35	20	20
Professional Core	53	70	64	67
Professional Electives	18	26	20	20
Open Electives	9	18	09	09
Mini-project, Main project, Seminar and Internship	18	26	24	20
Approved Online course like MOOC/SWAYAM	---	---	---	03
Total Credits	---	---	175	175

Credit distribution for the students admitted to first year in **2021-22**

Sem	HSS	Basic Science	Engineering Science	Professional Core	Department Electives	Open Elective	MOOCS/ Swayam	Mini Project+ / Project+ / Seminar+ / Internship	Total
I	1	9.5	9.5						20
II		9.5	10.5						20
III	1	3		17					21
IV	4	3		15					22
V	1+ 3**			16	0	3			23
VI	1			12	3	3		2MP	21
VII				7	8	3		2I+3P	23
VIII				0	9			12P+1S	22
Online Courses MOOCS							3*		03
Total (old)	11	25	20	67	20	9	3*	20	175

*As per the VTU guidelines, mandatory credits to be earned through MOOCS from the 4th Sem onwards

** Universal Human Values (UHV)

III Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	BS	Computational Methods for Mechanical Science	3	2	2	0	50	50	100
2	Core	Material Science & Metallurgy	3	3	0	0	50	50	100
3	Core	Engineering Thermodynamics and Fluid Mechanics	4	3	2	0	50	50	100
4	Core	Strength of Materials	4	3	2	0	50	50	100
5	Core	Machine Tools Technology	3	3	0	0	50	50	100
6	Core	Metallography and Material Testing Laboratory	1	0	0	3	50	50	100
7	Core	Machine Shop Practice	1	0	0	3	50	50	100
8	UHS	Samskrutika Kannada*/Vyavaharika Kannada **	1	2	0	0	50	50	100
9	M	Bridge Course Mathematics-1***	-	3	0	0	50	50	100
10	M	Environmental Studies***	-	2	0	0	50	50	100
		Total	21	21	6	6	400/ 500	400/ 500	800/ 1000

IV Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	BS	Statistical Methods for Mechanical Science	3	2	2	0	50	50	100
2	Core	Kinematics of Machines	4	3	2	0	50	50	100
3	Core	Foundry and welding Technology	3	3	0	0	50	50	100
4	Core	Metrology & Measurement	3	3	0	0	50	50	100
5	HSS	Management and Entrepreneurship	3	3	0	0	50	50	100
6	Core	Computer Aided Machine Drawing	3	1	0	6	50	50	100
7	HSS	Fundamentals of Quantitative Aptitude and Soft Skills	1	1	0	0	50	50	100
8	Core	Foundry and Welding Practice Lab	1	0	0	3	50	50	100
9	Core	Metrology & Measurements Laboratory	1	0	0	3	50	50	100
10		Bridge Course Mathematics -II	-	0	0	0	50	50	100
11		Constitution of India	-	0	0	0	50	50	100
		Total	22	16	4	12	450	450/ 550	900/ 1100

V SEMESTER

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Design of Machine Elements	3	2	2	0	50	50	100
2	Core	Industrial Engineering	3	4	0	0	50	50	100
3	Core	Quality Assurance & Reliability	3	3	2	0	50	50	100
4	Open Elective	Open elective -1	3	4	0	0	50	50	100
5	HSS	Advanced FQAS	1	1	0	0	50	50	100
6	Core	Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
8	Core	Metal Cutting and Product Assembly Lab	1	0	0	3	50	50	100
9	Core	Advanced C Programming Lab	2	1	0	2	50	50	100
10	Core	Industrial Engineering Lab	1	0	0	2	50	50	100
11	HSS	Universal Human Values	3	2	0	0	50	50	100
		Total	23	20	4	7	500	500	1000

VI Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Operations Research	4	3	2	0	50	50	100
2	Core	Finite Element Methods	3	2	2	0	50	50	100
	Core	Digital Design and Manufacturing	3	3	0	0	50	50	100
4	Dept Elective	Elective I	3	3	0	0	50	50	100
5	Open Elective	Open Elective -II	3	3	0	0	50	50	100
6	HSS	Career Planning and Professional Skills	1	1	0	0	50	50	100
7	Mini Project	Mini Project	2	0	0	4	50	50	100
	Core	Digital Manufacturing Lab.	1	0	0	2	50	50	100
9	Core	Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	21	16	4	8	450	450	900

VII Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Operations Management	3	3	0	0	50	50	100
2	Core	Theory of Metal Forming	4	3	2	0	50	50	100
3	Dept Elective	Elective-II	3	3	0	0	50	50	100
4	Dept Elective	Elective III	3	3	0	0	50	50	100
	Dept Elective	Elective-IV	2	2	0	0	50	50	100
5	Open Elective	Open Elective-III	3	3	0	0	50	50	100
6	I	Internship	2	0	0	4	50	50	100
8	Project	Project- Phase I	3	0	0	6	50	50	100
		Total	23	17	2	10	400	400	800

VIII Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Dept Elective	Elective-V	3	3	0	0	50	50	100
2	Dept Elective	Elective-VI	3	3	0	0	50	50	100
3	Dept Elective	Elective-VII	3	3	0	0	50	50	100
4	S	Seminar	1	0	0	2	50	50	100
5	P	Project- Phase II	12	0	0	24	50	50	100
		Total	22	9	0	26	250	250	500

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Proceedings of the meeting of the Board of Studies (BOS)
held at 10.30 am on Monday, 4th July 2020
through video conferencing

	Sub:1	The chairman of Board of Studies Dr. V.S Puranik HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies. Chairman also explained history of the department and laboratory facilities available in the department with the help of slides.
	Sub: 2	Before taking up the regular agenda, the chairman briefly reported about the academic developmental activities that took place in the department since last meeting of the BOS which was held on 24th June 2019. 1. Dr S.M Pharsiyawar Associate professor Department of IPE awarded with PhD degree **LIST OF PhD SCHOLARS AWARDED**

Candidate's Name	Research Topic	Guide
RAJENDRA KADI	EXPERIMENTAL INVESTIGATION ON SURFACE INTERGRITY AUSTENITIC STAINLESS STEEL	Dr ST Dundur
NINGOMBAM SANJEEV KUMAR	A STUDY ON MANAGEMENT OF SOCIAL ENTERPRISES IN KARNATAKA	Dr V.S Puranik

3. **WORK SHOP ORGANIZED**

Sr. No	Workshop organized Date	Name of the Faculty
01	AICTE Examination Reforms Policy for BEC faculty 14-16 February 2020	Dr.C.M.Javalagi
02	E-workshop - AICTE Reform Policy on	Dr.C.M.Javalagi

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.Vivek Khazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

		Examination for BEC faculty6-7 may 2020

Sr. No	Workshop, FDP Attended	Date	Name of the Faculty
1	Attended Industry Institute Interaction Cell Bangalore	13th July 2019	Dr.V.S.Puranik Dr C.M Javalagi Dr.S.M.Pharsiyawar
2	Attended Conference at The institute of Engineering , Kolkata, India,West Bengal Centre	23-24, Nov 2019	Dr. S. T. Dundur
3	Attended FDP on AICTE-Training for Experts at Chennai	24th Feb.2020	Dr. S. T.Dundur
4	Attended FDP on AICTE- Examination Reform Policy at BVB CET, Hubli	20-22, Feb. 2020	Dr. C. M. Javalagi
5	Attended FDP on FDP on Current Practices and Critical Issue for OBE in Engineering / Institution (AICTE Sponsored) at BEC-Bagalkot	27-01-2020 to 07-02-2020	Dr. C. M. Javalagi
6	Attended FDP on AICTE- Examination Reform Policy At BEC Bagalkot	14-15 Feb.2020	Dr. S. M. Pharsiyawar
7	Attended – Allterrian Vehicle (ATVC) Vadodara. Gujarat	15-19 Feb 2020	Dr. D. D. Chillal

	Sub: 3	**To read and approve the minutes of Board of Studies meeting held on 24.06.2019**
	Resolution:	The minutes of the previous BOS meeting held on 24.06.2019 were circulated to all members. There were no comments received, hence

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.Vivek Khazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

		resolutions were accepted and approved by the Board. The minutes are as in **Annexure-1**
	Sub: 4	**Ratification of modified scheme of teaching for the students admitted to first year during 2018-19 (175 credits)**
	Resolution:	After discussion it was resolved to approve modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester as in **Annexure-2**
	Sub: 5	**To discuss and approve the syllabus for V and VI semester for students admitted to first year in 2018-19**
	Resolution:	Dr D.G Mallapur and Dr S.M Pharsiyawar presented the syllabus for V and VI semester respectively for students admitted to first year in 2018-19. A thorough discussion was held and few suggestions like addition of Timer-Pro software to upgrade Industrial engineering laboratory and Introduction of special casting techniques as course which include plastic moulding methods were made by the BOS committee members which were agreed upon for incorporation. Then After it was resolved to approve the syllabus of teaching for the students admitted to first year in 2018-19 (Fifth and Sixth semester syllabus) as in **Annexure 4**
	Sub: 6	**To discuss and approve the scheme of teaching for the students admitted to first year in 2020-21 (175 credits)**
	Resolution:	Dr D.D Chillal presented the scheme of teaching for the students admitted to first year in 2020-21 (175 credits**).**After discussion it was resolved to approve scheme of teaching for the students admitted to first year 2020-21 from third to eighth semester as in **Annexure 5**
	Sub: 7	**To discuss and approve the structure of the course/ subject file**
	Resolution:	Dr C.M Javalagi presented to discuss and approve the structure of the course/ subject file as per the College exam reforms committee report guidelines**.** After discussion it was resolved to approve the structure of the course/ subject file as in **Annexure 6**

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.Vivek Khazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

	Sub:8	**To discuss and approve the assessment rubrics for Technical seminar, Internship, Mini project and project phase I & II**
	Resolution:	Dr C.M Javalagi presented to discuss and approve the assessment rubrics for Technical seminar, Internship, Mini project and project phase I & II as per the College exam reforms committee report guidelines. After discussion it was resolved to approve the assessment rubrics for Technical seminar, Internship, Mini project and project phase I & II
	Sub:9	**To discuss about the introduction of online mode of teaching from the year 2020-21**
	Resolution:	Chairman presented to discuss about the introduction of online mode of teaching from the year 2020-21 as per the College exam reforms committee report guidelines. After discussion it was resolved to approve the introduction of online mode of teaching from the year 2020-21
	Sub:10	**To discuss about the introduction of two or more virtual experiments in each laboratory course**
	Resolution:	Chairman presented to discuss about the introduction of two or more virtual experiments in each laboratory course as per the College exam reforms committee guidelines .After discussion it was resolved to approve the introduction of two or more virtual experiments in each laboratory course. However committee concluded that the virtual experiments may be introduced based on the types of laboratories wherever it is possible.
	Sub:11	**Any other subjects with permission of chair**
	Resolution	The committee suggested the following: ❖ Review the list of elective subjects offered for last five years

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.Vivek Khazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

		and also collects information from past students placed in different areas to introduce new elective subjects which will help students in their placements. ❖ Introduction of simulation softwares for casting and gating design. ❖ To balance the electives for three areas namely technology, management and production. A thorough discussion was held on above suggestions and resolved to prepare and seek approval in the next meeting.
	Sub: 13	Dr.S.T Dundur thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman

Name and Signature of BOS members present

Dr. V.S.Puranik	**Prof.Vivek Khazode**	**Mr. S B Kalyanshetti**	**Dr. D.G.Mallapur**	**Dr.V.G.Akkimardi**
Dr. Rathan Raj K.J	**Mr.V. S. KORI**	**Dr. S.T.Dundur**	**Dr. S. M.Pharsiyawar**	**Prakash mokhashi**
Dr. N. Nagesha	**Mr.C. T. Nagaraj.**	**Dr. C.M.Javalagi**	**Dr..D.D.Chillal**	**Kavyashree Kulkarni**

Annexure -I

Minutes of Board of Studies Meeting held on 24.06.2019

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
Proceedings of the meeting of the Board of Studies (BOS)
held at 10.30 am on Monday, 24th June 2019
at Old Board room

<table>
<tr><td></td><td>Sub:1</td><td>The chairman of Board of Studies Dr. V.S Puranik HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies.</td></tr>
<tr><td></td><td>Sub2</td><td>Before taking up the regular agenda, the chairman briefly reported about the academic developmental activities that took place in the department since last meeting of the BoS which was held on 30th June 2019. The chairman also briefed the following

i) NBA accreditation extended from 2019 to 2022
ii) The list of PhD Research Scholar
<table>
<tr><td>Candidate's Name</td><td>Research Topic</td><td>Guide</td></tr>
<tr><td>Vijaykumar Hiremath</td><td>Investigation Machining Parameters under Cryogenic conductors.</td><td>Dr ST Dundur</td></tr>
<tr><td>Maheshwar C</td><td>ERP implementation medium and small scale industries in Karnataka</td><td>Dr. C.M Javalagi</td></tr>
<tr><td>Dilip Gurunath Sondur</td><td>Studies on mechanical and tribological properties of as cast, cast aged and forge aged Al25Mg$_2$Si2Cu4Fe alloy.</td><td>Dr D.G Mallapur</td></tr>
<tr><td>Mohammad Saleem D. Harlapur</td><td>Studies on mechanical and tribological properties of as cast, cast aged and forge aged Al25Mg$_2$Si2Cu4Ni alloy.</td><td>Dr D.G Mallapur</td></tr>
</table>
iii)SDP on Finite Element analysis coordinated by Dr ST DUNDUR</td></tr>
<tr><td></td><td>Sub: 3</td><td>Confirmation of the previous minutes of the meeting of the Board of Studies held on 30.06.2019</td></tr>
<tr><td></td><td>Resolution:</td><td>The minutes of the previous BoS meeting held on 30.06.2018 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in Annexure-1</td></tr>
<tr><td></td><td>Sub: 4</td><td>Approval of minutes of Local BOS meeting held on 24.08.2018</td></tr>
<tr><td></td><td>Resolution:</td><td>The minutes of the previous Local BoS meeting held on 24.08.2018 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in Annexure-2</td></tr>
</table>

	Sub: 5	**Chairman BoS, presented a list for Post facto approval for the following subjects for the student studying from III sem to VIII sem of 200 credits and also approval for the students of 175 credits admitted to first year in 2018-19 from third to eighth semester** **i. Fundamentals of Quantitative Aptitude and Soft Skills (4th Semester)** **ii. Advanced Quantitative Aptitude and Soft Skills (5th Semester)** **iii. Career Planning and Professional Skills (6th Semester)** **iv. Naval Architecture and Marine Engineering (Teaching from Industry persons)** **v. Piping Engineering (Teaching from Industry persons)** vi. **NPTL / MOOCS online certificate courses**
	Resolution:	Fundamentals of Quantitative Aptitude and Soft Skills Advanced Quantitative Aptitude and Soft Skills Career Planning and Professional Skills Naval Architecture and Marine Engineering (Teaching from Industry persons) Piping Engineering and MOOCS and NPTL were discussed by the members and committee made no objection for students taking up the courses. Board Accepted the proposal and resolved for students continue to take up the courses
	Sub: 6	**The chairman presented modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester**
	Resolution:	After discussion it was resolved to approve modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester as in **Annexure 3**
	Sub: 7	**The chairman presented to discuss and approve on the syllabus of teaching for the students admitted to first year in 2018-19 from third to eighth semester with CO PO mapping**
	Resolution:	After discussion it was resolved to approve the syllabus of teaching for the students admitted to first year in 2018-19 (Third and Fourth sem syllabus)

		as in **Annexure 4** and from fifth to eighth semester will take up in next BOS with suitable modification in syllabus as discussed in the meeting
	Sub:8	**Permission given to the students to take the subjects in summer to those who have not completed 200 credits based on the student's request letter**
	Resolution:	After discussion it was resolved to approve for the students to take the subjects in summer to those who have not completed 200 credits.
	Sub: 13	**D.D Chillal**, thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman

Annexure -II

Scheme of Teaching for the Students Admitted to the First Year during 2018-19

Basaveshwar Engineering College (A), Bagalkot
Department of Industrial & Production Engineering

(SCHEME OF TEACHING FOR STUDENTS ADMITTED TO FIRST YEAR IN 2018-19)

III Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UMA301C	Engineering Mathematics –III	3	2	2	0	50	50	100
2	UIP302C	Material Science & Metallurgy	3	3	0	0	50	50	100
3	UIP330C	Engineering Thermodynamics and Fluid Mechanics	4	3	2	0	50	50	100
4	UIP320C	Strength of Materials	4	3	2	0	50	50	100
5	UIP321C	Machine Tools Technology	4	4	0	0	50	50	100
6	UIP316L	Metallography and Material Testing Laboratory	1.5	0	0	3	50	50	100
7	UIP322L	Machine Shop Practice	1.5	0	0	3	50	50	100
8	UMA330M	Bridge Course Mathematics-I	0	3	0	0	50	50	100
9	UBT133M	Environmental Studies	0	2	0	0	50	50	100
		Total	21	15	6	6	450	450	900

IV Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP401C	Mathematics –IV	3	2	2	0	50	50	100
2	UIP414C	Kinematics of Machines	4	3	2	0	50	50	100
3	UIP425C	Foundry and welding Technology	3	3	0	0	50	50	100
4	UIP431C	Metrology & Measurement	4	4	0	0	50	50	100
5	UIP465L	Computer Aided Machine Drawing	3	1	0	4	50	50	100
6	UHS001N	Fundamentals of Quantitative Aptitude and Soft Skills /BBC-I	1	1	0	0	50	50	100
7	UIP435L	Foundry and Welding Practice Lab	1.5	0	0	3	50	50	100
8	UIP432L	Metrology & Measurements Laboratory	1.5	0	0	3	50	50	100
9	UMA430M	Bridge Course Mathematics-II	0	3	0	0	50	50	100
10	UHS226M	Constitution of India	0	2	0	0	50	50	100
		Total	21	14	4	10	500	500	1000

V Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP501C	Design of Machine Elements	4	3	2	0	50	50	100
2	UIP502C	Industrial Engineering	4	4	0	0	50	50	100
3	UIP513C	Quality Assurance & Reliability	4	3	2	0	50	50	100
4	UIP501H	Management and Entrepreneurship	4	4	0	0	50	50	100
5	UHS002N	Advanced FQAS / BBC-II	1	1	0	0	50	50	100
6	UIP523C	Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
8	UIP542L	Metal Cutting Lab	1	0	0	3	50	50	100
		Programming Laboratory	2	1	0	2	50	50	100
	UIP532L	Industrial Engineering Lab	1	0	0	2	50	50	100
		Total	24	18	2	8	450	450	450

VI Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP601C	Operations Research	4	3	2	0	50	50	100
2	UIP630C	Finite Element Methods	4	3	2	0	50	50	100
	UIP640C	Digital Design and Manufacturing	3	3	0	0	50	50	100
4		Elective I	3	3	0	0	50	50	100
5		Open Elective 1	3	3	0	0	50	50	100
6	UHS003N	Career Planning and Professional Skills / BBC-III	1	1	0	0	50	50	100
7	UIP633P	Mini Project	3	0	0	6	50	50	100
	UIP632L	Digital Manufacturing Lab.	1	0	0	3	50	50	100
9	UIP622L	Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	23	17	6	10	450	450	900

VII Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP730C	Operations Management	4	3	2	0	50	50	100
2	UIP720C	Theory of Metal Forming	4	3	2	0	50	50	100
3		Elective-II	3	3	0	0	50	50	100
4		Elective -III	3	3	0	0	50	50	100
5		Open Elective 2	3	3	0	0	50	50	100
6	UIP710L	Internship	2	0	0	4	50	50	100
7	UIP723L	Software applications Laboratory	1	0	0	2	50	50	100
8	UIP713P	Project- Phase I	5	0	0	10	50	50	100
		Total	25	15	4	16	400	400	800

VIII Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Elective-IV	3	3	0	0	50	50	100
2		Elective-V	3	3	0	0	50	50	100
3		Elective-VI	3	3	0	0	50	50	100
4	UIP804P	Project- Phase II	12	0	0	24	50	50	100
		Total	21	9	0	24	200	200	400

Annexure -III

Syllabus of V and VI Semester for Students Admitted to First Year in 2018-19

Basaveshwar Engineering College (A), Bagalkot
DEPARTMENT OF INDUSTRIAL & PRODUCTION ENGINEERING

V Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP501C	Design of Machine Elements	4	3	2	0	50	50	100
2	UIP502C	Industrial Engineering	4	4	0	0	50	50	100
3	UIP513C	Quality Assurance & Reliability	4	3	2	0	50	50	100
4	UIP501H	Management and Entrepreneurship	4	4	0	0	50	50	100
5	UHS002N	Advanced FQAS / BBC-II	1	1	0	0	50	50	100
6	UIP523C	Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
8	UIP542L	Metal Cutting Lab	1	0	0	3	50	50	100
		Programming Laboratory	2	1	0	2	50	50	100
	UIP532L	Industrial Engineering Lab	1	0	0	2	50	50	100
		Total	24	18	2	8	450	450	900

DESIGN OF MACHINE ELEMENTS [04 Credits] [L-T-P:3-2-0]

UNIT – I

Stress analysis: Static **s**trength, Static loads and factor of safety, Theories of failure-maximum normal stress theory, maximum shear stress theory, distortion energy theory, stress concentration, Stress concentration factor, Fatigue, Endurance limit, Factors influencing endurance limit, Goodman and Soderberg relationship, Combined loading.

16 Hrs.

UNIT – II

Design of shafts: Design of shaft for pure torsion, pure bending, combined loading, design for strength & rigidity, shafts under fluctuating loads.

Design of Keys: Types of keys, Strength of rectangular and square keys.

Design of Coupling: couplings-design rigid flange coupling and bushed pin type flexible coupling. **16 Hrs.**

UNIT – III

Design of joints: Riveted Joints -Types, rivet materials, Failures of Riveted joints, Efficiency, Welded Joints - Types, Strength of butt and fillet welds. Threaded fasteners, Cotter and Knuckle joints. **16 Hrs.**

UNIT – IV

Design of gears: Introduction to gears, Design of spur gear, stresses in gear tooth, Lewis equation, form factor, dynamic and wear load.

Design of bearings: Mechanisms of Lubrication - Viscosity, bearing modulus, coefficient of friction, minimum oil film thickness-Heat Generated, Heat dissipated, bearing materials, lubricants and properties. Examples of journal bearing and thrust bearing design, Ball and Roller Bearings: Bearing life, equivalent bearing load, selection of bearings of different types.

16 Hrs.

Reference Books:

1. *Design of Machine Elements* -V. B. Bandhari, -Tata McGraw Hill Publishing Co. Ltd., New – Delhi, 2000.
2. *Machine Design*-Robert .L, Norton -Pearson Education Asia, New Delhi, 2001.
3. *Elements of Machine Design*-N. C. Pandey and C. S. Shah, 2002 -Chorotar Publishing House
4. *Machine Design*-R. K. Jain, Khanna Publications, New Delhi.
5. *Machine Component & Design*-William Orthwan, Jaico Publishing Co.
6. *Design Data Hand Book*-K. Mahadevan and Balaveera Reddy, CBS Publication.

INDUSTRIAL ENGINEERING [04 Credits] [L-T-P:4-0-0]

UNIT-I

Introduction to Industrial Engineering: Definition, history and development of industrial engineering, present state of industrial engineering, contribution to industrial engineering, activities and approach of industrial engineering, objectives and functions of industrial engineering, place of
industrial engineering in an organization. **02 Hrs.**

Productivity: Definition of productivity, productivity in individual enterprises, task of management, productivity of materials, land, building, machine and power.
Measurement of productivity, factors affecting the productivity, productivity improvement programmes, wages and incentives (simple numerical problems). **05 Hrs.**

Work study: Definition, objective and scope of work study, Human factors in work study, Work study and. management, work study and supervision,
work study and worker **06 Hrs.**

UNIT-II

Introduction to method study: Definition, objective and scope of method study, activity recording and examination aids. Charts to record moments in
shop operation – process charts, flow process charts, travel chart and multiple activity charts.(With simple problems) **07 Hrs.**

Micro and memo motion study: Charts to record moment at work place – principles of motion economy, classification of moments, two handed process chart, SIMO
chart, and micro motion study. Development, definition and installation of the improved method, brief concept about synthetic motion studies. **06 Hrs.**

UNIT-III

Introduction to work measurement: Definition, objective and benefit of work measurement. Work measurement techniques. Work sampling: need, confidence levels,
sample size determinations, random observation, conducting study with simple problems. **06 Hrs.**

Time study: Time Study, Definition, time study equipment, selection of job, steps in time study. Breaking jobs into elements, recording information. Rating & standard Rating, standard performance, scale of rating, factors affecting the rate of working, allowances and standard time determination. Predetermined motion time study –
Method time measurement (MTM)**.** **07 Hrs.**

UNIT-IV

Ergonomics: Introduction, areas of study under ergonomics, system approach to ergonomics model, Man-machine system: Components of man-machine system and their functions – work capabilities of industrial worker, study of development of stress in human body and their consequences, computer based Ergonomics

04Hrs.

Design of man-machine system: Fatigue in industrial workers. Quantitative/ qualitative representation and alphanumeric displays. Controls and their design criteria, control types, relation between controls and displays, layouts of panels and machines. Design of work places, influence of climate on human efficiency, influence of
noise, vibration and light. **05 Hrs.**

Industrial Engineering application: Introduction to Service Sector: Various Services: i) Hotel ii) Health Care iii) Bank iv) Retail Marketing / Department Stores v) Urban bodies, vi) Education vii) Construction
viii) Transport and Communication ix) Government. Content of Product Vs. Services. **04 Hrs.**

Text Books:

1. ILO, *Introduction to work study*– ILO, III (Revised)Edition, 2007, ISBN:81-204- 0602-8
2. *Motion and Time study*- Ralph M Barnes, John Wiley, 8th Edition,1985.
3. *Engineered work Measurement*- Wledon, ELBS , 1991 Marvin E. Mundel- Motion and Time study, PHI, 1st edition

References books:

1. *Human Factors in Engineering Design* - S Sanders and E J McCormick, 6th Edition,
McGraw Hill, ISBN:0-07-100319-3
2. *Work Study and Ergonomics*- S Dalela and Sourabh, – Chand Publishers, 3rd edition.
3. Industrial Engineering Hand book – Maynard

: QUALITY ASSURANCE & RELIABILITY ENGINEERING [04 Credits] [L-T-P:4-0-0]

UNIT-I

Introduction: Historical evolution of quality concepts, definition of quality, quality function, dimensions of quality, quality engineering terminology, statistical methods for quality, quality costs – four categories costs and hidden costs. quality of design and conformance, brief discussion on sporadic and chronic quality problems, quality control and quality improvement, seven quality control tools, quality function deployment, introduction to measurement system analysis
(MSA). **06 Hrs.**

Quality Assurance: Definition and concept of quality assurance, departmental assurance activities. quality audit concept, structuring the audit program, planning and . performing the audit activities, audit reporting, ingredients of a quality
programengineering, place of industrial engineering in an organization **06 Hrs.**

UNIT-II

Statistical Process Control:Introduction to statistical process control – chance and assignable causes of variation. Basic principles of control charts, choice of.
control limits, sample size and sampling frequency, rational subgroups. Analysis of patterns of control charts. Case Studies on application of SPC **06 Hrs.**

Control Charts For Variables: Controls charts for X bar and Range, statistical basis of the charts, development and use of X bar and R charts, interpretation of charts. Control charts for X bar and standard deviation (S), development and use of X bar and S chart. Brief discussion on – Pre control X bar and S control charts with variable sample size, control charts for individual measurements, cusum chart, moving-range charts. Process capability – definition, standardized formula,
methods of estimating process capability, relation to product tolerance. **07 Hrs.**

UNIT-III

Control Charts for Attributes: Controls chart for fraction non- conforming (defectives) development and operation of control chart, brief discussion on variable sample size. Control chart for non-conformities (defects) – development and operation of control chart for constant sample size and variable sample size. Choice between variables and attributes control charts. Guidelines for implementing control charts. Acceptance Sampling: Concept of accepting sampling, economics of inspection, **08 Hrs.**

UNIT-IV

Acceptance Sampling: Concept of accepting sampling, economics of inspection, Acceptance plans – single, double and multiple sampling. Operating characteristic curves – construction and use. Determinations of average outgoing quality, average outgoing quality level, average total inspection, production risk and consumer risk, published sampling plans. **07 Hrs.**

Reliability and Life Testing: Failure modes of components, definition of reliability, MTBF, failure rate, common failure rate curve, types of failure, reliability evaluation in simple cases of exponential failures in series, parallel and series-parallel device configurations, redundancy and improvement factors
evaluations. Numerical examples. **10 Hrs.**

Assignments: Students have to use the software packages like MS Excel, SPSS, Origin to solve the assignment problems. **02 Hrs.**

Text Books:

1. Introduction to statistical Quality Control, D C Montgomery John Wiley and Sons, 4th Edition.SBN:0- 471-31648-2
2. Statistical Quality Control, Grant and Leavenworth, McGraw Hill, 7th Edition.ISBN:00-70-435-553

Reference Books:

1. Quality Planning & Analysis, J M Juran, Frank M Gryna, Tata McGraw Hill, 3rdEdn. ISBN:978-007-462- 1790
2. Reliability and Maintainability Engineering, Charles E. Ebeling, McGraw Hill International Edition, MLM1004, ISBN007115248.
3. Quality Control, Prentice Hall, Dale H. Besterfield, 7thedn, 2003, ISBN-10: 0131131273. Fundamentals of Quality Control and Improvement, AmitavaMitra, Prentice hall, 2nd Edition, 1998, ISBN – 10: 0136450863

UIP430H: MANAGEMENT AND ENTREPRENEURSHIP [04 Credits] (L:T:P-3:2:0)

UNIT-I

Management Introduction: Definition of Management: its nature and purpose, Patterns of Management analysis: A management theory jungle? The systems approach to the management process, functions of a manager. **04 Hrs**

The Nature and Purpose of Planning: Introduction, Types of plans, Steps in planning, Planning process, Nature of Objectives, Concept of Management by Objectives (MBO), Process of MBO, Benefits and weaknesses of MBO, How to set objectives. **04 Hrs**

Decision making*:* Introduction, importance and limitations of decision-making, Evaluation of alternatives, Selecting an alternative, programmed and non-programmed decisions, decision making under certainty, uncertainty and risk. **05 Hrs**

UNIT-II

Nature and Purpose of Organizing: Formal and Informal organization, organization levels and the span of management, Departmentation-by time, by function, by geography, by customer, by product, by process or equipment, Matrix organization, Strategic Business UNITs (SBUs) **04 Hrs**

Staffing: Authority and power, Line and staff concept, Definition, Systems approach to HRM, situational factors affecting staffing, Selection: matching the person with the job, skills and personal characteristics required by managers, matching qualifications with position requirements, System approach to selection, position requirements and job design, skills and characteristics needed by managers, selection process, techniques, and instruments. **05 Hrs**

Human Factors and Motivation: Introduction, motivation & motivators, process of motivation, Maslow's hierarchy of needs, Hertzberg's motivation-hygiene theory, Vroom's expectancy theory, Equity theory, McClelland's needs theory, special motivational techniques **04 Hrs**

UNIT-III

Leadership: Definition, Ingredients of Leadership, Trait approach to leadership, Leadership behavior and styles, Managerial grid, Situational or contingency approach to leadership **04 Hrs**

Controlling: Basic control process, critical control points, standards and benchmarking, control as a feedback system, real time information and control, preventive control, control of overall performance, requirements for effective controls, budget as a control device **05 Hrs**

Introduction to Entrepreneurship: Entrepreneurship, Importance of Entrepreneurship, Concepts of Entrepreneurship, Characteristics of a Successful Entrepreneur, Classification of Entrepreneurs, Myths of Entrepreneurship **04 Hrs**

UNIT-IV

Institutions Supporting Small Business Enterprises: An Introduction about Central level Institutions, State level institutions, Other Agencies and Industry Associations. **06 Hrs**

Setting Up a Small Business Enterprise: Identifying the Business Opportunity, Business Opportunities in Various Sectors, and Formalities (including Business Plan) for Setting Up of a Small Business Enterprise, Environment Pollution Related Clearances. **07 Hrs**

Reference Books:

1. Harold Koontz , Heinz Weihrich and A Ramachandra Aryasril, "*Principles of Management*", Tata McGraw Hill Int. Book Co,ISBN-10:0-07-058192-4.
2. Poornima M. Charantimath, Entrepreneurship Development and Small Business Enterprises, Pearson Education India, October 22, 2005, ISBN-13: 978-81-7758-260-4, ISBN-10: 81-7758-260-7
3. Harold Koontz and Heinz Weihrich, "*Essentials of Management- An international perspective*", **Eidth Edition**, Tata McGraw Hill Companies, ISBN 13: 978-0-07-014495-8, ISBN 10:0-07-014495-8.
4. Heinz Weihrich and Harold Koontz , "*Management: A Global Perspective*", 10 Edition ,McGraw Hill Int. Edition,ISBN:0-07-069170-3.
5. P.C.Tripathi and P.N.Reddy " *Principles of Management*" 4 Edition, Tata McGraw Hill Int. Book Co, ISBN:0-07-022088-3.
6. Stephen Robbins, " *Management*",
7. Heinz Weihrich , Mark V Cannice and Harold Koontz , "*Management: A Global and Entrepreneural Perspective*", 12 Edition ,McGraw Hill Int. Edition,ISBN:0-0-07-066019-0.

ADVANCED FQAS / BBC-II

OVERVIEW	
Semester	5
Course Objectives	The course objectives for the semester are as follows: 1. Cover advanced topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills. 3. Hone career skills and industry awareness. 4. Develop awareness of career paths and competitive exams. 5.
Course Outcome	After the course, the students will be able to: 1. Answer multiple choice questions from topics in: a. quantitative aptitude,verbal aptitude, and reasoning aptitude. 2. Use tools and techniques learnt in soft skills modules to: a. build confidence and self-esteem. 3. Speak knowledgeable about career paths and competitive exams. 4.

Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	6	3
Reasoning Aptitude (RA)	6	3
Verbal Aptitude (VA)	6	3
Soft Skills (SS)	6	3
Career Skills (CS)	6	3
Total	30	15

DETAILS

Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quantitative and Reasoning Aptitude Skills Training			
1.	QA	Speed Maths	2
2.	QA	Areas and Volumes	2
3.	QA	Concept Review	2
4.	RA	Number Series and Letter Series	2
5.	RA	Coding and Decoding	2
6.	RA	Concept Review	2
UNIT II –Verbal Aptitude Skills Training			
7.	VA	Reading Comprehension	2
8.	VA	Listening Comprehension	2
9.	VA	Concept Review	2
Unit III – Career Skills			
10.	CS	Orientation to competitive exams, such as GATE, GRE, GMAT, CAT, UPSC, SSC, and Bank PO.	2
11.	CS	Group Discussion – Simulation	2
12.	CS	Orientation to career paths, such as core engineering, IT engineering, public sector, banking, sales and marketing, and entrepreneurship.	2
Unit IV – Soft Skills			
13.	SS	Dressing and Grooming	2
14.	SS	Professional Etiquette	2
15.	SS	E-mail Writing	2

UIP650C: THEORY OF METAL CUTTING AND TOOL DESIGN [03 Credits] [L-T-P:3-0-0]

UNIT-I

Theory of metal cutting - Cutting tools, tool geometry, concept of speed, feed and depth of cut.

Mechanics of metal cutting - Mechanism of chip formation, orthogonal and oblique cutting, types of chips, determination of shear plane angle, forces and energy calculations (Merchant's Analysis), power and energy relationship, velocity relationship, shear strain, force measurement using dynamometers.

Geometry of cutting tools: Introduction to single and multi point cutting tools, tools nomenclature and effect of cutting parameters on tool geometry. **10 Hrs.**

UNIT-II

Tool wear and tool life - Wear mechanisms, types of tool wear, tool life criteria, tool life equation of Taylor, tool life testing, factors affecting tool life and problems.

Machinability - Machinability and criteria for machinability, surface finish and surface integrity.

Heat generation - Sources of heat generation, regions of heat generation, heat in the primary and secondary zone, heat at the tool/work interface, temperature distribution and determination of cutting temperature.

Economic of cutting tools - Economics of machining, criteria for minimum cost and maximum production and simple problems. **10 Hrs.**

UNIT-III

Design of single point cutting tools - Introduction to design of single point cutting tools and multipoint point cutting tools, design of shank and problems related to shank design, shank determination for single point tool and thickness design and problems.

Design of multi point cutting tools - Drill geometry, design of drill bit, milling cutter nomenclature and its design criteria. **12 Hrs.**

UNIT-IV

Jigs and Fixtures - Fundamentals of jigs and fixtures, significance and purpose of jigs and fixtures and their functions in manufacturing processes, principles of design of jigs and fixtures and uses, classification of jigs and fixtures, principles of location and clamping, types of clamping and work holding devices, typical examples of jigs and fixtures.

Design of jigs and fixtures - General guidelines and procedures for design of jigs and fixtures, design and selection of standard elements, analysis of number of clamping
forces required and their magnitude, concept of modular fixtures and tool presetting fixtures. **10 Hrs.**

Text Books:

1. Fundamentals of Metal Cutting and Machine Tools - B. L. Juneja, G. S. Sekhon and Nitin Seth, New Age International Publishers, second addition, 2008. ISBN: 81-224-1467-2.
2. Production Engineering - P C. Sharma, Khanna Publishers. ISBN: 81-219-0421-8.
3. Machine tools and Tool Design - P. C. Sharma, ISBN: 81-219-2362-X.
4. Manufacturing Technology - Metal Cutting and Machine Tools - PN Rao 3/e, TMH, New Delhi, 2013

Reference books:

1. Metal Cutting Principles - 1st Edition, Milton C. Shaw and I.B.H.
2. Tool Design - Donaldson, LeGain, Goold, New Central Book Agency.
3. Metal Cutting and Tool Design - Dr. B. J. Ranganath, Vikas Publishing House.
4. Introduction to Jigs and fixtures design, M. H. A. Kempster, ISBN: 81-856-1785-6.
5. Fundamentals of Metal Machining and Machine Tools - G. Boothroyd, McGraw Hill, 2000
6. Metal Cutting: Theory and Practice - Bhattacharya A New Central Book Agency, Kolkata, 2007

UIP632L: METAL CUTTING AND PRODUCT ASSEMBLY LABORATORY[01 Credits] [L-T-P:0-0-2]

PART-A

1. Acceptance tests on machines.
2. Determination of cutting forces and analysis of merchant's circle during turning operation using lathe tool dynamometer:
   (a) By keeping speed as a constant parameter and
   (b) By keeping feed a constant parameter.
3. Determination of cutting forces during milling operation using milling tool dynamometer.
4. Measurement of cutting tool temperature using thermo-couples.
5. Determination of chip-reduction co-efficient during metal cutting operation on machines.
6. Measurement of finish of machined surface.

PART-B

Disassembly and Assembly of the following machine parts:

1. Lathe tail stock
2. Swivel vice
3. Screw jack
4. Lathe check
5. Tool head of shaper

SCHEME OF EXAMINATION

One Question from Part A	:	20 Marks
One Question from Part B	:	20 Marks
Viva-Voice	:	10 Marks
Total	:	**50 Marks**

UIP522L: INDUSTRIAL ENGINEERING LABORATORY[01 Credit] [L-T-P:0-0-2]

PART – A

Method study

1. Recording Techniques: Preparing the following charts and diagrams - Outline process chart -
2. Multiple Activity Chart - Flow process chart - Flow diagram and - String diagram
3. Experiments on the Application of principle of motion economy Two handed process chart
4. Exercises on conducting method study

PART – B

Work measurement

1. Rating practice using walking simulator, pin board assembly, deck of cards, marble collection activity
2. Determining the standard time for simple operations using stopwatch time study
3. Exercises on estimating standard time using PMTS.
4. Experiments on office work measurement through work sampling
5. Measurement of parameters (heart beat rate) using walking simulator
6. Measurement of parameters (heart beat rate, calorie) using Ergometer
7. Effect of Noise, Light on human efficiency in work environments.

Reference Books:

1. Work Study - Ralph & Barnes 2. Introduction to Work Study - ILO

SCHEME OF EXAMINATION

One Question from Part A : 15 Marks
One Question from Part B : 25 Marks

Viva-Voice : 10 Marks
Total : 50 Marks

Basaveshwar Engineering College (A), Bagalkot
Department of Industrial & Production Engineering

VI Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	UIP601C	Operations Research	4	3	2	0	50	50	100
2	UIP630C	Finite Element Methods	4	3	2	0	50	50	100
	UIP640C	Digital Design and Manufacturing	3	3	0	0	50	50	100
4		Elective I	3	3	0	0	50	50	100
5		Open Elective 1	3	3	0	0	50	50	100
6	UHS003N	Career Planning and Professional Skills / BBC-III	1	1	0	0	50	50	100
7	UIP633P	Mini Project	3	0	0	6	50	50	100
	UIP632L	Digital Manufacturing Lab.	1	0	0	3	50	50	100
9	UIP622L	Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	23	17	6	10	450	450	900

OPERATIONS RESEARCH [04 Credits] [L-T-P:3-2-0]

UNIT –I

Introduction: Definition of OR, Application of OR to engineering and Managerial problems, Features of OR models, Limitation of OR. Models of OR.

Linear Programming: Definition, mathematical formulation, standard form, Solution space, solution – feasible, basic feasible, optimal, infeasible, multiple, optimal, Redundancy, Degeneracy. Graphical method Simplex method, variants of simplex algorithm – Artificial basis techniques, Duality, Solution of LPP using duality concept. **13 Hrs.**

UNIT –II

Transportation Problem: Formulation of transportation model, Basic feasible solution using different methods (North-West corner, Least Cost, Vogel's Approximation Method) Optimality Methods. Unbalanced transportation problem, Degeneracy in transportation problems, Variants in Transportation Problems.

Aignment Problem: Formulation of the Assignment problem, unbalanced assignment problem, traveling alesman problem **13 Hrs.**

UNIT – III

Queuing Theory: Queuing system and their characteristics, The M/M/I Queuing system, Steady state performance analysing of M/M/1 queuing model. M/M/K/ Model.

Project Management Using Network Analysis: Network construction, determination of critical path and duration, floats. PERT- Estimation of project duration and variance. **13 Hrs.**

UNIT – IV

Replacement Analysis: Introduction, reasons for replacement, Individual Replacement of machinery or equipment with/without value of money, Group Replacement Policies, Problems.

Game Theory: Formulations of games, Two person zero sum game, games with and without saddle point, graphical solutions (2x n, mx2 game), dominance property. **13 Hrs.**

Assignments:

Students have to submit their assignments using OR software packages.

Text Books:

1. *Operation Research and Introduction*-Taha H A, Prentice Hall of India, 6th edition, 1999.ISBN-81-203-1222-8
2. *Principles of Operations Research*- Philips, Ravindram and Soleberg– Theory and Practice, PHI, 2nd Edition, 2007.ISBN:978-81-265-1256-0

Reference Books:

1. *Introduction to Operation Research*- Hiller and Libermann, McGraw Hill 6th edn.,2009.ISBN-13:978-0-7-060092-8
2. *Operations Research*, S.D. Sharma, Kedarnath, Ramnath&Co, 6TH EDN.2009.ISBN-978-81-907011-0-5
3. *Operations Research* Theory and Application- J K Sharma,Pearson Education Pvt Ltd , 4thEdn, ISBN-10:0230-63885-6
4. *Operations Research*– KanthiSwarup& others, Sultan chand and Sons. 1992.14th Edn., 2009.ISBN978-81-8854-719-5

UIP620C: FINITE ELEMENT METHODS [04 Credits] [L-T-P:3-2-0]

UNIT – I

Introduction to FEM: Need for use of FEM – Advantages and Disadvantages of FEM. Matrix algebra – Terminologies relating to matrices, methods of solution of linear algebraic equations. Eigen values and Eigen vectors, Simple numeric Gaussian Quadrature – 1 pt. 2pt and 3pt formula. **07 Hrs.**

Basics of theory of elasticity: Definition of stress and strain, stress-strain relations; Strain-displacement relations in 2D and 3D Cartesian and polar coordinates. **05 Hrs.**

UNIT – II

Continuum methods: Variational methods Rayleigh-Ritz methods applied to simple problems on axially loaded members cantilever. Simply supported and fixed beam with point loads and UDL. Galerkin method as applied to simple elasticity problem. **06 Hrs.**

FEM - Basic **definitions:** Displacement method Nodal degrees of freedom different coordinate systems shape functions. Lagrangian polynomial; complete Formulation of bar-truss beam- triangular-quadrilateral Tetrahedral hexahedral elements. **07 Hrs.**

UNIT – III

Boundary conditions: SPC and MPC. Methods of handling boundary conditions eliminating method-penalty method. Simple numericals, isoparametric, sub parametric, super parametric elements Convergence criteria – requirements of convergence of a displacement model. **07 Hrs.**

Higher order elements: bar – triangular-quadrilateral elements. Tetrahedral and hexahedral elements (non-Formulation) – Pascal triangle – Pascal pyramid. **06 Hrs.**

UNIT – IV

Higher Order Elements: (cont) Introduction to axis symmetric problems-formulation of axis symmetric triangular element. **06 Hrs.**

Dynamic Analysis: Formulating-element mass matrix for 1D and 2D element, computation of Eigen value and vector for simple one Dimensional analysis. **07 Hrs.**

Text Books:

1. *Fundamentals of Finite Element Method*- Hutton – McGraw Hill, 2004.
2. *Introduction to Finite Elements in Engineering*– Chandraupatla and Belegundu – Pearson edn, 2002.

Reference Books:

1. *Finite Element Method*– J.N.Reddy, Tat McGraw Hill edition 2002.
2. *A First course in Finite Element methods*- Daryl.L.Logon, Thomson Learning 3rd edi. 2001.
3. *Concepts & applications of FEA*- Robert Cook etal – Jonhwilley& sons 2002.
4. *Finite Element Analysis*- Chandrupatla, University press, 2002.
5. *Finite Element Procedures*- Bathe K.J. Prentice-Hall International Inc. 2006

DIGITAL DESIGN AND MANUFACTURING [03 Credits] [L-T-P:3-0-0]

UNIT-I

Digital Manufacturing: Development Course of Manufacturing and Manufacturing Science, Definition of Digital Manufacturing, Features and Development of Digital Manufacturing,

Architecture of Digital Manufacturing System:

Basic Architecture Model of Digital Manufacturing System, The Definition of Digital Manufacturing System, Organization Model of Digital Manufacturing System, Function Model of Digital Manufacturing System, Information Model of Digital Manufacturing System, Operation and Control Model of Digital Manufacturing System.

CAD Modeling: Design process and role of CAD, Types and applications of design models, Three dimensional modeling schemes, Wire frames and surface representation schemes, Solid modeling - Parametric modeling, Assembly modeling. **13 Hrs.**

UNIT-II

CAD/CAM: Computers in industrial manufacturing, Design process, Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Advantages and disadvantages CAD and CAM

Computer control in NC: Introduction and basic components of an NC system, NC procedure, NC co- ordinate systems, NC motion control systems, applications of Numerical control and Economics of numerical control Introduction, problems with conventional NC, NC controller technology, CNC, DNC, combined CNC and DNC systems.

CNC Programming: Part programming fundamentals, Manual part programming methods, Preparatory functions (G), Miscellaneous functions (M), Program number, Tool length compensation, Canned cycle, Cutter radius. compensation, milling and Drilling programming problems **13 Hrs.**

Unit-III

Reverse Engineering: Introduction to Reverse Engineering, Basic Theory of Reverse Engineering, Application of Reverse Engineering in Digital Manufacturing, Applications of 3D Scanner.

Digital factory and virtual manufacturing: Introduction, Scope, Methods and Tools Used in Virtual Manufacturing, Benefits. Virtual factory simulation.

Product life cycle management:Introduction, PLM softwares, Outsourcing chain, PLM and Concurrent Engineering, other advantages of PLM, components of PLM software. **13 Hrs.**

UNIT-IV

Internet of Things: Introduction, Applications, IoT data management requirements, Architecture of IoT, Technological challenges, Issues in implementing IoT.

Additive Manufacturing: Introduction to Additive manufacturing (AM), The Generic AM Process, Why use the term Additive manufacturing? The Benefits of AM, Distinction between AM and CNC machining, Development of AM Technology, Classification of AM Processes **13 Hrs.**

Text Books:

1. Ian Gibson, David W. Rosen, and Brent Stucker, *Additive Manufacturing Technologies:Rapid Prototyping to Direct Digital Manufacturing*, Springer New York, 2010, ISBN: 978-1-4419-1119-3 e-ISBN: 978-1-4419-1120-9, DOI 10.1007/978-1-4419-1120-9
2. Zude Zhou, Shane (Shengquan) Xie, Dejun Chen, *Fundamentals of Digital Manufacturing* Science, Springer, 1012, ISBN 978-0-85729-563-7 e-ISBN 978-0-85729-564-4, DOI 10.1007/978-0-85729-564-4
3. P. Radhakrishnan, S. Subramanian, V. Raju, *CAD/CAM/CIM*, 3rd Ed. 2008,New Age International (P) Ltd., ISBN (13) : 978-81-224-2711-0
4. P.N. Rao, *CAD / CAM Principles and Applications*, TMH, New Delhi, 3rd Edition, 2002.

Reference Books:

1. Ibrahim Zeid, *CAD/CAM theory and practice*. McGraw-Hill Higher Education, 1991.
2. Mikell P-groover, Emory W. Zimrners, *CAD/CAM*, Jr Pearson Education inc, 2003.
3. N. Hopkinson, R.J.M. Hague and P.M. Dickens, Editors, *Rapid Manufacturing: An Industrial Revolution for the Digital Age*, 2006, John Wiley & Sons, Ltd, ISBN-13 978-0-470-01613-8

UHS003N: CAREER PLANNING AND PROFESSIONAL SKILLS [1 Credits] [L-T-P:1-0-0]

OVERVIEW		
Semester	6	
Course Objectives	The course objectives for the first semester are as follows: 1. Cover fundamental topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills	
Course Outcome	After the course, the students will be able to do the following: 1. Answer multiple choice questions from fundamental topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Implement the tools and techniques learned in the soft skill session to build confidence and self-esteem	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	4	2
Reasoning Aptitude (RA)	4	2
Verbal Aptitude (VA)	4	2
Soft Skills (SS)	12	6
Career Skills (CS)	6	3
Total	30	15

DETAILS			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quant and Reasoning Aptitude Training			
1.	QA	Number Properties	2
2.	QA	Percentages	2
3.	RA	Linear and Circular Arrangement	2
4.	RA	Order and Rank	2
UNIT II – VerbalAptitude Training			
5.	VA	Parts of Speech	2
6.	VA	Reading Comprehension	2
UNIT III – Career Skills Training			
7.	CS	Introduction to Interview Etiquette	2
8.	CS	Introduction to GD Etiquette	2
9.	CS	Introduction to Resume Writing	2
UNIT IV – Soft Skills Training			
10.	SS	Six-Step Planning Process	2
11.	SS	Problem Solving through Design Thinking	2
12.	SS	Conflict Resolution through Assertiveness and Cooperation Matrix	2
13.	SS	Confidence through Body Language	2
14.	SS	Preparing and Delivering a Presentation	2
15.	SS	Self-Motivation	2

References:

- **ETHNUS**

UIP633P: MINI PROJECT [3 Credits] [L-T-P:0-06]

Number of students per batch: Maximum 2
Evaluation

CIE : 50 Marks
SEE : 50 Marks

Continuous evaluation of project by guide: 30 Marks

CIE marks are also allotted based on two presentations
CIEI: Presentation 1 along with 1st CIE and
(Presentation 1) should include: [10 marks by Department Committee (DC)]

- **Finalization of topic**
- **About the project**
- **Objectives of project**

CIE II:(Presentation 2) along with laboratory CIE:(10 marks by DC)

- Literature review (If any)
- Methodology of Project
- Result and Discussion
- Future Scope

Evaluation of CIE I and II should done by department committee consisting of

- HOD or his Nominee
- Guide
- Project Coordinator

Mode of Evaluation	Continuous Evaluation	Presentation1	Presentation2
Marks	30	10	10
Allotted by	Guide	DC	DC

SEE:
Students have to submit project diary.
The evaluation of the SEE will be based on write up (10 marks) + Demo (15 marks) + Presentation (15 marks) and Viva – Voce (10 marks)

Evaluation Committee

- HOD or his nominee
- External Examiner
- Project Coordinator

UIP531L: DIGITAL MANUFACTURING LABORATORY [01 Credit] [L-T-P:0-0-2]

Part - A

1. Writing and execution of manual programmes using ISO codes for machining of simple part in

   a. Turning (2 exercises)

   b. Taper turning (2 exercises)

2. Simple part programmes and execution using tool radius compensation and canned cycles

(4 Exercises)

Part - B

1. Writing and execution of simple milling part programmes, with radius compensation and
   a. Curved cycles (4 exercises)
2. Manual programming of the robot for pick and place operations (2 exercises)

Part - C

1. Design, modelling and printing (additive manufacturing) of 3D objects and parts (DEMO)
2. Study on 3D Scanner
3. Simulation of Virtual real factory

References:

1 CAD / CAM Principles and Applications - P.N. Rao, TMH, New Delhi, 2002.
2 Robotics – AppuKuttan K. K., I K International Publishing House Private Limited
3 N. Hopkinson, R.J.M. Hague and P.M. Dickens, Editors, Rapid Manufacturing: An Industrial Revolution for the Digital Age, 2006, John Wiley & Sons, Ltd, ISBN-13 978-0-470-01613-8
4 Zude Zhou, Shane (Shengquan) Xie, Dejun Chen, Fundamentals of Digital Manufacturing Science, Springer, 1012, ISBN 978-0-85729-563-7 e-ISBN 978-0-85729-564-4, DOI 10.1007/978-0-85729-564-4

SCHEME OF EXAMINATION

One Question from Part A	: 25 Marks
One Question from Part B	: 15 Marks
Viva-Voice	: 10 Marks
Total	**: 50 Marks**

UIP622L: FINITE ELEMENT ANALYSIS LAB. [1 Credits] [L-T-P:0-0-2]

PART - A

Study of a FEA package and modelling stress analysis of

1. Bars of constant cross section area, tapered cross section area and stepped bars.
2. Trusses – (Minimum 2 exercises).
3. Beams – Simply supported, cantilever, beams with UDL, beams with varying load etc.

PART - B

1. Stress analysis of a rectangular plate with a circular hole.
2. Thermal Analysis – 2D problem with conduction and convection boundary conditions.
3. Fluid flow Analysis – Potential distribution in the 2 – D bodies.
4. Dynamic Analysis.
    1) Fixed – fixed beam for natural frequency determination.
    2) Bar subjected to forcing function.
    3) Fixed – fixed beam subjected to forcing function.

One Question from Part A	:	20 Marks(05 Write up +15)
One Question from Part B	:	20 Marks(05 Write up +15)
Viva-Voice	:	10 Marks
Total	**:**	**50 Marks**

Annexure -IV

Scheme of Teaching for the Students Admitted to First Year in 2020-21

Basaveshwar Engineering College (A), Bagalkot

Department of Industrial Production Engineering

Credit Distribution and Scheme for the students admitted to first year for the academic year 2020-21

Credit distribution for the students admitted to first year in **2020-21**

Sem	HSS	Basic Science	Engineering Science	Professional Core	Department Elective	Open Elective	MOOCS/ Swayam	Mini Project+ / Project+ / Seminar+ / Internship	Total
I		9.5	10.5						20
II		9.5	10.5						20
III	2	3		16					21
IV	5	3		15					23
V	1			17	0	3			21
VI	1			13	3	3		2MP	22
VII				7	8	3		2I+3P-I	23
VIII				0	9			12P-II+1S	22
Online Courses MOOCS							3*		03
Total	9	25	21	68	20	9	3*	20	175

*Mandatory credits to be earned through MOOCS from any semester/s (preferably 4th Sem onwards)

III Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	BS	Engineering Mathematics – III	3	2	2	0	50	50	100
2	Core	Material Science & Metallurgy	3	3	0	0	50	50	100
3	Core	Engineering Thermodynamics and Fluid Mechanics	4	3	2	0	50	50	100
4	Core	Strength of Materials	4	3	2	0	50	50	100
5	Core	Machine Tools Technology	3	3	0	0	50	50	100
6	HSS	Creativity and Innovation	2	2	0	0	50	50	50
7	Core	Metallography and Material Testing Laboratory	1	0	0	3	50	50	100
8	Core	Machine Shop Practice	1	0	0	3	50	50	100
9	UMA330M	Bridge Course Mathematics-I	0	3	0	0	50	50	100
10	UBT133M	Environmental Studies	0	2	0	0	50	50	100
11		Kannada							
		Total	21	15	6	6	500	500	1000

IV Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	BS	Mathematics –IV	3	2	2	0	50	50	100
2	Core	Kinematics of Machines	4	3	2	0	50	50	100
3	Core	Foundry and welding Technology	3	3	0	0	50	50	100
4	Core	Metrology & Measurement	3	3	0	0	50	50	100
5	HSS	Management and Entrepreneurship	4	4	0	0	50	50	100
6	Core	Computer Aided Machine Drawing	3	1	0	4	50	50	100
7	HSS	Fundamentals of Quantitative Aptitude and Soft Skills /BBC-I	1	1	0	0	50	50	100
8	Core	Foundry and Welding Practice Lab	1	0	0	3	50	50	100
9	Core	Metrology & Measurements Laboratory	1	0	0	3	50	50	100
10	UMA430M	Bridge Course Mathematics-II	0	3	0	0	50	50	100
11	UHS226M	Constitution of India	0	2	0	0	50	50	100
		Total	23	17	4	10	550	550	1100

V SEMESTER

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Design of Machine Elements	4	3	2	0	50	50	100
2	Core	Industrial Engineering	3	4	0	0	50	50	100
3	Core	Quality Assurance & Reliability	3	3	2	0	50	50	100
4	Open Elective	Open elective -1	3	4	0	0	50	50	100
5	HSS	Advanced FQAS / BBC-II	1	1	0	0	50	50	100
6	Core	Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
8	Core	Metal Cutting and Product Assembly Lab	1	0	0	3	50	50	100
9	Core	Programming Laboratory	2	1	0	2	50	50	100
10	Core	Industrial Engineering Lab	1	0	0	2	50	50	100
11		Advanced Mathematics-II							
		Total	21	19	4	7	450	450	900

VI Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Operations Research	4	3	2	0	50	50	100
2	Core	Finite Element Methods	4	3	2	0	50	50	100
	Core	Digital Design and Manufacturing	3	3	0	0	50	50	100
4	Dept Elective	Elective I	3	3	0	0	50	50	100
5	Open Elective	Open Elective -II	3	3	0	0	50	50	100
6	HSS	Career Planning and Professional Skills / BBC-III	1	1	0	0	50	50	100
7	Mini Project	Mini Project	2	0	0	4	50	50	100
	Core	Digital Manufacturing Lab.	1	0	0	2	50	50	100
9	Core	Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	22	16	4	8	450	450	900

VII Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Core	Operations Management	3	3	0	0	50	50	100
2	Core	Theory of Metal Forming	4	3	2	0	50	50	100
3	Dept Elective	Elective-II	3	3	0	0	50	50	100
4	Dept Elective	Elective III	3	3	0	0	50	50	100
	Dept Elective	Elective-IV	2	2	0	0	50	50	100
5	Open Elective	Open Elective-III	3	3	0	0	50	50	100
6	I	Internship	2	0	0	4	50	50	100
8	Project	Project- Phase I	3	0	0	6	50	50	100
		Total	23	17	2	10	400	400	800

VIII Semester

Sl.	Subject Group	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1	Dept Elective	Elective-V	3	3	0	0	50	50	100
2	Dept Elective	Elective-VI	3	3	0	0	50	50	100
3	Dept Elective	Elective-VII	3	3	0	0	50	50	100
4	S	Seminar	1	0	0	2	50	50	100
5	P	Project- Phase II	12	0	0	24	50	50	100
		Total	22	9	0	26	250	250	500

Annexure -V

MODEL COURSE PLAN

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

MODEL COURSE PLAN

Title of Course	**:**		**Course Code**	**:**	
Credits	**:**		**Contact Hours/ Week**	**:**	
Total Hours	**:**		**Tutorial Hours**	**:**	
CIE Marks	**:**		**SEE Marks**	**:**	
Semester	**:**		**Year**	**:**	

Prerequisites:

Course Objectives:

	The Course objectives are:
1	
2	
3	
4	
5	
6	

Course Outcomes:

	At the end of the course the student should be able to:
1	
2	
3	
4	
5	
6	

Course Articulation Matrix: Mapping of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO 7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO1	PSO2	PSO3
No	Programme Outcomes / Course Outcomes															
The students will be able to:																
1																
2																
3																
4																
5																
6																

Competencies Addressed in the course and Corresponding Performance Indicators

Programme Outcome: Any of 1 to 12 PO's:

Competency	Indicators

PO1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Unit Learning Outcomes (ULO):

Unit Learning Outcome (ULO)	CO	BLL	PI addressed

Course Content:

Hours Required	Topic to be covered	Mode of Delivery
01		Chalk and talk in classroom/Lecture combined with discussions/Lecture with a quiz/ Tutorial/ Assignments/ Demonstration/ Invited lectures/ Group Assignment/ Project / Seminars, Presentations/Group Discussion/Asynchronous Discussion
01		
01		
01		
01		
01		
01		

Review Questions:

Review Questions	ULO	BLL	PI addressed

Evaluation Scheme:

Assessment	Marks	Weightage
CIE-I	20	20
CIE-II	20	20
Assignments/ Quizzes/ Case Study/ Course Project/ Term Paper/Field Work	10	10
SEE	100	50
Total	150	100

Details of Assignment:

Assignment	Marks (10)	CO	PI	CA	PO
Assignment 1					
Assignment 2					
..					
..					
Assignment *n*					

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

Proceedings of the meeting of the Board of Studies (BOS) held at 10.30 am on Monday, 24th June 2019 at Old Board room

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
Proceedings of the meeting of the Board of Studies (BOS)
held at 10.30 am on Monday, 24th June 2019
at Old Board room

	Sub:1	The chairman of Board of Studies Dr. V.S Puranik HOD Department of Industrial production Engineering, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies.
	Sub: 2	Before taking up the regular agenda, the chairman briefly reported about the academic developmental activities that took place in the department since last meeting of the BoS which was held on 30th June 2019. **The chairman also briefed the following** i. NBA accreditation extended from 2019 to 2022 ii. The following are the details of PhD awarded

Candidate's Name	Research Topic	Guide
Vijaykumar Hiremath	Investigation Machining Parameters under cryogenic conductors.	Dr ST Dundur
Maheshwar C	ERP implementation medium and small scale industries in Karnataka.	Dr, C.M Javalagi
Dilip Gurunath Sondur	Studies of the Influence of Fe on Mechanical and Tribological Properties of As cast, Cast aged and Forge aged Al-25Mg2Si2Cu4Fe Alloy.	Dr D.G Mallapur
Mohammad Saleem D. Harlapur	Studies of the Influence of Ni on Mechanical and Tribological Properties of as cast, Cast aged and Forge aged Al-25Mg2Si2Cu4Ni Alloy.	Dr D.G Mallapur

iii SDP on Finite Element analysis coordinated by Dr ST DUNDUR

	Sub: 3	**Confirmation of the previous minutes of the meeting of the Board of Studies held on 30.06.2018** 30.06.2018
	Resolution:	The minutes of the previous BoS meeting held on 30.06.2018 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in **Annexure-1**
	Sub: 4	**Approval of minutes of Local BOS meeting held on 24.08.2018**
	Resolution:	The minutes of the previous Local BoS meeting held on 24.08.2018 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in **Annexure-2**

	Sub: 5	**Chairman BoS, presented a list for Post facto approval for the following subjects for the student studying from III sem to VIII sem of 200 credits and also approval for the students of 175 credits admitted to first year in 2018-19 from third to eighth semester** **i. Fundamentals of Quantitative Aptitude and Soft Skills (4th Semester)** **ii. Advanced Quantitative Aptitude and Soft Skills (5th Semester)** **iii. Career Planning and Professional Skills (6th Semester)** **iv. Naval Architecture and Marine Engineering (Teaching from Industry persons)** **v. Piping Engineering (Teaching from Industry persons)** vi. **NPTL/MOOCS online certificate courses**
	Resolution:	Fundamentals of Quantitative Aptitude and Soft Skills Advanced Quantitative Aptitude and Soft Skills Career Planning and Professional Skills Naval Architecture and Marine Engineering (Teaching from Industry persons) Piping Engineering and MOOCS and NPTL were discussed by the members and committee made no objection for students taking up the courses. Board Accepted the proposal and resolved for students continue to take up the courses
	Sub: 6	**The chairman presented modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester**
	Resolution:	After discussion it was resolved to approve modified scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester as in **Annexure 3**
	Sub: 7	**The chairman presented to discuss and approve on the syllabus of teaching for the students admitted to first year in 2018-19 from third to eighth semester with CO PO mapping**
	Resolution:	After discussion it was resolved to approve the syllabus of teaching for the students admitted to first year in 2018-19 (Third and Fourth sem syllabus)

		as in **Annexure 4** and from fifth to eighth semester will take up in next BOS with suitable modification in syllabus as discussed in the meeting
	Sub:8	**Permission given to the students to take the subjects in summer to those who have not completed 200 credits based on the student's request letter**
	Resolution:	After discussion it was resolved to approve for the students to take the subjects in summer to those who have not completed 200 credits.
	Sub: 13	**D.D Chillal**, thanked all the members for their continued support, cooperation and valuable suggestions

BOS Chairman

Annexure

Annexure-1: Previous minutes of the meeting of the Board of Studies held on 30.06.2018

Annexure-2:Local BOS meeting held on 24.08.2018

Annexure-3: Scheme of teaching for the students admitted to first year 2018-19 from third to eighth semester

Annexure-1: Syllabus of teaching for the students admitted to first year in 2018-19 Third and Fourth sem syllabus

BASAVESHWAR ENGINEERING COLLEGE(A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

The Board of Studies (BoS) meeting of Industrial and Production Engineering department was held on 30.06.2018 at 10.00 am in the old Board Room of Basaveshwar Engineering College (A), Bagalkot.

The minutes of the meeting are as below:

- Dr. C. M. Javalagi Chairman BoS initiated the BOS meeting by welcoming the BOS members
- All BoS members introduced themselves as it was the first meeting of new BoS
- Dr. C. M. Javalagi presented the details of the meeting as per the agenda

Subject	Proposal	Resolution
Subject 1: Approval of the minutes of previous BoS meeting held on 17.06.2017	Chairman BoS read the resolution of previous BoS meeting held on 17.06.2017	The minutes of the previous BoS meeting held on 17.06.2017 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in **Enclosure-1**
Subject 2: Modification in the scheme of teaching for the student admitted to first year in 2017-18	Chairman BoS, proposed for a changing scheme of teaching for the student admitted to first year in 2017-18.	The Board after discussion and reasons for changing in the scheme of teaching and evaluation (which was accepted in previous BoS) accepted the proposal with the following scheme of teaching

Sem	Credits
1	24.0
2	26.0
3	25.5
4	26.0
5	25.0
6	24.5
7	25.0
8	24.0
Total	200.00

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>Subject 3:
Approval for the award of degree with 200 credits for the students admitted to first year in 2017-18</td><td>Chairman BoS, proposed for the award of degree with 200 credits for the students admitted to first year in 2017-18 with UHS151C- Constitution of India & Professional Ethics: 2 Credits and UBT152C – Environmental Studies: 2 Credits as Credits Courses</td><td>Board Accepted the proposal and resolved to award degree as per proposal</td></tr>
<tr><td>Subject 4:
Approval for the award of degree with 150 Credits for the students admitted through lateral entry in 2018-19(3rd Semester)</td><td>Chairman BoS proposed for the award of degree with 150 Credits for the students admitted through lateral entry in 2018-19 (3rd Semester), with Constitution of India and Professional Ethics & Environmental Studies as Mandatory courses.</td><td>Board accepted the proposal and resolved to award degree with the conditions in the proposal</td></tr>
<tr><td>Subject 5:
Discussion on the scheme of teaching and examination for the students admitted to first year in 2018-19 (175 Credits)</td><td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted to first year 2018-19</td><td>Board after detailed discussion and necessary modifications accepted the scheme of teaching and examination as below
<table>
<tr><th>Sem</th><th>Credits</th></tr>
<tr><td>1</td><td>20</td></tr>
<tr><td>2</td><td>20</td></tr>
<tr><td>3</td><td>23</td></tr>
<tr><td>4</td><td>22</td></tr>
<tr><td>5</td><td>22</td></tr>
<tr><td>6</td><td>23</td></tr>
<tr><td>7</td><td>23</td></tr>
<tr><td>8</td><td>22</td></tr>
<tr><td>Total</td><td>175</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>Subject 6:
Discussion on the scheme of teaching and examination for the students admitted to through lateral entry to third semester from 2019-20 (135 Credits)</td><td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted through lateral entry to third semester in the year 2019-20 and onwards</td><td>Board accepted the scheme of teaching and examination as below:
<table><tr><th>Sem</th><th>Credits</th></tr><tr><td>3</td><td>23</td></tr><tr><td>4</td><td>22</td></tr><tr><td>5</td><td>22</td></tr><tr><td>6</td><td>23</td></tr><tr><td>7</td><td>23</td></tr><tr><td>8</td><td>22</td></tr><tr><td>Total</td><td>135</td></tr></table></td></tr>
<tr><td>Subject 7:
Discussion on the syllabus of teaching for the students admitted to first year in 2018-19 (3rd and 4th semester Syllabus)</td><td>Chairman BoS, proposed the detailed syllabus for 3rd and 4th semester students (Admitted to first year in 2018-19)
i. Dr. B. M. Rajprakash, Member BoS proposed to include Rubrics for tutorials in the 3rd and 4th semester subjects

ii. Dr. Vivek Khanzode, Member BoS proposed to include Pin-board experiment in Basic Engineering Laboratory

iii. Shri Narendra Shanbhag proposed to include safety Engg. as a part to syllabus

iv. Dr. Parag Bhargav suggested changes in the instruction methodology of Material Science and Metallurgy and to create material library, to include disassembly project and presentations in tutorials

v. Dr. Parag Bhargav suggested to include Tetrahedron and Powder Metallurgy in Material Science and Metallurgy

vi. Dr. Parag Bhargav proposed to change the title of the subject “Management and Entrepreneurship” to “Entrepreneurship and Management” as</td><td>The board accepted the proposal and faculty handling the subject are to design the rubrics for tutorials and details of tutorials to be maintained, which will help in accreditation process.

The board accepted the proposal to include Pin-board experiment in Basic Engineering Laboratory

The board had a long discussion on the topic and accepted to include safety standards as a subject in higher semester.

Board accepted the proposal

Board accepted the proposal to include the same.

Board decided to change the title to “Entrepreneurship and Management”. The syllabus will have first 2 units as Entrepreneurship and next 2 units as Management.</td></tr>
</table>

Subject	Proposal	Resolution
	Entrepreneurship is first and then Managing the enterprise	Board accepted the same and case studies and story telling to be included in tutorials of Entrepreneurship and Management subject.
	vii. Dr. Vivek Khanzode advised to use case-studies, story- telling, books to be read in teaching methodology of Entrepreneurship and Management	Board accepted the proposal to revise the syllabus
	viii. Shri. Narendra Shanbhag and Dr. B.M. Rajprakash suggested to revise the Machine Tools Technology subject in line with modern machining processes and non-conventional machining processes	Board accepted the same
	ix. Shri.Umapathi Radder suggested to revise Foundry and Welding Technology subject and to include Joining processes, Brazing, soldering, joining of plastics in the syllabus	
	x. Dr. S. T. Dundur suggested to include Digital Metrology in Metrology and Measurement subject	The proposal was accepted to include Digital Methodology as a part of subject
	xi. Dr. C. M. Javalagi proposed to not to include basics of grammar in the proposed syllabus of Professional Communication syllabus	Looking into contents of English (subject taught in first year) syllabus the unit Basics of grammar will be modified
	xii. Dr. S. T. Dundur and Dr. B. M. Rajprakash suggested to include introduction to Geometrical Dimensioning and Tolerances in Computer Aided Machine Drawing Laboratory	Board accepted the proposal
Subject 8: Inclusion of e-resource and NPTEL course in syllabus	Dr. B. M. Rajprakash informed to include e-resources and NPTEL course for every subject to be mentioned in the syllabus	It is decided to include e-resources and NPTEL courses in each subject syllabus.
Subject 9: CO–PO mapping for subject	Each subject CO-PO mapping was displayed to BOS members	The mapping of CO-PO for each subject was approved by Board

Subject	Proposal	Resolution
Subject 10: Guest Lecture from industry for course	The board proposed to include guest lecture from industry in teaching	Based on need, and availability of resources it is planned to utilize Industry Guest Lectures
Subject 11: Any other matter with the permission of Chair: i) Post-facto approval of Programme Educational Objectives (PEO's), Programme Specific Outcomes (PSO's) and Programme Outcomes (PO's)	For reaccreditation of department through NBA, it was decided to reframe Programme Educational Objectives (PEO's), Programme Specific Outcomes (PSO's) and Programme Outcomes (PO's). The modified PEO'S, PSO's and PO's were presented to the Board.	Board accepted and approved the PEO'S, PSO's and PO's

The meeting was concluded with the vote of thanks to the chair by Prof. D.D. Chillal

Enclosure-1

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

The Board of Studies (BoS) meeting of Industrial and Production Engineering department was held on 17-06-2017 at 11.00 am in the Board Room of Basaveshwar Engineering College (A), Bagalkot.

The minutes of the meeting are as below:

Dr. C. M. Javalagi Chairman BOS initiated the BOS meeting by welcoming the BOS members

Dr. C. M. Javalagi presented the scheme and syllabus for the students admitted to first year on 2015-16 and 2016-17

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>I. Discussion on subjects and syllabus (V, VI, VII and VIII semester) for the students admitted to first year in 2015-16 and 2016-17.</td><td>The Proposed Scheme of teaching was presented. The scheme is as below
<table>
<tr><th>Semester</th><th>Credits</th></tr>
<tr><td>First</td><td>25.00</td></tr>
<tr><td>Second</td><td>25.00</td></tr>
<tr><td>Third</td><td>25.50</td></tr>
<tr><td>Fourth</td><td>26.00</td></tr>
<tr><td>Fifth</td><td>25.00</td></tr>
<tr><td>Sixth</td><td>24.50</td></tr>
<tr><td>Seventh</td><td>25.00</td></tr>
<tr><td>Eighth</td><td>24.00</td></tr>
<tr><td>Total</td><td>200.00</td></tr>
</table></td><td>The board accepted the scheme of teaching with modifications in sixth and eighth semester</td></tr>
<tr><td>i. The following modifications were suggested by BoS members</td><td>a. Mr .Gitan Ginde suggested including polymers and composites in Material science subject.</td><td>The board accepted the suggestion of Mr. Gitan Ginde and syllabus will be included in Material Science & Metallurgy subject for next academic year (2018-19) or the students admitted to first year in 2017-18.</td></tr>
<tr><td></td><td>b. Dr. N. S. Narahari recommended to include Mechanical Engineering Design by E.S. Shigley in reference books</td><td>The board accepted the proposal by Dr. N. S. Narahari.</td></tr>
<tr><td></td><td>c. Dr. N. S. Narahari suggested the include Maynard’s standards and value stream mapping to be included Industrial Engineering subject.</td><td>The board accepted to include the same</td></tr>
</table>

Subject	Proposal	Resolution
	d. Mr. Gitan Ginde and Dr. N. S. Narahari proposed to change the title of the subject CAD/CAM to "Digital Design and Manufacturing" and to include the following topics I. Introduction to Product life cycle management II. Additive manufacturing III. CAD tool programming IV. Parametric modeling	The board accepted the proposal and the subject to be titled as **"Digital Design and Manufacturing".** The necessary and relevant topics will be included in the syllabus.
	e. Dr. N. S. Narahari asked to include Generally Accepted Accounting Principles (GAAP) in Engineering Economics and Financial Accounting subject	The board accepted the proposal by Dr. N. S. Narahari. And topic will be included in Engineering Economics and Financial Accounting subject.
	f.The board felt that the CAM laboratory to be renamed as Digital Manufacturing Laboratory	The board accepted the proposal to change the name of CAM Laboratory to Digital Manufacturing Laboratory and include exercises of additive manufacturing
	g. Dr. N. S. Narahari recommended to include value stream mapping exercises in Industrial Engineering Laboratory	The board accepted to include one or two exercises of value stream mapping
	h. Dr. N. S. Narahari suggested to modify UIP614L : Metal Cutting Laboratory to include different assemblies apart from mechanical assemblies as a part to exercises	The board accepted to change name of the laboratory to Metal Cutting and Product Assembly Laboratory and to include different assemblies as exercises
	i. Mr. Gitan Ginde suggested to include sheet metal in Theory of Metal Forming (UIP720C)	The board accepted to include sheet metal forming in Theory of Metal Forming (UIP720C)
	j. The board suggested to include manufacturing / process of plastic and polymer components as an elective	The board accepted the proposal and asked to prepare the syllabus for the same
	k. Operations Management (UIP 802C) subject to be shifted to seventh semester and one of the subject from seventh to be shifted to VIII semester	The board agreed to shift Operations Management subject to seventh semester and Theory of Metal Forming(UIP 702C) to be shifted to eighth Semester
	n. Dr. N.S.Narahari advocated to include an introductory charter about Micro Electro Mechanical Systems (MEMS) in Mechatronics subject	The board accepted the suggestion and it will be included in the Mechatronics subject
II. **Mini Project and Project Phase I & II Evaluation scheme and details**	• Mini Project with 4 credits and the Major Project Phase-I with 6 credits and Major Project Phase –II with 10 credits are introduced and modified. • The evaluation scheme was presented and discussed	• The board accepted the introduction of Mini Project and modification to Major Project Phase-I with 6 credits and Major Project Phase –II with 10 credits.

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td></td><td></td><td>• The evaluation schemes for the above three projects was discussed and accepted.</td></tr>
<tr><td>III. Discussion on New system with reduction of number of subjects and more laboratory/projects etc. to be considered</td><td>Dr. C.M.Javalagi suggested to include more number of innovative labs and also self-study components amounting to 24 credits so that the learner centric approach to be brought in.</td><td>The board discussed in length the pros and cons of introducing innovative labs and also self-study components in some of the subjects. The decision was postponed to next meeting as there is a necessity of more research and study to be done to take a decision on the same.</td></tr>
<tr><td>IV. Any other matter with the permission of chair

i. Discussion on introduction on stream specific Mathematics-III and Mathematics-IV subjects.

ii. Scheme of teaching for the students to be admitted to first year in 2017-18.</td><td>The syllabus received from Mathematics department was presented to the board and discussion was carried out.

The scheme of teaching for the students to be admitted to first year in 2017-18 was presented by Chairman, BoS and the details are:
<table>
<tr><th>Semester</th><th>Total</th></tr>
<tr><td>First</td><td>24</td></tr>
<tr><td>Second</td><td>26</td></tr>
<tr><td>Third</td><td>24</td></tr>
<tr><td>Fourth</td><td>25</td></tr>
<tr><td>Fifth</td><td>24</td></tr>
<tr><td>Sixth</td><td>26</td></tr>
<tr><td>Seventh</td><td>26</td></tr>
<tr><td>Eighth</td><td>25</td></tr>
<tr><td>Total</td><td>200</td></tr>
</table></td><td>The board felt that for Industrial and Production Engineering students the following topics on Fourier Series (III Sem.) and Special Functions (IV Sem.) are not much of importance. Instead of them Bivariate statistical analysis and Introduction to Multivariate Analysis to be included. The board authorized the Chairman, BoS to communicate the same to Mathematics Board for consideration.

The Board accepted the same with the suggestion, that and the necessary modifications can be made whenever necessary arises</td></tr>
<tr><td colspan="3">The meeting ended with the vote of thanks by Prof. H.R.Patil.</td></tr>
</table>

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT
DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

The local Board of Studies (BoS) meeting of Industrial & Production Engineering Department was held on 24/08/2018 at 4.00 pm in the chambers of HOD to discuss the Credit adjustment for the following students. The minutes of the meeting are as below:

Sl. No.	USN.	Name of the student	Batch
1	2BA13IP013	Naveen Kallur	2013-14
2	2BA15IP404	Shridhar S. Angadi	2014-15 (lateral entry 2015-16)

Chairman, BoS proposed the need for in credit adjustment. The board after discussion and reasons for credit adjustment, (based on their scheme of teaching) accepted with the following details.

USN: 2BA15IP404 Name: **Shridhar S. Angadi** Batch: **2014-15 (Lateral entry 2015-16)**

VII SEM

Subject code	Subject	Credits
UIP730C	Operations Management	04
UIP731C	Enterprise resource planning	03
UIP732C	Mechatronics	03
UIP713P	Project Phase-I	08
UIP734L	Industrial internship	1.5
	Elective	03
	Total	**22.5**

VIII SEM

Subject code	Subject	Credits
UIP830C	Theory of metal forming	04
UIP835L	Software applications lab.	1.5
UIP804P	Project Phase-II	12
	Elective	03
	Elective	03
	Elective	03
	Total	**26.5**

USN: 2BA13IP013 **Name: Naveen Kallur** **Batch: 2013-14**

VII SEM

Subject code	Subject	Credits
UIP730C	Operations Management	04
UIP731C	Enterprise resource planning	03
UIP732C	Mechatronics	03
UIP713P	Project Phase-I	08
UIP734L	Industrial internship	1.5
	Elective	03
UIP721H	Entrepreneurship	02
	Total	**24.5**

VIII SEM

Subject code	Subject	Credits
UIP830C	Theory of metal forming	04
UIP835L	Software applications lab	1.5
UIP804P	Project Phase-II	12
	Elective	03
	Elective	03
	Elective	03
	Total	**26.5**

Dr.CMJ	**Dr.STD**	**Dr.VSP**	**Dr.DGM**	**Prof.SMP**
Prof.DDC	**Prof.HRP**	**Dr.VGA**		

Basaveshwar Engineering College (A), Bagalkot
Department of Industrial & Production Engineering

(SCHEME OF TEACHING FOR STUDENTS ADMITTED TO FIRST YEAR IN 2018-19)

III Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Engineering Mathematics –III	3	2	2	0	50	50	100
2		Material Science & Metallurgy	3	3	0	0	50	50	100
3		Engineering Thermodynamics and Fluid Mechanics	4	3	2	0	50	50	100
4		Strength of Materials	4	3	2	0	50	50	100
5		Machine Tools Technology	4	4	0	0	50	50	100
6		Metallography and Material Testing Laboratory	1.5	0	0	3	50	50	100
7		Machine Shop Practice	1.5	0	0	3	50	50	100
		Total	21	15	6	6	450	450	900

IV Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Mathematics –IV	3	2	2	0	50	50	100
2		Kinematics of Machines	4	3	2	0	50	50	100
3		Foundry and welding Technology	3	3	0	0	50	50	100
4		Metrology & Measurement	4	4	0	0	50	50	100
5		Computer Aided Machine Drawing	3	1	0	4	50	50	100
6		Fundamentals of Quantitative Aptitude and Soft Skills /BBC-I	1	1	0	0	50	50	100
7		Foundry and Welding Practice Lab	1.5	0	0	3	50	50	100
8		Metrology & Measurements Laboratory	1.5	0	0	3	50	50	100
9		Advanced Mathematics-I							
		Total	21	14	4	10	400	400	800

V Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Design of Machine Elements	4	3	2	0	50	50	100
2		Industrial Engineering	4	4	0	0	50	50	100
3		Digital Design and Manufacturing	3	3	0	0	50	50	100
4		Entrepreneurship and Management	4	4	0	0	50	50	100
5		Advanced FQAS / BBC-II	1	1	0	0	50	50	100
6		Theory of Metal Cutting & Tool Design	3	3	0	0	50	50	100
7		Digital Manufacturing Lab.	1.5	0	0	3	50	50	100
8		Metal Cutting Lab	1.5	0	0	3	50	50	100
		Industrial Engineering Lab	1.0	0	0	2			
		Advanced Mathematics-II							
		Total	23	18	2	8			

VI Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Operations Research	4	3	2	0	50	50	100
2		Finite Element Methods	3	2	2	0	50	50	100
3		Quality Assurance & Reliability	4	3	2	0	50	50	100
4		Elective I	3	3	0	0	50	50	100
5		Open Elective 1	3	3	0	0	50	50	100
6		Career Planning and Professional Skills / BBC-III	1	1	0	0	50	50	100
7		Mini Project	3	0	0	6	50	50	100
8		Programming Laboratory	2	1	0	2	50	50	100
9		Finite Element Analysis Lab	1	0	0	2	50	50	100
		Total	24	16	6	10	450	450	900

VII Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Operations Management	4	3	2	0	50	50	100
2		Theory of Metal Forming	4	3	2	0	50	50	100
3		Elective-Ii	3	3	0	0	50	50	100
4		Elective IIi	3	3	0	0	50	50	100
5		Open Elective 2	3	3	0	0	50	50	100
6		Internship	2	0	0	4	50	50	100
8		Project- Phase I	5	0	0	10	50	50	100
		Total	24	15	4	16	400	400	800

VIII Semester

Sl.	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Elective-IV	3	3	0	0	50	50	100
2		Elective-V	3	3	0	0	50	50	100
3		Elective-VI	3	3	0	0	50	50	100
7		Software applications Laboratory	1	0	0	2	50	50	100
4		Project- Phase II	12	0	0	24	50	50	100
		Total	22	9	0	24	200	200	400

Basaveshwar Engineering College (A), Bagalkot
DEPARTMENT OF INDUSTRIAL & PRODUCTION ENGINEERING
SCHEME OF TEACHING AND EXAMINATION

B.E. (I&PE) III SEMESTER

(Scheme of Teaching for Students admitted to first year in 2018-19)

Sl	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Engineering Mathematics –III	3	2	2	0			
2		Material Science & Metallurgy	3	3	0	0			
3		Engineering Thermodynamics and Fluid Mechanics	4	3	2	0			
4		Strength of Materials	4	3	2	0			
5		Machine Tools Technology	4	4	0	0			
6		Metallography and Material Testing Laboratory	1.5	0	0	3			
7		Machine Shop Practice	1.5	0	0	3			
		Total	21	15	6	6	27		

MATERIAL SCIENCE AND METALLURGY [03 Credits] [L-T-P:3-0-0]

Table: Correlation Matrix of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	**Programme Outcomes** **Course Outcomes**	**Engineering knowledge**	**Problem analysis**	**Design / Development of solutions**	**Conduct investigations of complex problems**	**Modern tool usage**	**The engineer and society**	**Environment and sustainability**	**Ethics**	**Individual and team work**	**Communication**	**Project management and finance**	**Life-long learning**	**The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.**	**Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions**	**Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices**
The students will be able to:																
1	Analyze different class of materials their properties, structures and present in them and to understand crystal structures, impacts of defects at the atomic and microstructure scales, atomic diffusion and mechanisms	2	1	1	2	2					1			3	1	2
2	Explain various testing procedure to evaluate mechanical properties of materials and their use in the design of materials for engineering applications	3	2	1	2	2					1			3	1	2
3	Explain solidification, concepts of solid solution and solubility limits, Identify phase diagrams and be able to predict the phase transformations and interpret Fe-C phase diagram, time temperature transformation curve and	3	2	1	3	2					1			3	1	2
4	Explain the purpose and select suitable heat treatment process to achieve desired properties of metals and alloys, classify ferrous and non ferrous metals and study their applications, acquire knowledge about powder metallurgy and its production, composite materials, types and its applications.	3	2	1	2	2					1			3	1	2

UIP302C: MATERIAL SCIENCE AND METALLURGY [03 Credits] [L-T-P:3-0-0]

UNIT I

Crystallography - Concept of UNIT cell, metallic crystal structures, calculation of atomic radius, coordination number and atomic packing factor for different cubic structures, **Crystal imperfections** - Point, line, surface and volume defects, **Atomic diffusion** - Phenomenon, Flick's Ist and IInd law of diffusion, factors influencing diffusion, concept of slip and twinning. **08 Hrs.**

UNIT II

Mechanical properties of metals - Concepts of stress and strain, tension test - true stress and true strain, compression test, notch impact test - izod and charpy, hardness test - brinell, vickers and rockwell, **Fatigue** - Fatigue test - fatigue loadings, S-N diagram and fatigue properties, **Failure** - Failure of metals, fracture - fundamentals of fractures, types - ductile & brittle, mechanisms of ductile fracture, griffith's theory of brittle fracture, **Creep** - Creep curve, mechanism of creep and creep resistant materials.

10 Hrs.

UNIT III

Solidification - Mechanism of solidification, homogeneous and heterogeneous nucleation, crystal growth, cast metal structures, **Solid solution** - Types, Hume Rothary rules governing the formation of solids solutions, **Phase diagrams** - basic terms, gibbs phase rule, construction of phase diagrams, lever rule, different types of invariant reactions, **Iron carbon equilibrium diagram** - Salient features of iron and carbon, allotropic forms of iron, Fe-C equilibrium diagram, phases in the Fe-C system, Invariant and TTT curves.

10 Hrs.

UNIT IV

Heat treatment - Basic concept of heat treatment, different types of heat treatment processes, **Ferrous and non-ferrous materials** - Steel, cast irons, copper and its alloys, aluminum and its alloys, magnesium and its alloys, **Powder metallurgy** - Concept of powder metallurgy, application and advantages, production of powder, **Composite material** - Concept and classification of composites, matrix-polymer matrix composites (PMC), metal matrix composites (MMC), ceramic matrix composites (CMC), reinforcement-particle reinforced composites, fibre reinforced composites, reinforcement-matrix interface, applications of various types of composites - automobile, aircrafts, missiles, space hardware, electrical and electronics, marine, recreational and sports equipment.

14 Hrs.

Text Books:

1. Materials Science and Engineering - An introduction by William D. Callister Jr Wiley India Pvt. Ltd. 7th Edition, 2006, New Delhi
2. Mechanical Metallurgy by George E. Dieter, Adapted by David Bacon, (SI Metric Edition), Mc Graw-Hill Book Company and
3. Composites Materials - Production, Properties, Testing and Applications by K. Srinivasan, Narosa Publishing House, New Delhi.

Reference Books:

1. Introduction to Material Science for Engineering, 6th Edition by James F. Shackel Ford, Pearson, Prentice Hall, New Jersey 2006
2. Materials Science and Engineering by V. Raghavan, 5thEdition, Prentice Hall, India, 2007
3. A Text Book on Material Science and Metallurgy by O. P. Khanna, Dhanpat Rai Publications (P) Ltd, New Delhi
4. Elements of Material Science and Engineering by Van Vlack, 6th Edition, Addison Wesley Publishing Company and
5. Foundation of Material Science and Engineering by Smith, 3rd Edition Mc Graw Hill, 1997.

ENGINEERING THERMODYNAMICS AND FLUID MECHANICS [04 Credits] [L-T-P:3-2-0]

Table: Correlation Matrix of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	**Programme Outcomes** **Course Outcomes**	**Engineering knowledge**	**Problem analysis**	**Design / Development of solutions**	**Conduct investigations of complex problems**	**Modern tool usage**	**The engineer and society**	**Environment and sustainability**	**Ethics**	**Individual and team work**	**Communication**	**Project management and finance**	**Life-long learning**	**The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.**	**Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions**	**Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices**
The students will be able to:																
1	To understand and explain the various laws of thermodynamics, the theory and applications of engineering thermodynamics, thermodynamic properties, equations of state, methods used to describe and predict phase equilibria	3	2	1	2	2					1			3	1	2
2	To learn the equivalence of two statements of second law of thermodynamics, to study the inequality of Clausius and application of the inequality of Clausius and establish the property entropy of a system and to apply the concepts to solve various heat problems	3	2	1	2	2					1			3	1	2
3	Identify and obtain fundamental aspects of fluid flow behavior, analyze and understand the various fluid flow principles and governing equations and understand the principles of continuity, momentum, and energy as applied to fluid motions and	3	2	1	2	2					1			3	1	2
4	To develop and apply the fluid flow equations for various flow instruments and flow problems. Estimate pressure drop in fluid flow systems.	3	2	1	2	2					1			3	1	2

ENGINEERING THERMODYNAMICS AND FLUID MECHANICS [04 Credits] [L-T-P:3-2-0]

UNIT I

Definitions of thermodynamics terms - Engineering thermodynamics definition and scope, **Work and heat** - Definition, sign convention, similarities and dissimilarities of heat and work, expressions for displacement work in various processes through P-V diagrams, work done during isentropic, isothermal, isochoric, isobaric and polytropic processes, **Temperature** - Zeroth law of thermodynamics, concepts, measurement scales, **First law of thermodynamics** - Statement of first law, first law to cyclic and non-cyclic processes, **Energy** - Energy as property, modes of energy, steady state steady flow energy equation.

4 hours tutorials to be taken **10 Hrs.**

UNIT II

Second law of thermodynamics - Thermal reservoirs, heat engine, heat pump and refrigerator - schematic representation and efficiency, reversed heat engine, coefficient of performance, kelvin-planck statement and clausius statement of second law of thermodynamics, perpetual motion machine of first kind (PMM-1), perpetual motion machine of second kind (PMM-II), clausius statement of second law, reversible and irreversible process, **Entropy** - Definition, clausius inequality proof, carnot theorem, QR/T as independent path, principal of increase of entropy, entropy as a quantitative test for irreversibility, calculation of entropy using Tds relations.

8 hours tutorials to be taken **10 Hrs.**

UNIT III

Properties of fluids - Introduction to fluid mechanics and its applications, properties of fluids, viscosity and kinematic viscosity, types of fluids, **Fluid pressure** - Pressure variation in a static fluid, absolute, gauge, atmosphere and vacuum pressure, **Manometers** - Simple and differential manometers, total pressure and centre of pressure, **Buoyancy** - Buoyancy, center of buoyancy, metacentre and metacentric height, conditions of equilibrium of floating and submerged bodies.

4 hours tutorials to be taken **10 Hrs.**

UNIT IV

Fluid kinematics - Types of fluid flow, continuity equation in three dimensions, velocity and acceleration, velocity potential function and stream function, **Fluid dynamics** - Equations of motion, euler's equation of motion, bernoulli's equation from euler's equation, limitation of bernoulli's equation, **Fluid flow measurements** - Veturimeter, orifice meter and pitot tube, **Flow through pipes** - Frictional loss in pipe flow, darcy-weisbach equation and chezy's equation for loss of head due to friction in pipes, hydraulic gradient line and total energy line.

8 hours tutorials to be taken **10 Hrs.**

Text Books:

1. Basic and Applied Thermodynamics by P. K. Nag, Tata McGraw Hill, 6th Edition 2017
2. Basic and Applied Thermodynamics by R. K. Hegde and Niranjan Murty, Sapna Book House, Bengaluru 2005
3. Engineering Thermodynamics by R. K. Rajput, Laxmi Publication (P) Ltd, 5th Edition 2016
4. A Textbook of Fluid Mechanics and Hydraulic Machines by R. K. Bansal, Laxmi Publications Pvt. Ltd., 2009 and
5. Fluid Mechanics and Hydraulics by Dr. Jagadish Lal (SI unit and MKS unit) - 9th Edition, Metropolitan Book Co Pvt. Ltd., New Delhi. 1995.

Reference Books:

1. Thermodynamics: An Engineering Approach by Yunus A. Cenegal and Michael A. Boles, Tata McGraw Hill Publications, 8th Edition
2. Fundamental of Classical Thermodynamics by Van Wylen and Gordon J. Sonntag, Richard E, Wiley 1985
3. 1000 Solved Problems in Fluid Mechanics (Includes Hydraulic Machines) by K. Subramanya, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 2005
4. Fluid Mechanics by Dr. A. K. Jain, Khanna Publishers, New Delhi and
5. Hydraulics and Fluid Mechanics including Hydraulic Machines by Dr. P. N. Modi, Dr. S. M. Seth, (SI Unit), Standard Book House, 5th Edition 2005, New Delhi.

UIP320C: STRENGTH OF MATERIALS [04 CREDITS] [L-T-P:3-2-0]

Table: Correlation Matrix of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	Programme Outcomes / Course Outcomes	Engineering knowledge	Problem analysis	Design / Development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Project management and finance	Life-long learning	The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service	Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	Know the physical properties of the materials such as stresses, strains, stress-strain relationship, elastic constants etc. and study the behavior of one dimensional simple component of varied shapes under varied load conditions.	3	3	1	1					1	1			1		
2	Understand the concept of principal stresses through compound stresses in 1D/2D elements.	3	3	1	1					1	1			1		
3	Develop the skill to analyze the bending of beams of different cross sections subjected to varied conditions of loading. Also comprehend the response through deflection and inclination of beams subjected to bending loads.	3	3	1	1					1	1			1		
4	Analyze the cylinders exposed to internal and external pressures from the view point of stresses developed and change in dimensions	3	3	1	1					1	1			1		
5	Know the stresses developed and the rigidity of the mechanical elements transmitting tensional power.	3	3	1	1					1	1			1		
6	Simulate the mechanical elements receiving axial compressive loads under different end conditions and determine their columnar stability.	3	3	1	1					1	1			1		

UIP320C: STRENGTH OF MATERIALS [04 CREDITS] [L-T-P:3-2-0]

UNIT -I

Simple stress and strain: Mechanical properties of materials, Stress, Strain, Stress-Strain relation, Extension / Shortening of a bars, Poisson's ratio, Bars with cross sections varying in steps, Bars with continuously varying cross sections (circular and rectangular), Elongation due to self weight, Principle of super position, Thermal stresses, Volumetric strain, Elastic constants. **16 Hrs.**

UNIT -II

Compound stress: Introduction, plane stress system, sign convention, stresses on an inclined plane, Principal stresses.

Bending of beams: Shear forces and bending moments, Types of beams, loads and reactions, Rate of loading, Sign conventions, Relationship between shear force and bending moments, Shear force and bending moment diagrams for different beams subjected to concentrated loads, Uniform distributed load (udl) and couple for different types of beams **16 Hrs.**

UNIT - III

Bending and shear stresses in beams: Theory of simple bending, Assumptions in simple bending, Relationship between bending stresses and radius of curvature, Relationship between bending moment and radius of curvature, Moment carrying capacity of a section, Shearing stresses in beams, Shear stress across rectangular, circular, symmetrical I and T sections

Deflection of beams: Deflection of beams, Equation for deflection, Slope and moments, Double integration method for cantilever and simply supported beams for point load, UDL, UVL and Couple, Macaulay's method. **16 Hrs.**

UNIT - IV

Thick and thin cylinders: Stresses in thin cylinders, Changes in dimensions of cylinder, Thick cylinders subjected to internal and external pressures (Lame's equation).

Torsion of circular shafts: Pure torsion, Assumptions, Derivation of torsional equations, Polar modulus, Torsional rigidity / stiffness of shafts, Power transmitted by solid and hollow circular shafts.

Elastic stability of columns: Introduction to columns, Euler's theory for axially loaded elastic long columns,
Derivation of Euler's load for various end conditions, Limitations of Euler's theory, Rankin's formula. **16 Hrs.**

Reference Books:

1. S.S. Bhavikatti, "*Strength of Materials"* Vikas Publications House – Pvt. Ltd., 2nd Ed., 2006.
2. W A Nash *"Strength of materials"*, Tata McGraw Hill, 4th edition
3. K.V. Rao, G.C. Raju, "*Mechanics of materials"*, First Edition,2007
4. Ferdinand Beer, Jr. Johnston, E. Russell, John DeWolf, David Mazurek, McGraw-Hill Education, 2011

UIP321C: MACHINE TOOLS TECHNOLOGY [04 CREDITS] [L-T-P:4 -0-0]

Table: Correlation Matrix of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	Programme Outcomes / Course Outcomes	Engineering knowledge	Problem analysis	Design / Development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Project management and finance	Life-long learning	The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems	Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	Able to classify various cutting tools based on materials and applications	3											1	3	2	3
2	Understand the constructional features and applications of various machine tools	3				2							1	3	2	3
3	Understand the influence of operating parameters in different machining operations.	3	3			2							1	3	2	3
4	Solve numerical related to various machining operations	3	3										1	3	2	3
5	Understand the operating principle, control parameters and applications in special machining processes	3	3			2							1	3	2	3

UIP321C: MACHINE TOOLS TECHNOLOGY [04 CREDITS] [L-T-P:4 -0-0]

UNIT I

Introduction: Types of cutting tools, Cutting tool materials - HSS carbides, coated carbides, ceramics, Cutting fluids-desired properties, types and selection, Single point and multi point cutting tools, types of chips, built-up edge, factors affecting forces and power, Machinability.
Turning, Shaping and Planning machines: Classification, Constructional features of Turret and Capstan Lathe, tool layout. Shaping and planning machine: Classification, Constructional features, Driving mechanisms, Shaping and planning operations, Tool and work holding devices, Machining time. **12 Hrs**

UNIT- II

Drilling Machines: Classification, Constructional features, Drilling and related operations, Types of drilling tools, Drill bit nomenclature.
Milling Machines: Classification, Constructional features, Milling cutters, Nomenclatures, Milling operations, Up milling and down milling, Indexing: Simple and compound indexing. **13 Hrs.**

UNIT-III

Grinding machines: Types of abrasives, Grain size, bonding process, grade and structure of grinding wheels, grinding wheel types. Classification, constructional features. Selection of grinding wheel, Grinding process parameters. Balancing of grinding wheel, mounting of grinding wheels.
Broaching process: Principle of broaching. Details of a broach. Types of broaching machines-constructional details, applications. Advantages and Limitations.
Finishing and other Processes: Lapping and Honing operations – Principles, arrangement of set up and application. Super finishing process, polishing, buffing operation and application. **12 Hrs.**

UNIT-IV

Non-traditional machining processes: Need for non-traditional machining, Principle, equipment, operation and applications of Electric Discharge Machining, Electro Chemical Machining. Ultrasonic Machining, Laser Beam Machining, Abrasive Jet Machining, Water Jet Machining and Electron Beam Machining. **13 Hrs**

Text Books:

1. **Workshop Technology,** Hazara Choudhry, Vol-II, Media Promoters& Publishers Pvt. Ltd. 2004
2. **Production Technology,** R.K.Jain, Khanna Publications, 2003.
3. **Production Technology,** HMT, Tata Mc Graw Hill, 2001.

Reference Books:

1. **Manufacturing Science**, Amitabha Ghosh and Mallik, affiliated East West Press, 2003.
2. **Fundamentals of Metal Machining and Machine Tools,** G. Boothroyd, McGraw Hill, 2000.

METALLOGRAPHY AND MATERIAL TESTING LABORATORY [01 CREDITS] [L-T-P:0 -0-2]

Table: Correlation Matrix of Course Outcomes (CO) with Programme Outcomes (PO) and Programme Specific Outcomes (PSO)

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	Programme Outcomes / Course Outcomes	Engineering knowledge	Problem analysis	Design / Development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Project management and finance	Life-long learning	The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems	Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	The student is able to prepare the specimens for metallographic examination with best practice, can operate the optical microscope and understand, interpret, analyze the microstructures of materials and also have heat treatment studies on various materials	2	2	1	2	2				3	1			2		
2	Acquire experimentation skills in the field of material testing and measure the mechanical properties of different materials by performing variety of tests	2	2	1	2	2				3	1			2		

METALLOGRAPHY AND MATERIAL TESTING LABORATORY [01 CREDITS] [L-T-P:0 -0-2]

ART-A

1. **Preparation -** Specimen for metallographic examination of engineering materials and study the microstructure of mild steel, plain carbon steel, tool steel, gray cast iron, spheroidal graphite iron, brass, bronze and
2. **Heat treatment -** Annealing, normalizing, hardening and tempering of steel and to study the hardness of heat-treated samples. (Demonstration only).

PART-B

1. Conduct of tensile test on mild steel specimen
2. Shear test on mild steel specimen
3. Compression test on - wooden block and concrete block
4. Bending test on a mild steel specimen
5. Conduct of izod and charpy tests on mild steel specimen
6. Hardness tests
7. Torsion test and
8. Wear and fatigue test (Demonstration only).

Scheme of Examination

One question from part A : 20 Marks
One question from part B : 20 Marks
Viva-voice : 10 Marks

TOTAL : 50 Marks

UIP322L: MACHINE SHOP PRACTICE LABORATORY [1.5 CREDITS] [L-T-P:0 -0-3]

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	Programme Outcomes Course Outcomes	Engineering knowledge	Problem analysis	Design / Development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Project management and finance	Life-long learning	The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service	Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1																
2																
3																
4																
5																
6																

UIP322L: MACHINE SHOP PRACTICE LABORATORY [1.5 CREDITS] [L-T-P:0 -0-3]

PART – A

Minimum four jobs consisting of following machining operations, Plain Turning, Taper Turning. Step Turning, Thread Cutting, Facing, Knurling. Eccentric Turning using lathe.

24 Hours

PART- B

Minimum two jobs consisting of following machining operations

Cutting of gear teeth using milling machine. Cutting of V-groove , Dovetail/Rectangular groove using shaping machine.

12 Hours

Scheme of Examination:

One model) from Part-A	30 marks
One model from Part-B	10 marks
Viva Voce	10 marks
Total	**50 marks**

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

SCHEME OF TEACHING AND EXAMINATION

(Scheme of Teaching for Students admitted to first year in 2018-19)

B.E. (I&PE) IV SEMESTER

Sl	Subject Code	Subject	Credits	Hours/week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1		Mathematics –IV	3	2	2	0			
2		Kinematics of Machines	4	3	2	0			
3		Foundry and welding Technology	3	3	0	0			
4		Metrology & Measurement	4	4	0	0			
5		Computer Aided Machine Drawing	3	1	0	4			
6		Fundamentals of Quantitative Aptitude and Soft Skills /BBC-I	1	1	0	0			
7		Foundry and Welding Practice Lab	1.5	0	0	3			
8		Metrology & Measurements Laboratory	1.5	0	0	3			
9		Advanced Mathematics-I							
		Total	21	14	4	10	28		

UIP414C: KINEMATICS OF MACHINES[04 Credits] [L-T-P:3-2-0]

No	Programme Outcomes / Course Outcomes	PO1 Engineering knowledge	PO2 Problem analysis	PO3 Design / Development of solutions	PO4 Conduct investigations of complex problems	PO5 Modern tool usage	PO6 The engineer and society	PO7 Environment and sustainability	PO8 Ethics	PO9 Individual and team work	PO10 Communication	PO11 Project management and finance	PO12 Life-long learning	PSO1 The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.	PSO2 Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	PSO3 Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	understand the basic concepts of kinematic chains and their inversions and mechanisms	3	3	2	1					1	1			3		
2	develop the skill to draw and analyze the velocity and acceleration diagrams of basic mechanisms	3	3	2	1					1	1			3		
3	classify, compare and evaluate the kinematcs of gears and gear trains	3	3	2	1					1	1			3		
4	design, develop and investigate the cam profiles to obtain desired movements in basic types of followers	3	3	2	1					1	1			3		
5	demonstrate the competancy to balance the revolving and reciprocating masses	3	3	2	1					1	1			3		

UIP414C: KINEMATICS OF MACHINES[04 Credits] [L-T-P:3-2-0]

UNIT-I

Introduction: Definitions: Link or element, kinematic pairs, degrees of freedom, Grubler's criterion (without derivation), Kinematic chain, Mechanism, structure, Mobility of Mechanism, Inversion, Machine.

Kinematic Chains and Inversions: Inversions of Four bar chain; Single slider crank chain and Double slider crank chain.

Mechanisms: Quick return motion mechanisms-Drag link mechanism, Whitworth mechanism and Crank and slotted lever Mechanism. Straight line motion mechanisms Peaucellier's mechanism and Robert's mechanism. Intermittent Motion mechanisms, Geneva mechanism and Ratchet and Pawl mechanism. Toggle mechanism, Pantograph, Steering gear mechanism.

10 +04Hrs.

UNIT-II

Velocity and acceleration analysis of mechanisms (graphical methods): Velocity and acceleration analysis of Four Bar mechanism, slider crank mechanism and Simple Mechanisms by vector polygons: Relative velocity and acceleration of particles in a common link, relative velocity and accelerations of coincident Particles on separate links-Coriolis component of acceleration. Angular velocity and angular acceleration of links, velocity of rubbing.

Velocity analysis by instantaneous center method: Definition, Kennedy's Theorem, Determination of linear and angular velocity using instantaneous center method.

Klein's construction: Analysis of velocity and acceleration of single slider crank mechanism. **10+08 Hrs.**

UNIT-III

Spur gears: Gear terminology, law of gearing, Characteristics of involute action, Path of contact, Arc of contact, Contact ratio, Interference in involute gears, Methods of avoiding interference, Back lash, Comparison of involute and cycloidal teeth.

Gear trains: Simple gear trains, Compound gear trains for large speed reduction, Epicyclic gear trains, Algebraic and tabular methods of finding velocity ratio of epicyclic gear trains. Tooth load and torque calculations in epicyclic gear trains. **10+06 Hrs.**

UNIT -IV

Cams: Types of cams, Types of followers, Displacement, Velocity and Acceleration time curves for cam profiles. Disc cam with reciprocating follower having knife-edge, roller and flat-faced follower, Disc cam with oscillating roller follower, Follower motions including SHM, Uniform velocity, uniform acceleration and retardation and Cycloidal motion.

Balancing of machinery: Balancing of revolving masses, in single plane and different planes. Graphical method. Balancing of reciprocating masses partial balancing of single cylinder I.C. engines (simple problems)

10+08 Hrs.

Text Books:

1. **"Theory of Machines",** Sadhu Singh, Pearson Education Pvt. Ltd, 2nd edition. **ISBN** 9788177581270
2. **"Theory of Machines",** Rattan S.S, Tata McGraw-Hill Publishing Company Ltd., New Delhi, 3 3rd edition. ISBN: 007014477X, 9780070144774

Reference Books:

1. *"Theory of Machines and Mechanisms"*John J. Uicker, Jr., Gordon R. Pennock & Joseph E. Shigley Oxford University Press, 4th edition. ISBN-10: 0195371232 ISBN-13: 978-0195371239
2. "*Theory of Machines*", R. K. Bansal, J. S. Brar Firewall Media, 3rd edition, ISBN: 8170084180, 9788170084181

UIP315C: Foundry & Welding Technology [03 Credits] [L-T-P:3-0-0]

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	Programme Outcomes Course Outcomes	Engineering knowledge	Problem analysis	Design / Development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Project management and finance	Life-long learning	The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.	Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	Students able to describe and compare different manufacturing methods	3	1	2		2	2						1	1	1	1
2	Ability to select different patterns and identify appropriate different types of moulds.	3	2	2		2	2			2			1	1	1	1
3	Student's able to select different special casting process for types of products.	2	2	2		2	1			1			1		1	1
4	Ability to identify and classify different welding processes and analyze the structure of the welds.	3	2	2		2	1			1			1	1	1	1
5	Identify materials and processes commonly used in welding.	2		1		1	2			1			1			
6	Demonstrate ability to use welding tools and machines	3	2			2	1			2			1			1

UIP315C: Foundry & Welding Technology [03 Credits] [L-T-P:3-0-0]

UNIT-I

Introduction: Concept of Manufacturing process, its importance. Classification of Manufacturing processes. Introductions to Hot & Cold working, forging, rolling, extrusion process & drawing operation.

Patterns: Introduction to Casting process & steps involved. Advantages & Limitations of casting process.

Definition, Classification of patterns, Pattern materials. And various pattern allowances. **12 Hrs.**

UNIT-II

Sand Moulding and Methods: Types of base sand, requirement of base sand. Types of sand moulds, properties. Ingredient of moulding sands. Core sands, ingredients and properties. Method used for sand moulding.

Special moulding Process: Study of important moulding processes, Green sand, Core sand, Dry sand, Sweep mould, CO_2 sand, Shell mould, Investment casting; Metal moulds: Gravity die-casting, Pressure die casting,

centrifugal casting, Squeeze Casting, Slush casting, Thixocasting and continuous casting processes. **12 Hrs.**

UNIT-III

Welding process: Definition, Principles, Classification, Application, Advantages & limitations of welding.

Arc Welding: Principle and Classifications.

Gas Welding: Principle, Oxy – Acetylene welding, Reaction in Gas welding, Flame. Flame characteristics.

08 Hrs.

UNIT-IV

Special type of welding: Resistance welding- principles and types. Friction welding, Explosive welding, Thermit welding, Laser welding and Electron beam welding **08 Hrs.**

Text Books:

1. "*Manufacturing Technology: Foundry Forming and Welding*", P.N.Rao 2nd Ed., Tata McGraw Hill, 2003.ISBN:0-07-463180-2
2. "*Foundry Techology* ", by R. K.Jain -4th Edition, Tata McGraw hill, 2003. ISBN-0-07-044760-8

Reference Books:

1. "*Manufacturing Technology*", Serope Kalpakjain, Steuen.R.Sechmid, Pearson Education Asia, 5th Ed. 2006.ISBN: 81-7808-157-1
2. "*Process and Materials of Manufacturing*:, Roy A Lindberg, 4th Ed. Pearson Edu. 2006.-ISBN-81-203-0663-5
3. *Introduction to Manufacturing* Processes by John. A. Schey, McGraw Hill, 3rd Edition, 2000.
4. Modern Manufacturing Process by Grover

UIP421C: METROLOGY AND MEASUREMENTS [04 Credits] [L-T-P:4-0-0]

No	Programme Outcomes / Course Outcomes	PO1 Engineering knowledge	PO2 Problem analysis	PO3 Design / Development of solutions	PO4 Conduct investigations of complex problems	PO5 Modern tool usage	PO6 The engineer and society	PO7 Environment and sustainability	PO8 Ethics	PO9 Individual and team work	PO10 Communication	PO11 Project management and finance	PO12 Life-long learning	PSO1 The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.	PSO2 Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	PSO3 Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	Gain knowledge about different measurement systems and common types of errors	1			2					1			2	3	2	2
2	Analyze the different types of limits and fits and determine the tolerance	1	3	2	2					1				3	1	2
3	Understand the different types of Comparators, Angular measurement	2	1	1	2								1	2	2	2
4	Understand the different types of sensors, transducers and strain gauges used for measurement	2		1	1	1	1	2		2	1		1	2	3	3
5	Get the knowledge about working of thermocouples, thermometers and flow meters used for measurements.	2	1	2		1		1		1			1	3	2	2

UIP421C: METROLOGY AND MEASUREMENTS [04 Credits] [L-T-P:4-0-0]

UNIT-I

Introduction to Metrology: Definition and concept of metrology, Need of inspection, Principles of measurement, Process of measurement, Methods of Measurement, Classification of measuring instruments, Selection of measuring instruments, Measuring systems and accuracy of measurement, Precision and accuracy, errors in measurement.

Standards of Measurement: System of measurement, Material Standard, Wavelength Standards, Subdivision of standards, Line and End standards, Classification of standards and Traceability, calibration of End bars

Linear Measurement: Constriction, working principle, measurement procedure, error and its elimination, limitations, calibration and application of different linear measuring instruments, like Steel rule, calipers, surface plates, tool maker's flats, angle plates, V block, Straight edge, Spirit level, combination square, Engineer's square. Slip gauge, wringing of slip gauge, Indian standards on slip gauge, selection of slip gauges, care of slip gauge, slip gauge accessories, adjustable slip gauges, Gauges for internal measurement like Telescopic gauge, Numerical problems for fits and gauges

Angular Measurement: Construction, working principle, measurement procedure of sine bar, Taper measurement, application of angle gauge

Comparators: Introduction to comparator, characteristics, classification of comparators, mechanical comparators-Johnson comparator, Sigma comparator, Dial indicator, Optical comparators-principles, Zeiss ultra optimeter, Electrical and Electronics comparators-principles, LVDT, pneumatic comparators **13 Hrs.**

UNIT-II

GEAR METROLOGY: Errors in Spur Gear form, Gear tooth Vernier, Constant chord, Base tangent (Numerical), Gear Rolling Tester. Profile Projector, Tool maker's microscope and their applications Surface Roughness Measurement: Introduction to Surface texture, Parameters for measuring surface roughness, Surface roughness measuring instrument: TalySurf.

Screw Thread Measurement: Terminology, Classification, Forms of thread, Errors in thread, Measurement of various Elements in threads like major diameter, minor diameter, effective diameter. Measurement of pitch, screw thread gauges, Screw pitch gauge, angle and effective diameter of screw thread by 2 and 3 wire methods, best size wire. Toolmakers microscope, gear terminology, use of gear tooth vernier caliper and gear tooth micrometer

Advances in Metrology Coordinate Measuring Machine (CMM): Fundamental features of CMM – development of CMMs – role of CMMs – types of CMM and Applications, – types of probes Machine Vision Systems: vision system measurement – Multisensory systems. Interferometer: Principle, NPL Interferometer Laser Metrology: Basic concepts of lasers, advantages of lasers, laser interferometers, types, applications **13 Hrs.**

UNIT-III

Measurements and Measurement systems: Definition, significance of measurement, generalized measurement system, definitions and concept of accuracy, precision, calibration, threshold, sensitivity, hysterisis, repeatability, linearity, loading effect, system response-time delay. Error in measurements and classification of errors. Transducers, Transfer efficiency, primary and secondary transducers. Electrical, Mechanical, electronic transducers, advantages of each type transducers.

Intermediate modifying devices, Mechanical systems, inherent problems, Electrical Intermediate modifying , devices, input circuitry, ballast, ballast circuit, electronics amplifiers and telemetry, Terminating devices, Mechanical system Cathode Ray Oscilloscope, Oscillographs, X-Y plotters **13 Hrs.**

UNIT-IV

Measurement of force: principle of analytical balance, platform balance, proving ring.

Measurement of Torque :-prony brake, hydraulic dynamometer. Pressure Measurements, Principle, use of elastic members, Bridgeman gauge, Mcloed gauge, Pirani Gauge.

Measurement ofTemperature : resistance thermometer, thermocouple, laws of thermocouples, thermocouple materials used for construction, pyrometers Optical pyrometer.

Measurement ofStrain : Strain gauges, preparation and mounting of strain gauges, gauge factor, methods of strain measurement **13 Hrs.**

Text Books:

1. Beckwith Marangoni and Lienhard, "*Mechanical measurements"* Pearson Education, 6th ed.2002.
2. R. K. Jain, "*Engineering Metrology"*, Khanna Publication, 1994.

Reference Books:

1. I. C. Gupta, "*Engineering Metrology"*Dhanpat Rai Publications, Delhi.
2. R. K. Jain. "*Mechanical Measurements"*
3. Alsutko, Jerry. D. Faulk, "*Industrial Instrumentation"* Thompson Asia Pvt.Ltd.2002. Ernest O, Doblin *"Measurement Systems Applications and Design"*McGRAW Hill Book Co.

UIP455L: COMPUTER AIDED MACHINE MODELING LABORATORY [04 Credits] [L-T-P:2-0-4]

No	Programme Outcomes / Course Outcomes	PO1 Engineering knowledge	PO2 Problem analysis	PO3 Design / Development of solutions	PO4 Conduct investigations of complex problems	PO5 Modern tool usage	PO6 The engineer and society	PO7 Environment and sustainability	PO8 Ethics	PO9 Individual and team work	PO10 Communication	PO11 Project management and finance	PO12 Life-long learning	PSO1 The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.	PSO2 Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	PSO3 Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	Students will be introduced to the use various CAD softwares and learn using the GUI, sketcing commands and initial setup required for drawing. Practice of converting pictorial views into orthographic projections	**2**	**1**			**1**		**1**						**1**		
2	Drawing the sectional views of various forms of threads fasteners, keys & joints and convert them into drawings	**3**	**2**			**2**	**1**	**1**						**1**	**1**	**1**
3	Understanding and drawing 3D models of different types of riveted joints and couplings	**3**	**3**	**1**	**1**	**3**	**1**	**1**		**1**			**1**	**2**	**2**	**2**
4	Convertion of 2D drawings of different part assemblies into three dimentional models	**3**	**3**	**2**	**2**	**3**	**1**	**1**		**2**	**1**		**2**	**3**	**2**	**2**

UIP455L: COMPUTER AIDED MACHINE MODELING LABORATORY [04 Credits] [L-T-P:2-0-4]

PART – A

Introduction: Review of graphic interface of the software. Review of basic sketching commands and navigational commands. Starting a new drawing sheet. Sheet sizes. Naming a drawing. Drawing UNITs, grid and snap **02 Hrs.**

Orthographic views: Conversion of pictorial views into orthographic projections of simple machine parts with or without section. (Bureau of Indian Standards conventions .are to be followed for the drawings) Hidden line conventions. Precedence of lines **05 Hrs.**

Thread forms: Thread terminology, sectional views of threads. ISO Metric (Internal & External) BSW (Internal & External) square and Acme. Sellers thread, American Standard thread. **05 Hrs.**

Fasteners: Hexagonal headed bolt and nut with washer (assembly), square headed bolt and nut with washer (assembly) simple assembly using stud bolts with nut and lock nut. Flanged nut, slotted nut, taper and split pin for locking, counter sunk head screw, grub screw, Allen screw. **10 Hrs.**

PART – B

Keys & Joints Parallel key, Taper key, Feather key, Gibhead key and Woodruff key **05 Hrs.**

Riveted Joints: single and double riveted lap joints, butt joints with single/double cover straps (Chain and Zigzag, using snap head rivets). cotter joint (socket and spigot), knuckle joint (pin joint) for two rods. **05 Hrs.**

Couplings Split Muff coupling, Protected type flanged coupling, pin (bush) type flexible coupling, Oldham's coupling and universal coupling (Hooks' Joint) **10 Hrs.**

PART – C

Assembly Drawings

1. Plummer block (Pedestal Bearing)
2. Petrol Engine piston
3. I.C. Engine connecting rod
4. Screw jack (Bottle type)
5. Tailstock of lathe
6. Machine vice

20 Hrs.

Text Books:

1. N.D.Bhat & V.M.Panchal '*Machine Drawing*',
2. N. Siddeshwar, P. Kanniah, V.V.S. Sastri, '*Machine Drawing*' , published by Tata Mc GrawHill,2006

Reference Books:

1. S. Trymbaka Murthy, '*A Text Book of Computer Aided Machine Drawing*', CBS Publishers, New Delhi, 2007
2. K.R. Gopala Krishna, '*Machine Drawing with Auto CAD*' , Subhash Publication.
3. Goutam Pohit & Goutham Ghosh, '*Machine Drawing with Auto CAD*'. 1st Indian print Pearson Education, 2005
4. Sham Tickoo. *'Solid Edge V18, for engineers and designers*'. Dream tech 2011

Note:

All the sheets should be drawn in the class using software. Sheet sizes should be A4. All sheets must be submitted at the end of the class by taking printouts.

Two questions to be set from each Part-A, Part-B and Part-C. Student has to answer one question each from Part-A and Part-B for 20 marks each and one question from Part-C for 60 marks.

PART-A	1x20	= 20 Marks
PART-B	1x20	= 20 Marks
PART-C	1x60	= 60 Marks
	Total	**=100 Marks**

UHS001N:FUNDAMENTALS OF QUANTITATIVE [01 CREDITS] [L-T-P:1-0-0]

OVERVIEW			
Semester	4		
Course Objectives	The course objectives for the semester are as follows: 1. Cover basic to intermediate topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills. 3. Hone career skills and industry awareness.		
Course Outcome	After the course, the students will be able to: 1. Answer multiple choice questions fromtopics in: a. quantitative aptitude,verbal aptitude, and reasoning aptitude. 2. Use tools and techniques learnt in soft skills modules to: a. build confidence and self-esteem. 3. Speak knowledgeable about career prospects and industry.		
Domain		**Hours**	**Modules**
Quantitative Aptitude (QA)		6	3
Reasoning Aptitude (RA)		6	3
Verbal Aptitude (VA)		6	3
Soft Skills (SS)		6	3
Career Skills (CS)		6	3
Total		30	15

DETAILS			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quantitative and Reasoning Aptitude Skills Training			
1.	QA	Factors and Multiples	2
2.	QA	Divisibility Rules	2
3.	QA	LCM and HCF	2
4.	RA	Puzzles	2
5.	RA	Venn Diagrams	2
6.	RA	Binary Logic	2
Unit II – Verbal Aptitude Skills Training			
7.	VA	Sentence Completion	2
8.	VA	Para Jumbles	2
9.	VA	Fill in the Blanks (Grammar)	2
Unit III – Career Skills			
10.	CS	Resume Building	2
11.	CS	Group Discussion - Fundamentals	2
12.	CS	Becoming Industry Aware	2
Unit IV – Soft Skills			
13.	SS	Personal Branding	2
14.	SS	Networking	2
15.	SS	Delivering a Prepared Speech	2

REFERENCES:

- ETHNUS

UIP317L: FOUNDRY AND WELDING PRACTICE [01 CREDITS] [L-T-P:0-0-2]

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
No	Programme Outcomes Course Outcomes	Engineering knowledge	Problem analysis	Design / Development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual and team work	Communication	Project management and finance	Life-long learning	The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.	Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1																
2																
3																
4																
5																

UIP317L: FOUNDRY AND WELDING PRACTICE [01 CREDITS] [L-T-P:0-0-2]

Part-A

1. Testing of Moulding sand and Core sand

Preparation of specimen and conduction of the following tests:

- Compression, Shear and Tensile tests
- Permeability test
- Core hardness & Mould hardness tests
- Grain fineness test
- Clay content test

Part-B

2. Foundry Practice

Use of foundry tools and other equipments
Preparation of moulds (ready to pour) using two boxes and three boxes
Preparation of one casting using Aluminium or cast iron (Demonstration only)

3. **Forging & Welding Practice**

Preparing minimum three models involving upsetting, drawing and bending operations
Simple welding joints like LAP, BUTT, using ARC welding . Simple welding joints using GAS welding, TIG & MIG welding ,spot welding.

Scheme of Examination:

One question from part A : 20 Marks
One question from part B : 20 Marks
Viva- Voice : 10 Marks
TOTALS : 50 Marks

UIP422L: METROLOGY AND MEASUREMENT LABORATORY [01 CREDITS] [L-T-P:0-0-2]

No	Programme Outcomes / Course Outcomes	PO1 Engineering knowledge	PO2 Problem analysis	PO3 Design / Development of solutions	PO4 Conduct investigations of complex problems	PO5 Modern tool usage	PO6 The engineer and society	PO7 Environment and sustainability	PO8 Ethics	PO9 Individual and team work	PO10 Communication	PO11 Project management and finance	PO12 Life-long learning	PSO1 The Industrial and Production Engineering Graduates will be able to effectively design, implement, improve and manage systems /activities in manufacturing and service organizations.	PSO2 Use the knowledge and skills of industrial engineering to model and analyze the real life problems to develop solutions	PSO3 Engage professionally in industries or as an entrepreneur by applying manufacturing and management practices
The students will be able to:																
1	**The student shall be measuring the various parameters like length, height, angle, displacement, flatness etc., by using various instruments like Vernier callipers, micrometer, dial indicator, etc.**	3	3	3	3	1				3				3	2	1
2	**The student shall be able to measure the threads, gear tooth profiles and surface roughness using appropriate instruments and analyze the data.**	1	2	3	3	1								2	2	1
3	**The student shall be able to recognize various types of governors and gyroscopes, and improve their performance as per requirement.**	3	2	2	1	1				3				2	2	1
4	**The student shall be able to determine the balancing forces, inertial forces of rotating and reciprocating components in real life problems.**	2	3	3	2	1				1				3	2	1
5	**The student shall be able to check alignment of various components in various mechanisms using advanced scientific tools.**	2	2	3	2	2				3				3	2	1

UIP422L: METROLOGY AND MEASUREMENT LABORATORY [01 CREDITS] [L-T-P:0-0-2]

Part-A

Mechanical Measurements

1. Calibration of Pressure Gauge
2. Calibration of Load Cell
3. Calibration of Thermocouple
4. Calibration of Strain Gauges

Part-B

Metrology Lab

1. Measurements Using Optical / Tool maker Microscope.
2. Measurements of angle using Sine Center/ Sine Bar/Bevel Protractor.
3. Measurements of the taper angle of given Taper Plug using roller sets.
4. Measurements of Screw thread parameters using two wire or three- wire method
5. Study on Snap, Plug, Ring, Taper and Adjustable Gauges.
6. Calibration of Micrometer, Vernier caliper and Vernier Height Gauge.
7. Measurement of Gear tooth profile using Gear tooth Vernier.
8. Studies on Mechanical/Electronic/Pneumatic Comparator.

Scheme of Examination:

One question from part A	: 20 Marks
One question from part B	: 20 Marks
Viva- Voce	: 10 Marks
TOTALS	**: 50 Marks**

BASAVESHWAR ENGINEERING COLLEGE(A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

The Board of Studies (BoS) meeting of Industrial and Production Engineering department was held on 30.06.2018 at 10.00 am in the old Board Room of Basaveshwar Engineering College (A), Bagalkot.

The minutes of the meeting are as below:

- Dr. C. M. Javalagi Chairman BoS initiated the BOS meeting by welcoming the BOS members
- All BoS members introduced themselves as it was the first meeting of new BoS
- Dr. C. M. Javalagi presented the details of the meeting as per the agenda

Subject	Proposal	Resolution
Subject 1: Approval of the minutes of previous BoS meeting held on 17.06.2017	Chairman BoS read the resolution of previous BoS meeting held on 17.06.2017	The minutes of the previous BoS meeting held on 17.06.2017 were circulated to all members. There were no comments received, hence resolutions were accepted and approved by the Board. The minutes are as in **Enclosure-1**
Subject 2: Modification in the scheme of teaching for the student admitted to first year in 2017-18	Chairman BoS, proposed for a changing scheme of teaching for the student admitted to first year in 2017-18.	The Board after discussion and reasons for changing in the scheme of teaching and evaluation (which was accepted in previous BoS) accepted the proposal with the following scheme of teaching

Sem	Credits
1	24.0
2	26.0
3	25.5
4	26.0
5	25.0
6	24.5
7	25.0
8	24.0
Total	200.00

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>Subject 3:
Approval for the award of degree with 200 credits for the students admitted to first year in 2017-18</td><td>Chairman BoS, proposed for the award of degree with 200 credits for the students admitted to first year in 2017-18 with UHS151C- Constitution of India & Professional Ethics: 2 Credits and UBT152C – Environmental Studies: 2 Credits as Credits Courses</td><td>Board Accepted the proposal and resolved to award degree as per proposal</td></tr>
<tr><td>Subject 4:
Approval for the award of degree with 150 Credits for the students admitted through lateral entry in 2018-19(3rd Semester)</td><td>Chairman BoS proposed for the award of degree with 150 Credits for the students admitted through lateral entry in 2018-19 (3rd Semester), with Constitution of India and Professional Ethics & Environmental Studies as Mandatory courses.</td><td>Board accepted the proposal and resolved to award degree with the conditions in the proposal</td></tr>
<tr><td>Subject 5:
Discussion on the scheme of teaching and examination for the students admitted to first year in 2018-19 (175 Credits)</td><td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted to first year 2018-19</td><td>Board after detailed discussion and necessary modifications accepted the scheme of teaching and examination as below
<table>
<tr><th>Sem</th><th>Credits</th></tr>
<tr><td>1</td><td>20</td></tr>
<tr><td>2</td><td>20</td></tr>
<tr><td>3</td><td>23</td></tr>
<tr><td>4</td><td>22</td></tr>
<tr><td>5</td><td>22</td></tr>
<tr><td>6</td><td>23</td></tr>
<tr><td>7</td><td>23</td></tr>
<tr><td>8</td><td>22</td></tr>
<tr><td>Total</td><td>175</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>Subject 6:
Discussion on the scheme of teaching and examination for the students admitted to through lateral entry to third semester from 2019-20 (135 Credits)</td><td>Chairman BoS, proposed the scheme of teaching and examination for the students admitted through lateral entry to third semester in the year 2019-20 and onwards</td><td>Board accepted the scheme of teaching and examination as below:
<table><tr><th>Sem</th><th>Credits</th></tr><tr><td>3</td><td>23</td></tr><tr><td>4</td><td>22</td></tr><tr><td>5</td><td>22</td></tr><tr><td>6</td><td>23</td></tr><tr><td>7</td><td>23</td></tr><tr><td>8</td><td>22</td></tr><tr><td>Total</td><td>135</td></tr></table></td></tr>
<tr><td>Subject 7:
Discussion on the syllabus of teaching for the students admitted to first year in 2018-19 (3rd and 4th semester Syllabus)</td><td>Chairman BoS, proposed the detailed syllabus for 3rd and 4th semester students (Admitted to first year in 2018-19)
i. Dr. B. M. Rajprakash, Member BoS proposed to include Rubrics for tutorials in the 3rd and 4th semester subjects

ii. Dr. Vivek Khanzode, Member BoS proposed to include Pin-board experiment in Basic Engineering Laboratory

iii. Shri Narendra Shanbhag proposed to include safety Engg. as a part to syllabus

iv. Dr. Parag Bhargav suggested changes in the instruction methodology of Material Science and Metallurgy and to create material library, to include disassembly project and presentations in tutorials

v. Dr. Parag Bhargav suggested to include Tetrahedron and Powder Metallurgy in Material Science and Metallurgy

vi. Dr. Parag Bhargav proposed to change the title of the subject “Management and Entrepreneurship” to “Entrepreneurship and Management” as</td><td>The board accepted the proposal and faculty handling the subject are to design the rubrics for tutorials and details of tutorials to be maintained, which will help in accreditation process.

The board accepted the proposal to include Pin-board experiment in Basic Engineering Laboratory

The board had a long discussion on the topic and accepted to include safety standards as a subject in higher semester.

Board accepted the proposal

Board accepted the proposal to include the same.

Board decided to change the title to “Entrepreneurship and Management”. The syllabus will have first 2 units as Entrepreneurship and next 2 units as Management.</td></tr>
</table>

Subject	Proposal	Resolution
	Entrepreneurship is first and then Managing the enterprise	Board accepted the same and case studies and story telling to be included in tutorials of Entrepreneurship and Management subject.
	vii. Dr. Vivek Khanzode advised to use case-studies, story- telling, books to be read in teaching methodology of Entrepreneurship and Management	Board accepted the proposal to revise the syllabus
	viii. Shri. Narendra Shanbhag and Dr. B.M. Rajprakash suggested to revise the Machine Tools Technology subject in line with modern machining processes and non-conventional machining processes	Board accepted the same
	ix. Shri.Umapathi Radder suggested to revise Foundry and Welding Technology subject and to include Joining processes, Brazing, soldering, joining of plastics in the syllabus	The proposal was accepted to include Digital Methodology as a part of subject
	x. Dr. S. T. Dundur suggested to include Digital Metrology in Metrology and Measurement subject	Looking into contents of English (subject taught in first year) syllabus the unit Basics of grammar will be modified
	xi. Dr. C. M. Javalagi proposed to not to include basics of grammar in the proposed syllabus of Professional Communication syllabus	Board accepted the proposal
	xii. Dr. S. T. Dundur and Dr. B. M. Rajprakash suggested to include introduction to Geometrical Dimensioning and Tolerances in Computer Aided Machine Drawing Laboratory	
Subject 8: Inclusion of e-resource and NPTEL course in syllabus	Dr. B. M. Rajprakash informed to include e-resources and NPTEL course for every subject to be mentioned in the syllabus	It is decided to include e-resources and NPTEL courses in each subject syllabus.
Subject 9: CO–PO mapping for subject	Each subject CO-PO mapping was displayed to BOS members	The mapping of CO-PO for each subject was approved by Board

Subject	Proposal	Resolution
Subject 10: Guest Lecture from industry for course	The board proposed to include guest lecture from industry in teaching	Based on need, and availability of resources it is planned to utilize Industry Guest Lectures
Subject 11: Any other matter with the permission of Chair: i) Post-facto approval of Programme Educational Objectives (PEO's), Programme Specific Outcomes (PSO's) and Programme Outcomes (PO's)	For reaccreditation of department through NBA, it was decided to reframe Programme Educational Objectives (PEO's), Programme Specific Outcomes (PSO's) and Programme Outcomes (PO's). The modified PEO'S, PSO's and PO's were presented to the Board.	Board accepted and approved the PEO'S, PSO's and PO's

The meeting was concluded with the vote of thanks to the chair by Prof. D.D. Chillal

Enclosure-1

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

The Board of Studies (BoS) meeting of Industrial and Production Engineering department was held on 17-06-2017 at 11.00 am in the Board Room of Basaveshwar Engineering College (A), Bagalkot.

The minutes of the meeting are as below:

Dr. C. M. Javalagi Chairman BOS initiated the BOS meeting by welcoming the BOS members

Dr. C. M. Javalagi presented the scheme and syllabus for the students admitted to first year on 2015-16 and 2016-17

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>I. Discussion on subjects and syllabus (V, VI, VII and VIII semester) for the students admitted to first year in 2015-16 and 2016-17.</td><td>The Proposed Scheme of teaching was presented. The scheme is as below
<table>
<tr><th>Semester</th><th>Credits</th></tr>
<tr><td>First</td><td>25.00</td></tr>
<tr><td>Second</td><td>25.00</td></tr>
<tr><td>Third</td><td>25.50</td></tr>
<tr><td>Fourth</td><td>26.00</td></tr>
<tr><td>Fifth</td><td>25.00</td></tr>
<tr><td>Sixth</td><td>24.50</td></tr>
<tr><td>Seventh</td><td>25.00</td></tr>
<tr><td>Eighth</td><td>24.00</td></tr>
<tr><td>Total</td><td>200.00</td></tr>
</table></td><td>The board accepted the scheme of teaching with modifications in sixth and eighth semester</td></tr>
<tr><td>i. The following modifications were suggested by BoS members</td><td>a. Mr .Gitan Ginde suggested including polymers and composites in Material science subject.</td><td>The board accepted the suggestion of Mr. Gitan Ginde and syllabus will be included in Material Science & Metallurgy subject for next academic year (2018-19) or the students admitted to first year in 2017-18.</td></tr>
<tr><td></td><td>b. Dr. N. S. Narahari recommended to include Mechanical Engineering Design by E.S. Shigley in reference books</td><td>The board accepted the proposal by Dr. N. S. Narahari.</td></tr>
<tr><td></td><td>c. Dr. N. S. Narahari suggested the include Maynard’s standards and value stream mapping to be included Industrial Engineering subject.</td><td>The board accepted to include the same</td></tr>
</table>

Subject	Proposal	Resolution
	d. Mr. Gitan Ginde and Dr. N. S. Narahari proposed to change the title of the subject CAD/CAM to "Digital Design and Manufacturing" and to include the following topics I. Introduction to Product life cycle management II. Additive manufacturing III. CAD tool programming IV. Parametric modeling	The board accepted the proposal and the subject to be titled as **"Digital Design and Manufacturing".** The necessary and relevant topics will be included in the syllabus.
	e. Dr. N. S. Narahari asked to include Generally Accepted Accounting Principles (GAAP) in Engineering Economics and Financial Accounting subject	The board accepted the proposal by Dr. N. S. Narahari. And topic will be included in Engineering Economics and Financial Accounting subject.
	f.The board felt that the CAM laboratory to be renamed as Digital Manufacturing Laboratory	The board accepted the proposal to change the name of CAM Laboratory to Digital Manufacturing Laboratory and include exercises of additive manufacturing
	g. Dr. N. S. Narahari recommended to include value stream mapping exercises in Industrial Engineering Laboratory	The board accepted to include one or two exercises of value stream mapping
	h. Dr. N. S. Narahari suggested to modify UIP614L : Metal Cutting Laboratory to include different assemblies apart from mechanical assemblies as a part to exercises	The board accepted to change name of the laboratory to Metal Cutting and Product Assembly Laboratory and to include different assemblies as exercises
	i. Mr. Gitan Ginde suggested to include sheet metal in Theory of Metal Forming (UIP720C)	The board accepted to include sheet metal forming in Theory of Metal Forming (UIP720C)
	j. The board suggested to include manufacturing / process of plastic and polymer components as an elective	The board accepted the proposal and asked to prepare the syllabus for the same
	k. Operations Management (UIP 802C) subject to be shifted to seventh semester and one of the subject from seventh to be shifted to VIII semester	The board agreed to shift Operations Management subject to seventh semester and Theory of Metal Forming(UIP 702C) to be shifted to eighth Semester
	n. Dr. N.S.Narahari advocated to include an introductory charter about Micro Electro Mechanical Systems (MEMS) in Mechatronics subject	The board accepted the suggestion and it will be included in the Mechatronics subject
II. **Mini Project and Project Phase I & II Evaluation scheme and details**	• Mini Project with 4 credits and the Major Project Phase-I with 6 credits and Major Project Phase –II with 10 credits are introduced and modified. • The evaluation scheme was presented and discussed	• The board accepted the introduction of Mini Project and modification to Major Project Phase-I with 6 credits and Major Project Phase –II with 10 credits.

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td></td><td></td><td>• The evaluation schemes for the above three projects was discussed and accepted.</td></tr>
<tr><td>III. Discussion on New system with reduction of number of subjects and more laboratory/projects etc. to be considered</td><td>Dr. C.M.Javalagi suggested to include more number of innovative labs and also self-study components amounting to 24 credits so that the learner centric approach to be brought in.</td><td>The board discussed in length the pros and cons of introducing innovative labs and also self-study components in some of the subjects. The decision was postponed to next meeting as there is a necessity of more research and study to be done to take a decision on the same.</td></tr>
<tr><td>IV. Any other matter with the permission of chair

i. Discussion on introduction on stream specific Mathematics-III and Mathematics-IV subjects.

ii. Scheme of teaching for the students to be admitted to first year in 2017-18.</td><td>The syllabus received from Mathematics department was presented to the board and discussion was carried out.

The scheme of teaching for the students to be admitted to first year in 2017-18 was presented by Chairman, BoS and the details are:
<table>
<tr><th>Semester</th><th>Total</th></tr>
<tr><td>First</td><td>24</td></tr>
<tr><td>Second</td><td>26</td></tr>
<tr><td>Third</td><td>24</td></tr>
<tr><td>Fourth</td><td>25</td></tr>
<tr><td>Fifth</td><td>24</td></tr>
<tr><td>Sixth</td><td>26</td></tr>
<tr><td>Seventh</td><td>26</td></tr>
<tr><td>Eighth</td><td>25</td></tr>
<tr><td>Total</td><td>200</td></tr>
</table></td><td>The board felt that for Industrial and Production Engineering students the following topics on Fourier Series (III Sem.) and Special Functions (IV Sem.) are not much of importance. Instead of them Bivariate statistical analysis and Introduction to Multivariate Analysis to be included. The board authorized the Chairman, BoS to communicate the same to Mathematics Board for consideration.

The Board accepted the same with the suggestion, that and the necessary modifications can be made whenever necessary arises</td></tr>
<tr><td colspan="3">The meeting ended with the vote of thanks by Prof. H.R.Patil.</td></tr>
</table>

BASAVESHWAR ENGINEERING COLLEGE (A), BAGALKOT

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING

The Board of Studies (BoS) meeting of Industrial and Production Engineering department was held on 17-06-2017 at 11.00 am in the Board Room of Basaveshwar Engineering College (A), Bagalkot.

The minutes of the meeting are as below:

Dr. C. M. Javalagi Chairman BOS initiated the BOS meeting by welcoming the BOS members

Dr. C. M. Javalagi presented the scheme and syllabus for the students admitted to first year on 2015-16 and 2016-17

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<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>I. Discussion on subjects and syllabus (V, VI, VII and VIII semester) for the students admitted to first year in 2015-16 and 2016-17.</td><td>The Proposed Scheme of teaching was presented. The scheme is as below
<table><tr><th>Semester</th><th>Credits</th></tr><tr><td>First</td><td>25.00</td></tr><tr><td>Second</td><td>25.00</td></tr><tr><td>Third</td><td>25.50</td></tr><tr><td>Fourth</td><td>26.00</td></tr><tr><td>Fifth</td><td>25.00</td></tr><tr><td>Sixth</td><td>24.50</td></tr><tr><td>Seventh</td><td>25.00</td></tr><tr><td>Eighth</td><td>24.00</td></tr><tr><td>Total</td><td>200.00</td></tr></table></td><td>The board accepted the scheme of teaching with modifications in sixth and eighth semester</td></tr>
<tr><td>i. The following modifications were suggested by BoS members</td><td>a. Mr .Gitan Ginde suggested including polymers and composites in Material science subject.</td><td>The board accepted the suggestion of Mr. Gitan Ginde and syllabus will be included in Material Science & Metallurgy subject for next academic year (2018-19) or the students</td></tr>
</table>

Subject	Proposal	Resolution
		admitted to first year in 2017-18.
	b. Dr. N. S. Narahari recommended to include Mechanical Engineering Design by E.S. Shigley in reference books	The board accepted the proposal by Dr. N. S. Narahari.
	c. Dr. N. S. Narahari suggested the include Maynard's standards and value stream mapping to be included Industrial Engineering subject.	The board accepted to include the same
	d. Mr. Gitan Ginde and Dr. N. S. Narahari proposed to change the title of the subject CAD/CAM to "Digital Design and Manufacturing" and to include the following topics I. Introduction to Product life cycle management II. Additive manufacturing III. CAD tool programming IV. Parametric modeling	The board accepted the proposal and the subject to be titled as **"Digital Design and Manufacturing".** The necessary and relevant topics will be included in the syllabus.
	e. Dr. N. S. Narahari asked to include Generally Accepted Accounting Principles (GAAP) in Engineering Economics and Financial Accounting subject	The board accepted the proposal by Dr. N. S. Narahari. And topic will be included in Engineering Economics and Financial Accounting subject.
	f.The board felt that the CAM laboratory to be renamed as Digital Manufacturing Laboratory	The board accepted the proposal to change the name of CAM Laboratory to Digital Manufacturing Laboratory and include exercises of additive manufacturing
	g. Dr. N. S. Narahari recommended to include value stream mapping exercises in Industrial Engineering Laboratory	The board accepted to include one or two exercises of value stream mapping
	h. Dr. N. S. Narahari suggested to modify UIP614L : Metal	The board accepted to change name of the

Subject	Proposal	Resolution
	Cutting Laboratory to include different assemblies apart from mechanical assemblies as a part to exercises	laboratory to Metal Cutting and Product Assembly Laboratory and to include different assemblies as exercises
	i. Mr. Gitan Ginde suggested to include sheet metal in Theory of Metal Forming (UIP720C)	The board accepted to include sheet metal forming in Theory of Metal Forming (UIP720C)
	j. The board suggested to include manufacturing / process of plastic and polymer components as an elective	The board accepted the proposal and asked to prepare the syllabus for the same
	k. Operations Management (UIP 802C) subject to be shifted to seventh semester and one of the subject from seventh to be shifted to VIII semester	The board agreed to shift Operations Management subject to seventh semester and Theory of Metal Forming(UIP 702C) to be shifted to eighth Semester
	n. Dr. N.S.Narahari advocated to include an introductory charter about Micro Electro Mechanical Systems (MEMS) in Mechatronics subject	The board accepted the suggestion and it will be included in the Mechatronics subject
II. **Mini Project and Project Phase I & II Evaluation scheme and details**	• Mini Project with 4 credits and the Major Project Phase-I with 6 credits and Major Project Phase –II with 10 credits are introduced and modified. • The evaluation scheme was presented and discussed	• The board accepted the introduction of Mini Project and modification to Major Project Phase-I with 6 credits and Major Project Phase –II with 10 credits. • The evaluation schemes for the above three projects was discussed and accepted.
III. **Discussion on New system with reduction of number of subjects and more laboratory/projects etc. to be considered**	Dr. C.M.Javalagi suggested to include more number of innovative labs and also self-study components amounting to 24 credits so that the learner centric approach to be brought in.	The board discussed in length the pros and cons of introducing innovative labs and also self-study components in some of the subjects. The decision was postponed to next meeting as there is a necessity of more research and study to be done to take a decision on the same.

<table>
<tr><th>Subject</th><th>Proposal</th><th>Resolution</th></tr>
<tr><td>IV. Any other matter with the permission of chair

i. Discussion on introduction on stream specific Mathematics-III and Mathematics-IV subjects.</td><td>The syllabus received from Mathematics department was presented to the board and discussion was carried out.</td><td>The board felt that for Industrial and Production Engineering students the following topics on Fourier Series (III Sem.) and Special Functions (IV Sem.) are not much of importance. Instead of them Bivariate statistical analysis and Introduction to Multivariate Analysis to be included. The board authorized the Chairman, BoS to communicate the same to Mathematics Board for consideration.</td></tr>
<tr><td>ii. Scheme of teaching for the students to be admitted to first year in 2017-18.</td><td>The scheme of teaching for the students to be admitted to first year in 2017-18 was presented by Chairman, BoS and the details are:
<table><tr><th>Semester</th><th>Total</th></tr><tr><td>First</td><td>24</td></tr><tr><td>Second</td><td>26</td></tr><tr><td>Third</td><td>24</td></tr><tr><td>Fourth</td><td>25</td></tr><tr><td>Fifth</td><td>25</td></tr><tr><td>Sixth</td><td>26</td></tr><tr><td>Seventh</td><td>25</td></tr><tr><td>Eighth</td><td>25</td></tr><tr><td>Total</td><td>200</td></tr></table></td><td>The Board accepted the same with the suggestion, that and the necessary modifications can be made whenever necessary arises</td></tr>
<tr><td colspan="3">The meeting ended with the vote of thanks by Prof. H.R.Patil.</td></tr>
</table>

B.V.V Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

BOARD OF STUDIES MEETING

RESOLUTIONS

Agenda for the 12th Board of Studies meeting in Department of Information Science & Engineering to be held on 13.06.2020 (Saturday) at 10.00 am ((Through Online mode)

Sub (1)	:	Welcome and introduction of the BOS members.
Res.	:	Head of the department (HoD) welcomed the BoS members. All the BoS members introduced themselves.
Sub (2)	:	Appraisal of the activities in the department from 16.06.2019 to 12.06.2020
Res.	:	The HoD appraised the activities/events in the department from 16.06.2019 to 12.06.2020. The Board members appreciated the efforts of HoD and the staff and the progress made by the department [Annexure 1].
Sub (3)	:	Discussion and approval of the curriculum (175 Credits). Applicable to the students admitted to BE 1st semester during the academic year 2018-19 and the students admitted to lateral entry in the academic year 2019-20.
Res.	:	The HoD presented the 2018-19 scheme for 175 credits and syllabus for 3rd to 8th semester courses (2018-19 scheme). It was resolved to approve the same [Annexure 2].
Sub (4)	:	Discussion and approval of draft scheme (175 Credits). Applicable to the students admitted to BE 1st semester during the academic year 2020-21 and the students admitted to lateral entry in the academic year 2021-22.
Res.	:	The HoD presented the draft scheme 2020-21 scheme for 175 credits and syllabus for 3rd to 8th semester courses (2020-21 scheme) which is modified due to redistribution of credits to various heads of curriculum. This redistribution is shown in credit distribution table. It was resolved to approve the same [Annexure 3]. Further the detailed discussion of the scheme will be taken up in the next BoS meeting before commencement of next academic year in offline mode.
Sub (5)	:	Seeking post-facto approval of resolutions of Internal BoS meeting held on 22.02.2020.
Res.	:	It was resolved to approve the resolutions of Internal BoS meeting held on 22.02.2020 [Annexure 4]
Sub (6)	:	To appraise the results of the odd semesters for the academic year 2019-20.
Res.	:	The HoD presented the results and analysis of the odd semester for the academic year 2019-20. Members of the board expressed their satisfaction about the performance of the students [Annexure 5].
Sub (7)	:	To seek approval for the revised Vision and Mission statements of the department

pproval of resolutions of Internal BoS meeting held on 22.02.2020.

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

RESOLUTIONS OF THE INTERNAL BOARD OF STUDIES MEETING

Proceedings and resolutions of internal Board of Studies meeting in Department of Information Science & Engineering held on 22.02.2020 at 12:00 pm.

Sub. : To define the subject code for the online course (UIS807O) of 1 credit for 8th semester student (Academic Year 2019-20) as mentioned in the Table below.

Resolution : It is decided in the internal BOS meeting to define the subject code for the online course registered by the student in the 8th semester as below.

S.No.	USN	Name	Subject Offered
			Code: Title: Credit: Sem
1	2BA16IS044	Parvati Belagali	Online Course (UIS807O) :1 credit: 8th sem

BOS Members Present:

Sl. No	Name of the Staff	Position	Signature
1.	Smt. S. R. Patil	Chairman	
2.	Smt. S. P. Bangarshetti	Member	
3.	Shri. P. V. Kulkarni	Member	
4.	Smt. B. M. Reshmi	Member	
5.	Smt. P. S. Puranik	Member	
6.	Shri. A. D. Devangavi	Member	
7.	Smt. R. B. Math	Member	

Res.	:	The HoD presented the revised Vision and Mission statements of the department. After discussion it was resolved to approve the same [Annexure 6].
Sub (8)	:	Seeking approval for 1 credit adjustment by offering Programming with Python Lab (UIS719L) for 7th semester students [2017-18 batch]
Res.	:	To compensate 1 credit deficit to Final year students of 2017-18 entry batch owing to the reduction in the credits of Java programming course it was resolved to offer Programming with Python Lab (UIS719L) for 1 credit to the same students.
Sub (9)	:	Seeking approval to offer B.E. Honours in ISE programme as per VTU guidelines.
Res.	:	It was resolved to approve to offer B.E. Honours in ISE programme as per VTU guidelines.
Sub (10)	:	Any other matters with the permission of the chair i) It was suggested to include concepts of QT design with Python course. ii) Dr. V. P. Baligar, suggested to offer courses on Parallel Processing and High-Performance Computing iii) Dr.Snajeev S. Sannakki suggested to include concepts of Video processing in Image processing course. iv) Dr. Devi Prasad suggested to include Rust programming language. v) Dr M. M. Kodabagi Dr. Smt Ganga Holi suggested to design a course encouraging project-based learning. vi) Shri Santosh Hanaji suggested to include concepts of J2EE in Advanced Java programming course. vii) Shri Yadunandan L. suggested to expose students GitHubs like platforms. viii) ~~Prof.~~ ChannabasavarajRaravi suggested deputation of students to reputed industries and startups for internship.

Rane
13/6/20

11th BOS

B.V.V Sangha's
BASAVESHWARENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
DEPARTMENT INFORMATION SCIENCE & ENGINEERING

BOARD OF STUDIES MEETING

RESOLUTIONS

Agenda for the 11th Board of Studies meeting in Department of Information Science & Engineering to be held on 15.06.2019 (Saturday) at 10.30 am.

Sub (1)	:	To appraise the activities in the department from 01.07.2018 to 14.06.2019
Res.	:	The HoD presented the activities/events in the department from 01.07.2018 to 14.06.2019. The Board members appreciated the efforts of HoD and staff and the progress made by the department.
Sub (2)	:	To approve i) the revised scheme for students taking admission to 1st year from academic year 2018-19 onwards (175 credit) and for lateral entry students taking admission to 2nd year from academic year 2019-20 onwards [Annexure 1] ii) syllabus for the 3rd and 4th semester courses (2018-19 scheme) [Annexure 1]
Res.	:	The HoD presented the 2018-19 scheme for 175 credits and syllabus for the 3rd and 4th semester courses (2018-19 scheme). It was resolved to approve the same [Annexure 1].
Sub (3)	:	To appraise results for the odd and even semesters for the academic year 2018
Res.	:	The HoD presented the results and analysis for the odd and even semester for the academic year 2018-19. The attainments of POs and PSOs for the year 2018 was also presented. It was resolved to approve to continue with considering previous 3 years results and percentage of attainment of POs and to set the revised target values for POs and PSOs. Members of the board expressed their satisfaction about the performance of the students.

Dr. S. R. PATIL	Present 15/6/19	Smt. R. B. MATH	Present 15/6/19
Shri. P. V. KULKARNI	15/6/19	Dr. SUVARNA NANDYAL	
Dr. B. M. RESHMI		Dr. VIJAY RAJPUROHIT	
Dr. S. P. BANGARSHETTI	15/6/19	Dr. GURUPRAKASH C. D	
Smt. P. S. PURANIK	15/06/19	Dr. PIYUSHKUMAR PAREEK	
Dr. A. D. DEVANGAVI	15/6/19	Mr. VIRUPAKSH GUDAGUNTI	
MR. SURESH DARGA	-	MISS. VIJAYALAXMI	

Sub (4)	:	To seek approval for the review of Vision and Mission statements of the department
Res.	:	It was approved to review Vision and Mission statements of the department as per the suggestion of NBA expert team.
Sub (5)	:	Seeking post-facto approval for the guidelines of evaluation for Internship (UIS808I) component [Annexure 2]
Res.	:	The HoD presented the guidelines for evaluation of Internship (UIS808I) as in [Annexure 2] in line with the guidelines of VTU. It was resolved to approve the same.
Sub (6)	:	Seeking post-facto approval for offering courses on soft skills viz. Introduction to Essential Business Communication (UHS001N), UHSOO2N and Preparedness for External Opportunities (UHS003N) during 4th, 5th and 6th semesters respectively
Res. Res	:	To enhance employability skills among students it was resolved to approve the offering of courses on soft skills viz. Essential Business Communication (UHS001N), UHSØO12N and Preparedness for External Opportunities (UHS003N) during 4th, 5th and 6th semesters.
Sub (7)	:	Seeking post-facto approval for permitting the students to register for online courses (MOOCS, NPTEL, etc.) during 2018-19 and 2019-20 as audit courses
Res.	:	It was resolved to approve to permit the students to register for online courses (MOOCS, NPTEL, etc.) during 2018-19 and 2019-20 as audit courses.
Sub (8)	:	Seeking approval for offering Discrete Mathematical Structures (DMS) for 3 credits in place of PCTW during 3rd semester (2018-19 scheme)
Res.	:	It was approved not to offer PCTW during 3rd semester as the same concepts were included as part of courses on soft skills. Hence it was approved to offer Discrete Mathematical Structures (DMS) for 3 credits in place of PCTW during 3rd semester (2018-19 scheme).

Dr. S. R. PATIL	Rasr 15/6/19	Smt. R. B. MATH	Rbmath 15/6/19
Shri. P. V. KULKARNI		Dr. SUVARNA NANDYAL	
Dr. B. M. RESHMI		Dr. VIJAY RAJPUROHIT	
Dr. S. P. BANGARSHETTI		Dr. GURUPRAKASH C. D	
Smt. P. S. PURANIK		Dr. PIYUSHKUMAR PAREEK	
Dr. A. D. DEVANGAVI		Mr. VIRUPAKSH GUDAGUNTI	
MR. SURESH DARGA		MISS. VIJAYALAXMI	

Sub (9)	:	Seeking post-facto approval for the resolutions of Internal BoS meetings conducted on 16.08.2018, 13.12.2018, 18.01.2019 and 03.06.2019 [Annexure 3]
Res.	:	It was resolved to approve the resolutions of Internal BoS meetings conducted on 16.08.2019, 13.12.2018, 18.01.2019 and 03.06.2019 [Annexure 3].
Sub (10)	:	Any other matters with the permission of the chair i) It was suggested to make certification of atleast 1 online course either compulsory or mandatorycourse subjected to the approval in Joint Board meeting. ii) It was suggestedto practice AICTE recommendation for the students to score 100 points (~~250~~ 300-400 hrs.) w. r. t. community services before completion of degree from the academic year 2019-20. iii) It was recommended to split one-time conduction of 3 weeks induction program of AICTE into 11 days program during 1st semester and 10 days program during 2nd semester respectively (2019-20 scheme). iv) It was suggested to conduct remedial classes for the students eligible for make-up exam in the courses having passing percentage below 60%. v) It was suggested to motivate the final year students to publish atleast 1 paper in national / International journal. vi) It was suggested to include concepts on Linear Algebra in Computational Methods in Computer Science during 3rd semester.

Dr. S. R. PATIL	Part 15/6/19	Smt. R. B. MATH	15/6/19
Shri. P. V. KULKARNI	15/6/19	Dr. SUVARNA NANDYAL	
Dr. B. M. RESHMI		Dr. VIJAY RAJPUROHIT	
Dr. S. P. BANGARSHETTI	15/6/19	Dr. GURUPRAKASH C. D	
Smt. P. S. PURANIK	15/06/19.	Dr. PIYUSHKUMAR PAREEK	
Dr. A. D. DEVANGAVI	15/6	Mr. VIRUPAKSH GUDAGUNTI	
MR. SURESH DARGA		MISS. VIJAYALAXMI	

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

RESOLUTIONS OF THE INTERNAL BOARD OF STUDIES MEETING

Proceedings and resolutions of internal Board of Studies meeting in Department of Information Science & Engineering held on 13.12.2018 at 11.00 am.

Sub1. : To introduce optional open elective on soft skills for 1 credit.

Resolution: After discussion it is resolved to introduce an optional elective on soft skills for 1 credit during 6th semester from the academic year 2018-19.

Sub2. : To introduce online courses for 1 credit.

Resolution: To encourage the students to take online courses such as MOOC, SWAYAM, NPTEL for 1 credit, it is resolved to give options to the students to register for above said online courses during the supplementary semester or 8th semester from the academic year 2018-19.

Members Present:

Sl. No	Name of the Staff	Signature
1.	Smt. S. R. Patil	
2.	Smt. S. P. Bangarshetti	
3.	Shri. P. V. Kulkarni	13/12/2018
4.	Smt. B. M. Reshmi	
5.	Smt. P. S. Puranik	
6.	Shri. A. D. Devangavi	
7.	Smt. R. B. Math	13/12/18
8.	Ajey Ghale	
9.	Jyoti Ambi	

10th BOS

B.V.V Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

RESOLUTIONS OF THE BOARD OF STUDIES MEETING

Resolutions of the Board of Studies meeting in Department of Information Science & Engineering held on 30.6.2018 at 10.30 pm are:

Welcome speech by Prof. P. S. Puranik.		
Bouquet Presentation by Dr. L. B. Bhajantri.		
Introduction of BoS members by Prof. P.V.Kulkarni.		
Sub (1)	:	To appraise the activities in the department 07.01.2018 onwards to 29.06.2018.
Res.	:	The HoD presented the activities/events of the department 07.01.2018 to 29.06.2018. The Board members appreciated the efforts of HoD and the staff for their efforts and the progress made by the department.
Sub (2)	:	To approve the syllabus for 2017-18 scheme (from III Semester to VIII Semester of ISE Department).
Res.	:	The HoD presented the syllabus of the coursesfor 2017-18 scheme (from III Semester to VIII Semester of ISE Department). It was resolved to approve the same.
Sub (3)	:	To approve the draft scheme from the academic year 2018-19 (from I Semester to VIII Semester of ISE Department).
Res.	:	The HoD presented the draft scheme of the curriculum effective from the academic year 2018-19 (from III Semester to VIII Semester of ISE Department). It was resolved to approve the scheme of the curriculum.
Sub (4)	:	To appraise the results for the even semester for the academic year 2017-18.
Res.	:	The HoD presented the results and analysis for the even semester for the academic year 2017-18. Members of the board expressed their satisfaction about the performance of the students.

1. Dr. Keshavamurhty B. N
2. Dr. Suvarna Nandyal
3. Dr. Vijay Rajpurohit
4. Dr. Guruprakash C. D
5. Dr. Piyushkumar Pareek
6. Mr. Virupaksh Gudagunti
7. Smt. Shashikala J. B
8. Smt. S. P. Bangarshetti
9. Shri. P. V. Kulkarni
10. Smt. B. M. Reshmi
11. Smt. S. R. Patil
12. Smt. P. S. Puranik
13. Shri. A. D. Devangavi
14. Smt. R. B. Math
13. Ajey Ghale
15. Jyoti Ambi

Sub (5) **Res.**	: :	To appraise the SAR uploaded with 2017-18 as Current Academic Year. SAR with 2017-18 as Current Academic Year (CAY) uploaded on NBA web portal was presented by HoD. Members of the board expressed their satisfaction about the content of the report. Members also discussed about the documentation to be made available during the visit of NBA expert committee.
Sub (6) **Res.**	: :	Seeking postfacto approval for offering CIP and EVS courses as mandatory courses for lateral entry students admitted during the academic years 2017-18 and 2018-19. It was resolved to approve offering of CIP and EVS courses as mandatory courses for lateral entry students admitted during the academic years 2017-18 and 2018-19.
Sub (7) **Res.**	: :	Seeking approval for 8th time registration for Physics course (UPH122C/222C). It was resolved to accord the permission for Rahul Kulkarni to register Physics course (UPH122C/222C) for 8th time.
Sub (8) **Res.**	: :	Any other matters with the permission of the chair. 1. It was suggested to add tutorials to Operating Systems and Software Engineering courses. 2. It was suggested to offer Big Data and Analytics at 6th semester. 3. It was suggested to include concepts on collections in advanced Java Programming course.
Vote of thanks by Prof. B. M. Reshmi.		

1. Dr. Keshavamurhty B. N
2. Dr. Suvarna Nandyal
3. Dr. Vijay Rajpurohit
4. Dr. Guruprakash C. D
5. Dr. Piyushkumar Pareek
6. Mr. Virupaksh Gudagunti
7. Smt. Shashikala J. B
8. Smt. S. P. Bangarshetti
9. Shri. P. V. Kulkarni
10. Smt. B. M. Reshmi
11. Smt. S. R. Patil
12. Smt. P. S. Puranik
13. Shri. A. D. Devangavi
14. Smt. R. B. Math
13. Ajey Ghale
15. Jyoti Ambi

9th BoS

B.V.V Sangha's
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

BOARD OF STUDIES MEETING

Resolution

Resolution for the 9th Board of Studies meeting in Department of Information Science &Engineering to be held on 06.01.2018(Sunday) at 10.30 am.

Welcome speech by Prof. P. S. Puranik.		
Bouquet Presentation by Dr. L. B. Bhajantri.		
Introduction of BoS members by Prof. P.V.Kulkarni.		
Sub (1)	:	To appraise the activities in the department 29.01.2017 onwards till 05.01.2018.
Res.	:	The HoD presented the activities/events of the department 30.01.2017 till 05.01.2018. The Board members appreciated the efforts of HoD and the staff for their efforts and the progress made by the department.
Sub (2)	:	To approve the draft scheme of the curriculum from the academic 2018-19(from III Semester to VIII Semester of ISE Department).
Res.		The HoD presented the draft scheme of the curriculum effective from the academic year 2018-19 (from III Semester to VIII Semester of ISE Department). It was resolved to approve the scheme of the curriculum.
Sub (3)	:	To appraise the results for the academic year 2016-17 and Odd semester 2017-18.
Res.		The HoD presented the results and analysis for the academic year 2016-17 and Odd semester 2017-18.Members of the board expressed their satisfaction about the performance of the students.
Sub (4)	:	Post facto approval to a) Offer /exempt courses for credit adjustment. b) 6th attempt registration.
Res.		a) It was resolved to offer/ exempt some of the courses to the year back students (Details attached as Annex 1). b) The board members accorded the permission to Ms. SoumyaChippar (USN: 2BA13IS063) for 6th attempt registration.

Dr. Keshavamurhty B. N
Dr. Suvarna Nandyal
Dr. Vijay Rajpurohit
Dr. Guruprakash C. D
Dr. Prakashkumar Pareek
Mr. Virupaksh Gudagunti
Smt. Shashikala J. B.
Prof. S. P. Bangarshetti
Prof. P.V.Kulkarni
Prof. B. M. Reshmi
Prof. S. R. Patil
Prof. P. S. Puranik
Prof. A.D.Devangavi
Prof. R. B. Math 6/1/18

Sub (4) Res	:	To appraise the PSOs of the Department. The HoD presented the PSOs of the Department framed as per the guidelines of NBA. Board members consented with the PSOs of the department.
Sub (5)	:	Any other matters with the permission of the chair.
Vote of thanks by Prof. B.M.Reshmi.		

Dr. Keshavamurhty B. N

Dr. Suvarna Nandyal

Dr. Vijay Rajpurohit

Dr. Guruprakash C. D

Dr. Pixashkumar Pareek

Mr. Virupaksh Gudagunti

Smt. Shashikala J. B.

Prof. S. P. Bangarshetti

Prof. P.V.Kulkarni

Prof. B. M. Reshmi

Prof. S. R. Patil

Prof. P. S. Puranik

Prof. A.D.Devangavi

Prof. R. B. Math 9/1/18

7th BOS (Copy 1)

B.V.V Sangha's
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

RESOLUTIONS OF THE BOARD OF STUDIES MEETING

Resolutions of the Board of Studies meeting in Department of Information Science & Engineering held on 17.01.2016 at 10.30 pm:

Welcome speech by Prof P. S. Puranik.		
Introduction of BoS members By Prof P. V. Kulkarni.		
Brief about Autonomy and Credit based learning system by Dr. S. P. Bangarashetti.		
Sub (1)	:	To approve the draft scheme (from III Semester to VIII Semester of ISE Department) from the academic year 2016-17
Res	:	It was resolved to implement the presented draft scheme (from III Semester to VIII Semester of ISE Department) from the academic year 2016-17 with the following suggestions: i. To combine the contents of Computer Organization and Logic Design and offer single course.(Computer Organization and Design-H/w and S/w interface) ii. To offer Information Systems theory course at the 3rd semester level iii. To increase the credit weightage of Data Structure course from 4 to 5 credits and decrease the credit weightage of Discrete Mathematical Structures from 4 to 3 credits. iv. To add concepts of Embedded C programming in Microprocessor and Microcontroller course v. To offer Embedded System theory and lab course during 4th semester instead of Microprocessor and Microcontroller theory and Analysis and Design lab. vi. To add assignments pertaining to Analysis and Design in C++ laboratory vii. To offer DBMS lab during 5th semester in place of Microprocessor and

SPB	PVK	BMR	PSP	RBM 17/1/16	LBB	MVN
VRN	SPA	KC	AS	NJK	RGM	SSK

		Microcontroller lab viii. To offer Software Engineering based Project Management course during 7th semester in place of Mgmt and Entrepreneurship course. ix. To offer Information Security, Cyber Security, Data Mining, Cloud Computing, Soft Computing course as core course in appropriate semesters instead of File and Information Structures course. x. To make Project as a 20 credit course with credits averaged over semesters. xi. To make Seminar component based on Project work. xii. To offer 2 credit self learning course(with support of online courses).
Sub (2) **Res**	: :	Ratification of the permission to change the internal evaluation process for the subject Advanced Java Programming(UIS036E). It was ratified to change the internal evaluation process for the course mentioned in the subject. It was approved to conduct the third CIE test based on laboratory assignments.
Sub (3) **Res**	: :	Ratification of the registration of the students exceeding five attempts in the same course. It was ratified to approve the registration of the following students who have already attempted for 5 times in the same course with a legitimate request application. 1. Yamanesh Ganganalli USN:2BA09IS071 2. Jayaraj Ganjihal USN:2BA10IS407
Sub (4)	:	Any other matters with the permission of the chair. i. Recommended to revisit the syllabus of Basic Electronics course ii. To offer theory and lab courses in the same semester iii. To explore 176 credit model instead of 200 credit model for the programme
Vote of thanks by Prof B. M. Reshmi.		

SPB	PVK	BMR	PSP	RBM 17/11/16	LBB	MVN
VRN	SPA	KC	AS	NJK	RGM	SSK

Members of the BOS.

Name	Signature	Name	Signature
Smt. Dr. S P Bagarashetti.		Dr. Murulidhar V N	
Mr. P V Kulkarni		Mr. V R Najangud	
Smt. B M Reshmi		Dr. K Chandrasekaran	
Smt. Roopa B Math		Dr. S P Algur	
Smt. Preeti Puranik		Mr. Aravind Sharma	
Mr. Lokesh Bhajantri		Mr. Nandakishore J Kulkarni	
Ms. Soumya Kandagal		Mr. Rakesh Madharakhandi	

SPB	PVK	BMR	PSP	RBM 17/11/16	LBB	MVN
VRN	SPA	KC	AS	NJK	RGM	SSK

B.V.V.S

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS) BAGALKOT

DEPARTMENT OF MANAGEMENT STUDIES

Proceedings of 12th Board of Studies (BOS) meeting

Following points have been discussed during the 12th Board of Studies meeting which was held on 26th June 2021 from 10.00 am to 1.30 pm, through online mode.

Sub (1)	:	To appraise of activities/events conducted/organized and the progress made by the department since inception.
Res (1)	:	The activities/events organized and the progress made by the department was presented by the BOS Chairman Dr. Rashmi Hunnur to all the BOS members. The board members appreciated the progress made by the department.
Sub (2)	:	To present the minutes of previous BOS meeting held on 10th July 2020.
Res (2)	:	The minutes of previous BOS meeting held on 10th July 2020 was apprised to the members present.
Sub (3)	:	To discuss and seek post-facto approval of the scheme of teaching and evaluation of I to IV Semesters MBA programme for students admitted to 2020-21 batch.
Res (3)	:	The scheme of teaching and evaluation of MBA I to IV semesters was presented to the board members and it was resolved to approve the scheme for students admitted to 2020-21 batch. See Annexure (1)
Sub (4)	:	To discuss and seek approval for the syllabus of III & IV Semesters MBA programme for students admitted to 2020-21 batch.
Res (4)	:	The syllabus of III & IV semester MBA programme was discussed in the meeting and it was resolved to approve the syllabus. See Annexure (2).
Sub (5)	:	To discuss the scheme of evaluation for Internship & Project Phase –I & II for the students admitted to 2020-21 batch.
Res (5)	:	The scheme of evaluation of Internship (PBA330I), Project Phase-I (PBA329P), Project Phase-II (PBA429P) were presented to the BOS members and it was resolved to approve the schemes of evaluation for the students admitted to 2020-21 batch. See Annexure (3, 4 & 5).

Dr. Rashmi Hunnur | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Mr. Mohan Kumar** | **Dr. Sanjay Hanji**

Prof. Brijmohan Vyas | **Dr. R.B. Tapashetti** | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Vishal Patil**

Miss. Soubhagya Halakatti

Sub (6)	:	To discuss and seek approval for the provision of offline/online internship for III semester students of 2020-21 joining batch.
Res (6)	:	The provision of online internship for III semester students was discussed and considering the present situation of COVID-19, it was resolved to approve the provision of online internship for the III semester students of 2020-21 joining batch. The board also went on suggesting that if internships cannot be provided under any circumstances then this internship credits can be converted as individual seminars or any other activity and examinations can be conducted.
Sub (7)	:	To discuss and seek approval for the distribution of credits for MBA programme for students admitted to 2021-22 batch.
Res (7)	:	The MBA programme credit distribution was presented to the board members. The credit distribution was well under the guidelines prescribed by VTU and it was resolved to approve the credit distribution for the students admitted to 2021-22 batch. See Annexure (6)
Sub (8)	:	To discuss and seek approval for the scheme of teaching and evaluation of I to IV Semesters MBA programme for students admitted to 2021-22 batch.
Res (8)	:	The scheme of teaching and evaluation of MBA I to IV semesters was presented to the board members and it was resolved to approve the scheme for students admitted to 2021-22 batch. See Annexure (7)
Sub (9)	:	To discuss and seek approval for the syllabus of I & II Semesters MBA programme for students admitted to 2021-22 batch.
Res (9)	:	The syllabus of I & II semester MBA programme was discussed where board members put forth some suggestions and it was resolved to approve the syllabus. See Annexure (8).
Sub (10)	:	To discuss and seek post-facto approval of CIE & SEE question paper pattern of MBA programme w.e.f. academic year 2020-21.
Res (10)	:	The CIE & SEE question paper patterns of MBA programme were presented to the board members and it was resolved to approve both w.e.f. academic year 2021-22. See Annexure (9).
Sub (11)	:	To discuss the scheme of evaluation for Internship & Project Phase –I &II (batch-wise) for the students admitted to 2021-22 batch.
Res (11)	:	The scheme of evaluation of Internship (PBA340I), Project Phase-I (PBA339P), Project Phase-II (PBA439P) was presented to the BOS members and it was resolved to approve the schemes of evaluation for the students admitted to 2021-22 batch. See Annexure (10 & 11).

Dr. Rashmi Hunnur | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Mr. Mohan Kumar** | **Dr. Sanjay Hanji**

Prof. Brijmohan Vyas | **Dr. R.B. Tapashetti** | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Vishal Patil**

Miss. Soubhagya Halakatti

<table>
<tr><td>Sub (12)</td><td>:</td><td>To discuss the scheme of evaluation for Seminar (PBA128S), Business Analytics Lab (PBA230L), Presentation Lab (PBA231L) for the students admitted to 2021-22 batch.</td></tr>
<tr><td>Res (12)</td><td>:</td><td>The scheme of evaluation of Seminar (PBA128S), Business Analytics Lab (PBA230L), Presentation Lab (PBA231L) was presented to the BOS members and it was resolved to approve the schemes of evaluation for the students admitted to 2021-22 batch. See Annexure (12, 13 & 14).</td></tr>
<tr><td>Sub (13)</td><td>:</td><td>To discuss the eligibility criteria for Makeup examination w.e.f 2021-22 academic year.</td></tr>
<tr><td>Res (13)</td><td>:</td><td>The student has to satisfy the criteria of obtaining a minimum of 80% marks in the CIE to be eligible for ‘X’ Grade. Makeup examination will be offered to such students who are eligible for ‘X’ Grade. It was resolved to approve this criteria for Makeup examinations w.e.f. 2021-22 academic year.</td></tr>
<tr><td>Sub (14)</td><td>:</td><td>To seek post-facto approval for the program outcomes, competencies and performance indicators for MBA programme w.e.f. 2020-21 joining batches.</td></tr>
<tr><td>Res (14)</td><td>:</td><td>The program outcomes, competencies and performance indicators of MBA programme were presented to the BOS members and it was resolved to approve the same for implementation w.e.f. 2020-21 joining batches. See Annexure (15).</td></tr>
<tr><td>Sub (15)</td><td>:</td><td>To discuss and seek approval for the new VTU guidelines w.r.t.
a. CIE & SEE Weightage
b. Grading pattern
c. Eligibility in CIE & SEE
d. Vertical progression</td></tr>
<tr><td>Res (15)</td><td>:</td><td>The above points were discussed by the BOS members and it was resolved to approve the following w.e.f. 2021-22 joining batches:
a. 50% weightage for CIE and 50% weightage for SEE
b. The grading pattern for MBA Programme
<table>
<tr><td>Grade</td><td>S</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr>
<tr><td>Grade Point</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>4</td><td>0</td></tr>
<tr><td>Marks</td><td>90 to 100</td><td>80 to 89</td><td>70 to 79</td><td>60 to 69</td><td>55 to 59</td><td>50 to 54</td><td>0 to 49</td></tr>
</table>
c. Eligibility in CIE and SEE: For a pass in a theory course, the student shall secure minimum of 50 % of the maximum marks prescribed in the CIE (Continuous Internal Evaluation and 40 % of marks in SEE (Semester End Examination) and 50 % in the aggregate of CIE and SEE marks.
d. Vertical Progression: A student shall have not more than 2 F grades (or 2 backlogs) to get promoted from first year to second year in MBA programme.</td></tr>
</table>

Dr. Rashmi Hunnur | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Mr. Mohan Kumar** | **Dr. Sanjay Hanji**

Prof. Brijmohan Vyas | **Dr. R.B. Tapashetti** | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Vishal Patil**

Miss. Soubhagya Halakatti

Sub (16)	:	Any other matter with the permission of the chair
Res (16)	:	No other matters came-up and meeting was concluded. Dr. Sanjay Hanji proposed vote of thanks to all the Board Members.

Dr. Rashmi Hunnur | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Mr. Mohan Kumar** | **Dr. Sanjay Hanji**

Prof. Brijmohan Vyas | **Dr. R.B. Tapashetti** | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Vishal Patil**

Miss. Soubhagya Halakatti

Chairman BOS & Head of Department

B.V.V.Sangha's
BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS) BAGALKOT
DEPARTMENT OF MANAGEMENT STUDIES

Proceedings of 11th Board of Studies (BOS) meeting

Following points have been discussed during the 11th Board of Studies meeting which was held on 10th July 2020 at 10.30 am to 3.00 pm, through Video Conferencing (VC).

Sub(1)	:	To appraise of activities/events conducted/organized and the progress made by the department since inception.
Res.(1)	:	The activities/events organized and the progress made by the department was presented by the BOS Chairman Dr. Sanjay Hanji to all the BOS members. The board members appreciated the progress made by the department.
Sub(2)	:	To present the minutes of previous BOS meeting held on 22nd June 2019.
Res (2)	:	The minutes of previous BOS meeting held on 22nd June 2019 was apprised to the members present.
Sub(3)	:	To discuss and seek approval for the distribution of credits for MBA programme for students admitted to 2020-21 batch.
Res.(3)		The MBA programme credit distribution was presented to the board members. The credit distribution was well under the guidelines prescribed by VTU and it was resolved to approve the credit distribution for the students admitted to 2020-21 batch. See Annexure (1)
Sub(4)	:	To discuss and seek approval for the scheme of teaching and evaluation of I to IV Semesters MBA programme for students admitted to 2020-21 batch.
Res.(4)		The scheme of teaching and evaluation of MBA I to IV semesters was presented to the board members and it was resolved to approve the scheme for students admitted to 2020-21 batch. See Annexure (2)

Dr. Sanjay Hanji | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Dr. P.C. Geeta** | **Prof. R.V. Navalagi**

Mr. Mohan Kumar | **Mr. Nitin Nayak** | **Dr. Shreelatha Rao** | **Dr. Rashmi Hunnur** | **Prof. Brijmohan Vyas**

Dr. R.B. Tapashetti | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Harun Kudachi** | **Miss. Radhika Yadav**

Mr. Ranganath T.

Sub(5)	:	To discuss and seek approval for the syllabus of I & II Semesters MBA programme for students admitted to 2020-21 batch.
Res.(5)		The syllabus of I & II semester MBA programme was discussed where board members put forth some suggestions and it was resolved to approve the syllabus. See Annexure (3) The suggestions in various subjects: • Management & Organizational Behaviour: To add - learning styles and learning models • IT for Business: To add - Industry 4.0, BYOD, Business Apps • Financial Management: To add - Financial ethics, • Managing Human Resources: To add - Types of interviews, exit interview, rewards and recognition, trends and challenges. • Board members suggested to add some component of Indian Ethos and Ethics in different subjects wherever possible.
Sub(6)	:	To discuss: i) Number of CIE tests & their distribution of marks w.e.f. academic year 2020-2021. ii) Distribution of remaining 10 marks for other activities in the respective courses w.e.f. academic year 2020-2021.
Res.(6)		Both the points were discussed and resolved with following comments: i). Board members discussed the number of CIE tests and their distribution of marks which can be used w.e.f. academic year 2020-21. Two CIE tests of 20 marks each was finalized along with other 10 remaining marks activities (See Annexure 4). The board members suggested adding 5 marks quiz as compulsory question in the CIE question papers, if possible. ii). Board members approved to add Assignments/ Case Study/ Course Mini Project/ Field Work / Course Seminars / Quiz etc. or combination of these for evaluation of remaining 10 marks in CIE assessment. The board suggested that the faculty members handling the subjects should be given liberty to choose their 10 marks components to appropriately suit to their subject requirements.

Dr. Sanjay Hanji | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Dr. P.C. Geeta** | **Prof. R.V. Navalagi**

Mr. Mohan Kumar | **Mr. Nitin Nayak** | **Dr. Shreelatha Rao** | **Dr. Rashmi Hunnur** | **Prof. Brijmohan Vyas**

Dr. R.B. Tapashetti | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Harun Kudachi** | **Miss. Radhika Yadav**

Mr. Ranganath T.

Sub(7)	:	To discuss SEE question paper pattern of MBA programme w.e.f. academic year 2020-21.
Res.(7)		The SEE question paper pattern of MBA programme was discussed and it was resolved to approve the same w.e.f. academic year 2020-21. See Annexure (5)
Sub(8)	:	To discuss the scheme of evaluation for Seminar (PBA128S), Business Analytics Lab (PBA230L), Presentation Lab (PBA231L) for the students admitted to 2020-21 batch.
Res.(8)	:	The scheme of evaluation of Seminar (PBA128S), Business Analytics Lab (PBA230L), Presentation Lab (PBA231L) was presented to the BOS members and it was resolved to approve the schemes of evaluation for the students admitted to 2020-21 batch. See Annexure (6, 7 & 8)
Sub(9)	:	To discuss the criteria of student passing in all the subjects of all the previous semesters before submission of the project work thesis for similarity check, for MBA programme.
Res.(9)	:	The MBA final year students have subjects along with project phase-1 and phase-2 in III and IV semesters respectively. Since they have subjects also registered along with projects in their III and IV semesters, it was resolved to not to have this criteria for submission of MBA project thesis for similarity check. The students should be able to submit their project work thesis for similarity check and eventually submit the thesis for evaluation. All other rules for submission of project work thesis for similarity check remains applicable. This resolution is also applicable for the students of next forth coming batches.
Sub(10)		To discuss and seek approval for the provision of online internship for III semester students of 2019-20 joining batch.
Res.(10)		The provision of online internship for III semester students was discussed and considering the present situation of COVID-19, it was resolved to approve the provision of online internship for the III semester students of 2019-20 joining batch. The board also went on suggesting that if internships cannot be provided under any circumstances then this internship credits can converted as individual seminars or any other activity and examinations can be conducted.

Dr. Sanjay Hanji | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Dr. P.C. Geeta** | **Prof. R.V. Navalagi**

Mr. Mohan Kumar | **Mr. Nitin Nayak** | **Dr. Shreelatha Rao** | **Dr. Rashmi Hunnur** | **Prof. Brijmohan Vyas**

Dr. R.B. Tapashetti | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Harun Kudachi** | **Miss. Radhika Yadav**

Mr. Ranganath T.

Sub(11)	:	Any other matters with permission of the chair i) Presentation of model course plan, as prescribed by the AICTE Exam Reforms Policy and to discuss the program outcomes for MBA Programme. ii) Discussion about adding quiz assessment for workshops.
Res.(11)		Some of the discussions with the permission of the chair are: i) Dr. Shreelatha Rao presented the model course plan for MBA programme. Board members appreciated and approved the model course plan and asked to prepare similar course plan for all other subjects. The program outcomes for MBA programme were discussed and it was finalized to adopt AICTE approved learning/program outcomes. ii) It was advised by the board members to add quiz assessment for workshops/training programmes conducted by industry/academic experts in the departments.

Dr. Sanjay Hanji | **Dr. Prashanth C.** | **Dr. Praveen Kulkarni** | **Dr. P.C. Geeta** | **Prof. R.V. Navalagi**

Mr. Mohan Kumar | **Mr. Nitin Nayak** | **Dr. Shreelatha Rao** | **Dr. Rashmi Hunnur** | **Prof. Brijmohan Vyas**

Dr. R.B. Tapashetti | **Prof. Vaibhav Deshpande** | **Miss. Shruti Talikoti** | **Mr. Harun Kudachi** | **Miss. Radhika Yadav**

Mr. Ranganath T.

Dr. Sanjay V Hanji
Chairman BOS & Head of Department

B.V.V.S's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS)
BAGATKOT
Department of Management Studies
MBA Programme

Proceedings of 10th Board of Studies meeting held on 22nd June 2019 at 10.00am in the MBA Seminar Hall

The 10th Board of Studies meeting was held on 22nd June 2019 in the seminar hall and the resolutions made are as follows.

The chairman of Board of Studies Dr. Sanjay V. Hanji, Head of the Department, Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of studies.	
Sub (1)	To discuss and approve guidelines and scheme of evaluation of Internship (PBA330I), Project Phase - I (PBA329P) and Project Phase - II (PBA429P) .
Res:	After the discussion it was resolved to approve the guidelines and scheme of evaluation of Internship (PBA330I), Project Phase - I (PBA329P) and Project Phase - II (PBA429P)
Sub (2)	To approve Course objectives and Course outcomes of all courses of III and IV semester.
Res:	After the discussion it was resolved to approve Course objectives and Course outcomes of all courses of III and IV semester.
Sub (3)	To review and approve the syllabus of all courses of III and IV semester
Res:	After the discussion it was resolved to approve the syllabus of III & IV semester with fallowing inclusions: • To include Block chain management in the course Supply Chain Management (PBA422C) • To include the topic of sexual harassment in the course Industrial Relations and Legislations (PBA326E)
	No other subjects came for discussions and the meeting was concluded with the vote of thanks by the Dr. R.B. Tapashetti, Coordinator, BOS.

Chairman, BOS
(Dr. Sanjay V. Hanji)

B.V.V.S's

Basaveshwar Engineering College (Autonomous) Bagalkot.

Department of management Studies (MBA)

Proceedings of the Ninth meeting of the Board of Studies
Held at 10:00am, on Tuesday 3dr July 2018

1. The chairman of Board of Studies Dr. Shreelatha Rao Department of Management Studies and Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies and Presented Proceedings of Seventh BOS meeting.
2. Before taking up the regular agenda, Dr. Shreelatha Rao presented report about the Department.

The resolutions of the Board of Studies of the Eighth meeting held on 25th January 2018 were presented to the Board

1. After discussion it was resolved to approve the Syllabus and Scheme of I semester to IV Semester for the academic year 2018-2020
2. Syllabus of I & II semester for the academic year 2018-19 were discussed and approved
3. Seminar I and Seminar II guidelines and scheme of evaluation were discussed and approved
4. Internship (PBA331I) and project Phase I (PBA329P)and Phase IIPBA429P) weightage increased through enhancing credit and displayed in the scheme attached

Prof Sumangala Badami member and Assistant Professor in the department of Management studies thanked all the members for their continuous support, Cooperation and valuable suggestions.

Chairman, BOS
(Dr. Shreelatha R. Rao)

Basaveshwar Engineering College (Autonomous) Bagalkot.
Department of management Studies (MBA)
Proceedings of the 8th meeting of the Board of Studies
Held at 10:30 am, on Thursday, 25th January 2018 at Board room

1. The chairman of Board of Studies Dr. Sanjay Hanji, Department of Management Studies and Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies and Presented Proceedings of Seventh BOS meeting.
2. Before taking up the regular agenda, Dr. Sanjay Hanji presented report about the Department.

   Resolution:
   The minutes of the Board of Studies of the Seventh meeting held on 8th July 2017 were discussed in the meeting and no comments were mentioned in the Board of Studies and confirmed the minutes. Chairman also read modified previously suggested syllabus and scheme

3. The Chairman presented new syllabus for I and II semester of MBA Programme for the academic year 2016-17 as in appendix 1.

   Resolution:
   After discussion it was resolved to approve the Syllabus and Scheme of III and IV Semester MBA from 2018-19 with modifications.

   The Board of studies members suggested the following points;

- The Board of Studies members suggested for modification with reference to Operations Management to include some theoretical concepts as Service delivery system, logistics concepts, transportation modules, service operations
  .
- The Board of Studies members suggested for modification with reference to Strategic Management to include some concepts on red ocean strategy, blue ocean strategy.
  .
- The Board of Studies members suggested for modification with reference to Consumer Behaviour to include activities related to Human psychology, perception, neuro marketing .

- The Board of Studies members suggested for title modification with reference to strategic talent management.

- The Board of Studies members discussed strategic brand management & integrated marketing communication to be combined and Rural marketing subject to be given as a elective and that will be taken up in the next Board of Studies Meeting for future action.

Chairman, BOS
(Dr. Sanjay V. Hanji)

Basaveshwar Engineering College (Autonomous) Bagalkot.

Department of management Studies (MBA)

Proceedings of the 7th meeting of the Board of Studies

Held at 10:00 am, on Saturday, 8th July 2017 at MBA Seminar Hall

1. The chairperson of Board of Studies Dr. Shreelatha Rao HOD, Department of Management Studies, and Basaveshwar Engineering College extended a hearty welcome to all the members of the Board of Studies and Presented Proceedings of Sixth BOS meeting.
2. Before taking up the regular agenda, Dr. Rashmi Hunnur presented about the Department
3. **Resolution**:

   After discussion the approval was taken for the syllabus of I and II semester and Scheme for all four semesters of MBA for the year 2017-19.

The Board of Studies members discussed and approved the following points:

The Board of Studies members discussed and suggested modifications subject wise which is detailed as below:

- The Board of Studies members suggested for modification with reference to Management & Organizational Behaviour to add topic related to current trends.
- The Board of Studies members suggested for modification with reference to Marketing Management to remove few concepts from third unit syllabus related to Integrated Marketing Communication, which is repeated in IV Semester specialization subjects and also suggested to add new trends of Marketing.
- The Board of Studies members suggested for modification with reference to IT For Managers to include analytical reports and wireless technologies like Mobile Applications.
- The Board of Studies members suggested for modification with reference to Managerial communication to include virtual meetings concepts & etiquettes of conference calls.

- The Board of Studies members suggested with reference to Business Law & Ethics to include the concepts like Code of Conduct of organization.
- The Board of Studies members suggested with reference to Managing Human Resource to change the recruitment concept as talent acquisition.

Prof. Sumangala. S. Badami, member and Assistant Professor in the Department of Management Studies, thanked all the members for their continuous support, cooperation and valuable suggestions.

Shubatha. R. Rao

HOD

PROFESSOR & HEAD
Department of Management Studies
MBA Programme
Basaveshwar Engineering College
BAGALKOT-587102

Department of Mechanical Engineering

Basaveshwar Engineering College Bagalkot

BOS meeting held on 05-06-2017 at 11 am in HOD chamber

Members Present

Sr.No	Name	Designation	Signature
1.	Dr.S.N.Kurbet	Chairman	
2.	Dr.P.B.Gangavati	Member	
3.	Dr.G.B.Rudrakshi	Member	
4.	Dr.B.K.Venkanna	Member	
5.	Dr.S.S.Balli	Member	
6.	Dr.M.S.Hebbal	Member	
7.	Dr.V.V.Kuppast	Member	
8.	Dr.S.G.Saraganachari	Member	
9.	Dr.S.C.Kamate	Member (VTU Nominee)	
10.	Dr.Aravind M.Y	Member (External)	

Proceedings of the BOS meeting held on 5th June 2017

1. Proceedings of the Local BOS held on 1st June 2017 was approved.
2. In view of making practical exposure more for the students, the subject Turbo Machine code UME 504C of 5th semester is shifted to 7th semester with code UME 704C and in it's place, Project code UME 508P for 4 credits is introduced .
3. Scheme for III semester to VIII semester for the year 2017-18 batch was discussed and finalized.
4. The students of UG and PG requested for change of electives, number of attempts and permission for writing examination and registration for the semesters after the stipulated period by giving undertaking has been approved.
5. The above changes will come into effect immediately unless and otherwise specified

Date;05.06.2017

Chairman BOS

Department of Mechanical Engineering

Basaveshwar Engineering College Bagalkot

BOS meeting held on 01-06-2017

Sr.No	Name		Signature
1.	Dr.S.N.Kurbet	Chairman	
2.	Dr.P.B.Gangavati	Member	
3.	Dr.G.B.Rudrakshi	Member	
4.	Dr.B.K.Venkanna	Member	
5.	Dr.S.S.Balli	Member	
6.	Dr.M.S.Hebbal	Member	
7.	Dr.V.V.Kuppast	Member	
8.	Dr.S.G.Saraganachari	Member	

Proceedings of the Local BOS held on 1st June 2017

1.The students Mr.Raghuveer USN:2BA13CS057, Reregistered for Engineering Graphics subject with code:UME231C of 2 Credits ,attended the SEE for the same and answered for the question paper for the subject Engineering graphics of UME247 of 4 credits without noticing the proper code. Now the student has requested the Principal to consider the same answer booklet for evaluation and declaring the result.

2.After going through the syllabus and question papers for the same course title with different codes, it is observed that the syllabus for the 4 credit course is slightly of higher version. However the student can answer the questions in the question paper received by the student for the 4 credit course.

3.As per the letter given by the student to the Principal, the student has agreed to accept to consider the question paper , the committee has no objection for its evaluation and declaration of the result.

4.Hence it is resolved that the answer booklet of the student Mr.Raghuveer USN:2BA13CS057 can be considered for its evaluation and declaration of the result. The marks obtained for UME247C question paper may be considered for UME231C.

01-06-2017

BOS file

Chairman BOS

Chairman,
BOS
Dept. of Mech.Engg.
BEC, BAGALKOT

Department of Mechanical Engineering
Basaveshwar Engineering College Bagalkot

BOS meeting held on 07-07-2018 at 11 am in HOD chamber

Members Present

Sr. No	Name	Designation	Signature
1.	Dr. S. N. Kurbet	Chairman	
1.	Dr.B.K.Venkanna	Member	
2.	Dr. V. V. Kuppast	Member	
3.	Dr. S. G. Saraganachari	Member	
4.	Dr. G. B. Rudrakshi PG	Member	
5.	Dr. M. S. Hebbal PG	Member	
6.	Prof. M. M. Ganganahallimath	Member	
7.	Prof. H. M. Kadlimatti	Member	
8.	Prof. B. R. Endigeri	Member	
9.	Dr. R. A. Savanur ,	VTU Nominee	
10.	Dr. S. C. Kamate	Member (External)	
11.	Dr. Aravind M.Y	Member (External)	
12.	Shri. Shrihari Jadav	Member (Industry)	
13.	Prof. Shivasharanayya Swamy	Member (Alumni)	

Proceedings of the BOS meeting held on 7th July 2018

1. Discussions made in the Local BOS held on 4th and 6th July 2018 were considered.
2. New Scheme for BE Mechanical including the 1st year for 2018-19 batch was discussed and finalized.
3. Scheme for M.Tech in Production Technology and Machine Design for 2018-19 batches were discussed and finalized.
4. The students of UG and PG requested for number of attempts and permission for writing examination and registration for the semesters after the stipulated period by giving undertaking has been approved.
5. Certification courses are to be encouraged for UG Students and made mandatory for PG Students.
6. Suggested to create exclusive facility for project to be carried out by students in the department only.
7. Suggested to display the best students project in department premises and Hostel as well to attract/encourage the students.
8. More number of Inter disciplinary projects must be encouraged with the co-guide of other department. (such projects to be highlighted in NAAC/NBA/UGC/ AICTE and placement visit.)
9. The above changes will come into effect immediately unless and otherwise specified.

7/7/18

10. After the NBA report received in 2016, continuously PEOs have been reviewed and revised as per the opinion of the alumni /graduate and industry representatives/ focus group. The redefined PEOs and newly defined PSOs were discussed in this meeting and approval was taken.

11. It was resolved to invite the faculty from industry to teach domain oriented courses and soft skills from the next semester i.e., 2018-2019 even semester, as mentioned by chairman of BoS.

- The content of the subject "**Introduction to Naval Architecture & Marine Engineering**" was discussed in consultation with industrial experts **Cdr S. Navaneetha Krishnan**, Senior Deputy General Manager, Warship Design Centre, L&T Ship building; Chennai.
- The content of the subject "**Concepts of Design and Engineering of Industrial Piping Systems**" was discussed in consultation with industrial experts **Shri. Amogh Bhudihal**, Vijayapur and **Shri.B.M.Jamadagni**, former Deputy General Manager, JACOBS Engineering India Limited, Bangalore.
- The content of the subject, **Fundamentals of Quantitative Aptitude and Soft Skills and Career Planning & Professional Skills**, was discussed in consultation with Ethnus, Bangalore,Karnataka.

12. Accordingly the above mentioned decisions were finalized and permitted to implement during 2018-19 even semester.

13. Elective Automotive Engineering was dropped in 2018-19 even semester as it was not possible to accommodate more electives.

14. To prepare he students specialized in thermal area Power Plant Engineering and Turbo machinery subjects which were earlier the core subjects will be offered as elective subjects

15. It is observed that COs mentioned in the syllabus are generic in nature. It was suggested to make COs more specific relevant to the subject contents from the academic year 2018-19 even semester.

Chairman
BoS

Basaveshwar Engineering College, (Autonomous), Bagalkot

Department of Mechanical Engineering

BoS meeting held on 29.06.2019 at 10.30 am in HOD chamber

Members Present

Sr.No	Name	Designation	Signature
1.	Dr.B.K.Venkanna	Chairman	
2.	Dr.S.N.Kurbet	Member	
3.	Dr. V.V.Kuppast	Member	
4.	Dr.S.G.Saraganachari	Member	
5.	Dr.G.B.Rudrakshi PG	Member	29/6/19
6.	Prof.M.S.Hebbal PG	Member	29/6/2019
7.	Prof.M.M.Ganganahallimath	Member	29.06.19.
8.	Prof.H.M.Kadlimatti	Member	29/06/2019
9.	Prof.B.R.Endigeri	Member	
10.	Dr.R.A.Savanur ,	VTU Nominee	
11.	Dr.S.C.Kamate	Member (External)	29/6
12.	Dr.M.Y.Aravind	Member (External)	29/6
13.	Shri.Shrihari Jadav	Member (Industry)	
14.	Dr. Shivasharanayya Swamy	Member (Alumni)	29/06/19

Proceedings of the BoS meeting held on 29th June 2019

1. Chairman of the committee welcomed the members of the committee
2. The minutes of the BoS meeting held on 07.07.2018 were read and approved.
3. Approval was given for the subjects discussed in local BoS meeting held on 17.12.2018.
4. To adjust the credit/s for the BE programe, the students were permitted to register for the supplementary term as a special case is approved.

5. The detailed syllabus for 3rd and 4th semester, 175 credits scheme, admitted during 2018-2019 and 2019-2020 (lateral entry)onwards is approved
6. The students were sent to HAL Management Academy, Bangalore to study the course "Air Craft Design and Manufacturing" as special session semester, 3 credits with code UME005N are approved.
7. The following suggestions were given by the BoS Members
   a. For the new scheme some of the contents can be added as self learning topics
   b. Concerned Faculty may be assigned for online courses.
   c. Skill mapping for students may be carried out before 6th semester.
   d. Assembly Lab to be renamed as "Assembly Skill Development Lab".

Chairman BoS,
Mechanical Engineering,
BEC,Bagalkot

Shri. B.V.V.Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF MECHANICAL ENGINEERING

PROCEEDINGS OF THE MEETING OF BOARD OF STUDIES

A meeting of BoS (Board of Studies) of Mechanical Engineering courses under Autonomous system was held on Saturday, 23rd May 2020 at 10.30 AM through **ONLINE** mode (CISCO Webex Meet).

Members present

1. Dr. S. S. Balli	Chairman	
2. Dr. G. B. Rudrakshi	Member	
3. Dr. M. S. Hebbal	Member	
4. Dr. V. V. Kuppast	Member	
5. Smt. S. B. Wadawadagi	Member	
6. Dr. H. M. Kadlimatti	Member	
7. Prof.V.P.Girisagar	Member	
8. Prof.B.R.Endigeri	Member	
9. Dr. S. M. Jigajinni	Member	
10. Prof.M.M.G.Math	Member	
11. Prof.H.R.Patil	Member	
12. Dr. V. N. Gaitonde	VTU Nominee	
13. Dr. Shivasharanswamy	Academic	
14. Sri. Darshan Athani	Industrialist	
15. Sri. Gurunath Kashinakunte	Alumni	

Proceedings of the BoS meeting held on 23rd May 2020

1. The Chairman of the committee welcomed and introduced the members to the meeting.
2. The minutes of BoS meeting held on 29th June 2019 were read and approved.
3. The scheme and examination of I to VIII semesters, 175 credits to be admitted during academic year 2020 – 21 and III to VIII semester 135 credits lateral entry, to be admitted during academic year 2021 – 22 was presented and approved.

4. The scheme, examination and syllabus of V to VIII semesters, 175 credits admitted during academic year 2018 – 19 and III to VIII semester 135 credits lateral entry, admitted during academic year 2019 – 20 was presented and approved.
5. The modified syllabus and inclusion of new electives for B.E.VII and VIII semesters (200 credits) commenced from 2019-20 academic year (2016-17 admitted batch) was presented and approved.
6. The scheme of teaching & examination and contents of Syllabus for I to IV semesters of the M.Tech course in Machine Design commencing from 2020 – 21 academic year was presented and approved.
7. In the subject with the permission of Chair, it is resolved that the laboratory subjects UME 606L (Heat and Mass Transfer Laboratory) of 2 credits and UME637L (Heat and Mass Transfer Laboratory) with 1 credit may be treated equal as the syllabus is same. Therefore the case of student by name Mr.Honnagirivasu of USN 2BA15ME038 who has registered for UME606L, and attended & passed the subject (UME637L) may be declared having passed in UME606L with a fine of Rs.1,000/-.
8. The following suggestions were given by the BoS members.
   a. Inclusion of PLM (Products Life cycle Management) and ERP (Enterprise Resource Planning) as elective subjects
   b. Inclusion of Python, Artificial Intelligence and Machine Learning subjects for online courses.
   c. Re-titling of Industrial Management subject as Management and Entrepreneurship.
   d. Introduction of Composite Materials lab.
   e. Re-titling of Engineering Economics subject as Engineering Economics and Financial Accounting.
   f. Flexibility to introduce and rearrange the scheme and syllabus of the elective subjects within the semesters was permitted.

Date: 23.05.2020

Dr. S. S. Balli
Chairman Board of Studies
B.E. (Mech) Programme

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT
DEPARTMENT OF MECHANICAL ENGINEERING

[Government Aided Institute, Accredited by NBA, Affiliated to Visvesvaraya Technological University, Belagavi, Institute under TEQIP-I, II & III of World Bank, Recognized Research Centre of VTU, Belgavi and QIP]

S. Nijalingappa Vidyanagar
BAGALKOT – 587 102, Karnataka, India

Dr. M. S. Hebbal
Professor & Head

Ph:, 9481137429 Fax: 08354-234204
website: www.becbgk.edu
Email: mshebbal@gmail.com

Date: 10-07-2021

Board of Studies, Mechanical Engineering Department (2021 – 22)

1.	Dr. M. S. Hebbal	-	Chairman
2.	Dr. G. B. Rudrakshi	-	Member
3.	Dr. V. V. Kuppast	-	Member
4.	Smt. S. B. Wadawadagi	-	Member
5.	Dr. H. M. Kadlimatti	-	Member
6.	Prof. V. P. Girisagar	-	Member
7.	Prof. B. R. Endigeri	-	Member
8.	Dr. S. M. Jigajinni	-	Member
9.	Prof. M. M. G. Math	-	Member
10.	Prof. H. R. Patil	-	Member
11.	Prof. S. S. Davanageri	-	Member
12.	Dr. V. N. Gaitonde	-	VTU Nominee
13.	Dr. Shivasharanswamy	-	Academic Expert
14.	Sri. Darsh[illegible] Athani	-	Industry Representative
15.	Sri. Gurunath Kashinakunte	-	Alumni Representative
16.	Sri. Ramesh H	-	Invitee (Industries)
17.	Sri. B. G. Suresh	-	Invitee (Industries)
18.	Sri. G. R. Kulkarni	-	Invitee (Industries)

Shri. B.V.V.Sangha's

BASAVESHWAR ENGINEERING COLLEGE (AUTONOMOUS), BAGALKOT

DEPARTMENT OF MECHANICAL ENGINEERING

BOARD OF STUDIES 2021-22

MEETING PROCEEDINGS

A meeting of BoS (Board of Studies) of Mechanical Engineering courses under Autonomous system was held on Saturday, 10th July 2021 at 10.30 AM, through **ONLINE** mode (GOOGLE Meet link:https://meet.google.com/mar-yjme-rrb).

Members present

1. Dr. M. S. Hebbal	-	Chairman
2. Dr. G. B. Rudrakshi	-	Member
3. Dr. V. V. Kuppast	-	Member
4. Smt. S. B. Wadawadagi	-	Member
5. Dr. H. M. Kadlimatti	-	Member
6. Prof. V. P. Girisagar	-	Member
7. Prof. B. R. Endigeri	-	Member
8. Dr. S. M. Jigajinni	-	Member
9. Prof. M. M. G. Math	-	Member
10. Prof. H. R. Patil	-	Member
11. Prof. S. S. Davanageri	-	Member
12. Dr. V. N. Gaitonde	-	VTU Nominee
13. Dr. Shivasharanswamy	-	Academic Expert
14. Sri. Darshan Athani	-	Industry Representative
15. Sri. Gurunath Kashinakunte	-	Alumni Representative
16. Sri. Ramesh H	-	Invitee (Industries)
17. Sri. B. G. Suresh	-	Invitee (Industries)
18. Sri. G. R. Kulkarni	-	Invitee (Industries)

Proceedings of the BoS meeting held on 10th July 2021

Subject 1	:	Welcome address by the Chairman, BoS and introduction of new BoS members.
Resolution		The Chairman of the committee welcomed and introduced the members to the meeting.
Subject 2	:	To confirm the minutes of BoS meeting held on 23rd May 2020. Annexure-I
Resolution		The minutes of BoS meeting held on 23rd May 2020 were read and approved.

Subject 3	:	Approval of the curriculum i.e., scheme of teaching and examination for B.E. I to VIII semesters (175 credits) commencing from 2021 – 22 academic year. (for batch to be admitted in 2021-22). Annexure-II
Resolution		The scheme of teaching and examination for B.E. I to VIII semesters of 175 credits to be admitted during academic year 2021 – 22 and B.E. III to VIII semesters of 135 credits of lateral entry batch, to be admitted during academic year 2022 – 23 were presented and approved.
Subject 4	:	Approval of syllabus for B.E. VII and VIII semesters (175 credits) commencing from 2021-22 academic year (2018-19 admitted batch). Annexure-III
Resolution	:	The scheme of teaching and examination and detailed syllabus of B.E. VII to VIII semesters for 175 credits admitted during academic year 2018 – 19 and B.E. VII and VIII semesters for 135 credits lateral entry, admitted during academic year 2019 – 20 were presented and approved with four groups of department electives.
Subject 5	:	Approval of syllabus for B.E. V to VIII semesters (175 credits) commencing from 2021-22 academic year (2019-20 admitted batch). Annexure-IV
Resolution		The scheme of teaching and examination and detailed syllabus of B.E. V to VIII semesters for 175 credits admitted during academic year 2019 – 20 and B.E. V to VIII semesters for 135 credits lateral entry, admitted during academic year 2020 – 21 were presented and approved with four groups of department electives.
Subject 6	:	Approval of syllabus for B.E. III and VIII semesters (175 credits) commencing from 2021-22 academic year (2020-21 admitted batch). Annexure-V
Resolution		The scheme of teaching and examination and detailed syllabus of B.E. III to VIII semesters for 175 credits admitted during academic year 2020 – 21 and B.E. III to VIII semesters for 135 credits lateral entry, admitted during academic year 2021 – 22 were presented and approved.
Subject 7	:	Approval of scheme of teaching & examination and contents of Syllabus for I to IV semesters of the M. Tech course in Machine Design commencing from 2021 – 22 ~~academic year (2021-22 admitted batch). Annexure-VI~~
Resolution	:	The scheme of teaching and examination and contents of Syllabus for I to IV semesters of the M. Tech course in Machine Design commencing from 2021 – 22 academic year were presented and approved.
Subject 8	:	Approval of the credit adjustments for VIII semester (200 Credits) admitted during academic year 2017-18 from 199 to 200 credits. (The shortage of one Credit is adjusted by introducing Technical Seminar with code UME 832 S.)
Resolution	:	Ratification of 01 credit by introducing Technical Seminar with code UME 832 S from 199 to 200 credits is approved for VIII semester students (200 Credits) admitted during academic year 2017-18.
Subject 9		Approval of permission for the candidate Mr. Ambalal Kothari, bearing USN: 2BA15ME009, to register for both Project Phase – I (UME 702 P) and Project Phase – II (UME 802 P) during the academic year 2020-21.
Resolution		Mr. Ambalal Kothari, bearing USN: 2BA15ME009, failed in Project Phase – I during VII semester. It is approved for him to register for both Project Phase – I (UME 702 P) and Project Phase – II (UME 802 P) during the academic year 2020-21.
Subject 8	:	Any other matters with the permission of the chair.
Resolution		The following suggestions were given by the BoS members. a) Students should be encouraged, to make use of latest FEM tools like a. Abaqus, Hyper-mesh and LS Dyna in final year projects. b) Inclusion of PLM (Products Life cycle Management) and ERP (Enterprise Resource Planning) as elective subjects

		c) Inclusion of subjects like Python, Artificial Intelligence and Machine Learning subjects in the list of online courses. d) Link projects and internships. e) Inclusion of grinding, welding spraying technology in labs

Date: 10.07.2021

Dr. M. S. Hebbal
Chairman, Board of Studies
Mechanical Engineering Department
BEC(A), Bagalkot

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Revision History

Document Rev. 2.1 (January 14, 2019)

1. Organized all modules into 4 units

Document Rev. 2 (January 14, 2019)

1. Added course outcome for each semester
2. Added scheme of teaching and examination
3. Split topics according to units
4. Added course curriculum correlation table

Document Rev. 1 (December 10, 2018)

1. Created separate curriculum for existing 6th semester students and for existing 4th semester students.

Scheme of Teaching and Examination

Sl. No.	Subject Code	Subject	Credits	Hours/Week			Examination Marks		
				Lecture	Tutorial	Practical	CIE	SEE	Total
1.	To be allotted	To be finalized	1	1	0	0	50	50	100

Course Curriculum Correlation Table

Existing 6th Semester Students (Batch of 2020)

Semster 6

Aptitude Training	Career Skills Training	Soft Skills Training

Semester 7 - Phase I

Aptitude Skills Training	Career Skills Training	Simulation

Semester 7 - Phase II

Company Pattern Training	Simulation

Existing 4th Semester Students (Batch of 2020)

Semster 4

Aptitude Training	Career Skills Training	Soft Skills Training

Semester 5

Aptitude Skills Training	Career Skills Training	Soft Skills Training

Semester 6

Aptitude Skills Training	Career Skills Training	Soft Skills Training

Semester 7 - Phase I

Aptitude Skills Training	Career Skills Training	Simulation

Semester 7 - Phase II

Aptitude Skills Training	Career Skills Training	Simulation

1.

Curriculum for Existing 6th Semester Students (Batch of 2020)

Semester 6

OVERVIEW		
Semester	6	
Course Objectives	The course objectives for the first semester are as follows: 1. Cover fundamental topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills	
Course Outcome	After the course, the students will be able to do the following: 1. Answer multiple choice questions from fundamental topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Implement the tools and techniques learned in the soft skill session to build confidence and self-esteem	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	4	2
Reasoning Aptitude (RA)	4	2
Verbal Aptitude (VA)	4	2
Soft Skills (SS)	12	6
Career Skills (CS)	6	3
Total	30	15

DETAILS			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quant and Reasoning Aptitude Training			
1.	QA	Number Properties	2
2.	QA	Percentages	2
3.	RA	Linear and Circular Arrangement	2
4.	RA	Order and Rank	2
UNIT II – VerbalAptitude Training			
5.	VA	Parts of Speech	2
6.	VA	Reading Comprehension	2
UNIT III – Career Skills Training			
7.	CS	Introduction to Interview Etiquette	2
8.	CS	Introduction to GD Etiquette	2
9.	CS	Introduction to Resume Writing	2
UNIT IV – Soft Skills Training			
10.	SS	Six-Step Planning Process	2
11.	SS	Problem Solving through Design Thinking	2
12.	SS	Conflict Resolution through Assertiveness and Cooperation Matrix	2
13.	SS	Confidence through Body Language	2
14.	SS	Preparing and Delivering a Presentation	2
15.	SS	Self-Motivation	2

Semester 7

OVERVIEW		
Semester	7	
Course Objectives	The course objectives for the first semester are as follows: 1. Cover intermediate and advanced topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Solve pattern papers in the following domain: a. mass recruiters, and b. competitive exams. 3. Hone confidence and self-esteem through the following: a. career skills	
Course Objectives	After the course, the students will be able to do the following: 1. Answer multiple choice questions fromintermediate and advanced topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Answer questions from pattern papers in the following domain: a. mass recruiters, and b. competitive exams. 3. Implement the lessons learnt in the career skills modules to hone their interview and group discussion skills.	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	16	8
Reasoning Aptitude (RA)	12	6
Verbal Aptitude (VA)	8	4
Soft Skills (SS)	0	0
Career Skills (CS)	12	6
Pattern Papers (PP)	12	6
Total	60	30

DETAILS – Phase I			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Aptitude Skills Training			
1.	QA	Ratio, Proportion, and Variation	2
2.	QA	Averages, Mixtures, and Alligations	2
3.	QA	Simple Interest and Compound Interest	2
4.	QA	Profit and Loss	2
5.	VA	Sentence Correction	2
6.	VA	Error Spotting	2
7.	VA	Reading Comprehension	2
8.	VA	Analogies	2
9.	RA	Blood Relations and Direction Sense	2
10.	RA	Non-Verbal Reasoning	2
11.	RA	Syllogisms	2
12.	RA	Selection Decision Table	2
UNIT II – Career Skills Training			
13.	CS	Group Discussion – Simulation	2
14.	CS	Interview – Simulation	2

15.	CS	Resume Review	2
DETAILS – Phase II			
UNIT – III Advanced Aptitude Skills Training			
1.	QA	Time, Speed, and Distance	2
2.	QA	Time, and Work	2
3.	QA	Permutation and Combination	2
4.	QA	Probability	2
5.	RA	Cubes	2
6.	RA	Cross Variable Mapping	2
UNIT IV – Company Pattern Papers and Simulation			
7.	CP	Infosys Pattern Paper	2
8.	CP	TCS Pattern Paper	2
9.	CP	Capgemini Pattern Paper	2
10.	CP	Wipro Pattern Paper	2
11.	CP	UPSC and SSC Pattern Paper	2
12.	CP	Bank PO Pattern Paper	2
13.	CS	Technical Interview – Simulation	2
14.	CS	HR Interview – Simulation	2
15.	CS	Managerial Interview - Simulation	2

Curriculum for Existing 4th Semester Students (Batch of 2021)

Semester 4

OVERVIEW		
Semester	4	
Course Objectives	The course objectives for the semester are as follows: 1. Cover basic to intermediate topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills. 3. Hone career skills and industry awareness.	
Course Outcome	After the course, the students will be able to: 1. Answer multiple choice questions fromtopics in: a. quantitative aptitude,verbal aptitude, and reasoning aptitude. 2. Use tools and techniques learnt in soft skills modules to: a. build confidence and self-esteem. 3. Speak knowledgeable about career prospects and industry.	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	6	3
Reasoning Aptitude (RA)	6	3
Verbal Aptitude (VA)	6	3
Soft Skills (SS)	6	3
Career Skills (CS)	6	3
Total	30	15

DETAILS			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quantitative and Reasoning Aptitude Skills Training			
1.	QA	Factors and Multiples	2
2.	QA	Divisibility Rules	2
3.	QA	LCM and HCF	2
4.	RA	Puzzles	2
5.	RA	Venn Diagrams	2
6.	RA	Binary Logic	2
Unit II – Verbal Aptitude Skills Training			
7.	VA	Sentence Completion	2
8.	VA	Para Jumbles	2
9.	VA	Fill in the Blanks (Grammar)	2
Unit III – Career Skills			
10.	CS	Resume Building	2
11.	CS	Group Discussion - Fundamentals	2
12.	CS	Becoming Industry Aware	2
Unit IV – Soft Skills			
13.	SS	Personal Branding	2
14.	SS	Networking	2
15.	SS	Delivering a Prepared Speech	2

Semester 5

OVERVIEW		
Semester	5	
Course Objectives	The course objectives for the semester are as follows: 1. Cover advanced topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills. 3. Hone career skills and industry awareness. 4. Develop awareness of career paths and competitive exams.	
Course Outcome	After the course, the students will be able to: 1. Answer multiple choice questions from topics in: a. quantitative aptitude,verbal aptitude, and reasoning aptitude. 2. Use tools and techniques learnt in soft skills modules to: a. build confidence and self-esteem. 3. Speak knowledgeable about career paths and competitive exams.	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	6	3
Reasoning Aptitude (RA)	6	3
Verbal Aptitude (VA)	6	3
Soft Skills (SS)	6	3
Career Skills (CS)	6	3
Total	30	15

DETAILS			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quantitative and Reasoning Aptitude Skills Training			
1.	QA	Speed Maths	2
2.	QA	Areas and Volumes	2
3.	QA	Concept Review	2
4.	RA	Number Series and Letter Series	2
5.	RA	Coding and Decoding	2
6.	RA	Concept Review	2
UNIT II –Verbal Aptitude Skills Training			
7.	VA	Reading Comprehension	2
8.	VA	Listening Comprehension	2
9.	VA	Concept Review	2
Unit III – Career Skills			
10.	CS	Orientation to competitive exams, such as GATE, GRE, GMAT, CAT, UPSC, SSC, and Bank PO.	2
11.	CS	Group Discussion – Simulation	2
12.	CS	Orientation to career paths, such as core engineering, IT engineering, public sector, banking, sales and marketing, and entrepreneurship.	2
Unit IV – Soft Skills			
13.	SS	Dressing and Grooming	2
14.	SS	Professional Etiquette	2
15.	SS	E-mail Writing	2

Semester 6

OVERVIEW		
Semester	6	
Course Objectives	The course objectives for the semester are as follows: 1. Cover fundamental topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Build confidence and self-esteem through the following: a. life skills, and b. soft skills.	
Course Objectives	After the course, the students will be able to: 1. Answer multiple choice questions from topics in: a. quantitative aptitude,verbal aptitude, and reasoning aptitude. 2. Use tools and techniques learnt in soft skills modules to: a. communicate effectively with others, and to b. build proficiency in speaking English.	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	4	2
Reasoning Aptitude (RA)	4	2
Verbal Aptitude (VA)	4	2
Soft Skills (SS)	12	6
Career Skills (CS)	6	3
Total	30	15

DETAILS			
Sl. No.	**Domain**	**Topic**	**Hours**
UNIT I – Quantitative and Reasoning Aptitude Skills Training			
1.	QA	Number Properties	2
2.	QA	Percentages	2
3.	RA	Linear and Circular Arrangement	2
4.	RA	Order and Rank	2
UNIT II –VerbalAptitude Skills Training			
5.	VA	Parts of Speech	2
6.	VA	Reading Comprehension	2
Unit III – Career Skills			
7.	CS	Introduction to Interview Etiquette	2
8.	CS	Introduction to GD Etiquette	2
9.	CS	Introduction to Resume Writing	2
Unit IV – Soft Skills			
10.	SS	Six-Step Planning Process	2
11.	SS	Problem Solving through Design Thinking	2
12.	SS	Conflict Resolution through Assertiveness and Cooperation Matrix	2
13.	SS	Confidence through Body Language	2
14.	SS	Preparing and Delivering a Presentation	2
15.	SS	Self-Motivation	2

Semester 7

OVERVIEW		
Semester	7	
Course Objectives	The course objectives for the semester are as follows: 1. Cover intermediate and advanced topics in the following domains: a. quantitative aptitude, b. verbal aptitude, and c. reasoning aptitude. 2. Solve pattern papers in the following domain: a. mass recruiters, and b. competitive exams. 3. Hone confidence and self-esteem through the following: a. career skills	
Course Outcome	After the course, the students will be able to: 1. Answer multiple choice questions from topics in: a. quantitative aptitude,verbal aptitude, and reasoning aptitude b. company pattern papers 2. Use tools and techniques learnt in soft skills modules to: a. communicate effectively with others, and to b. build proficiency in speaking English. 3. Learn from feedback received from participation in interview and groups discussion simulations.	
Domain	**Hours**	**Modules**
Quantitative Aptitude (QA)	16	8
Reasoning Aptitude (RA)	12	6
Verbal Aptitude (VA)	8	4
Soft Skills (SS)	0	0
Career Skills (CS)	12	6
Pattern Papers (PP)	12	6
Total	60	30

DETAILS – Phase I			
Sl. No.	**Domain**	**Topic**	**Hours**
Unit I – Aptitude Skills Training			
1.	QA	Ratio, Proportion, and Variation	2
2.	QA	Averages, Mixtures, and Alligations	2
3.	QA	Simple Interest and Compound Interest	2
4.	QA	Profit and Loss	2
5.	VA	Sentence Correction	2
6.	VA	Error Spotting	2
7.	VA	Reading Comprehension	2
8.	VA	Analogies	2
9.	RA	Blood Relations and Direction Sense	2
10.	RA	Non-Verbal Reasoning	2
11.	RA	Syllogisms	2
12.	RA	Selection Decision Table	2
Unit II – Career Skills Training			

13.	CS	Group Discussion – Simulation	2
14.	CS	Interview – Simulation	2
15.	CS	Resume Review	2
DETAILS – Phase II			
Unit III – Advanced Aptitude Skills Training			
1.	QA	Time, Speed, and Distance	2
2.	QA	Time, and Work	2
3.	QA	Permutation and Combination	2
4.	QA	Probability	2
5.	RA	Cubes	2
6.	RA	Cross Variable Mapping	2
Unit IV – Company Pattern Paper and Simulation			
7.	CP	Infosys Pattern Paper	2
8.	CP	TCS Pattern Paper	2
9.	CP	Capgemini Pattern Paper	2
10.	CP	Wipro Pattern Paper	2
11.	CP	UPSC and SSC Pattern Paper	2
12.	CP	Bank PO Pattern Paper	2
13.	CS	Technical Interview – Simulation	2
14.	CS	HR Interview – Simulation	2
15.	CS	Managerial Interview - Simulation	2