

**Balaji Institute of Technology & Science**

Laknepally, NARSAMPET, Warangal (Rural) – 506331


Accredited By NBA (UG – CE, ME, ECE & CSE Programmes) & NAAC

(Affiliated to JNTUH, Hyderabad and Approved by the AICTE, New Delhi)

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1.2.2.1. Number of programmes in which CBCS/ Elective course system implemented.

In view of DVV 12 Programmes are highlighted in the enclosed document which is claimed under implementation of CBCS/Elective programmes. Information supporting the above was also attached.


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1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/elective course system has been implemented
(Current Year data) (10)

Name of all programs	whether adopting CBCS course system (yes/No)	Whether adopting elective course system (yes/No)	Programme Code	Year of imlementation of CBCS / elective course system
CIVIL	yes	yes	A01	2016(R16 Regulation)
EEE	yes	yes	A02	
MECH	yes	yes	A03	
ECE	yes	yes	A04	
CSE	yes	yes	A05	
CIVIL	yes	yes	A01	2015(R15 Regulation)
EEE	yes	yes	A02	
MECH	yes	yes	A03	
ECE	yes	yes	A04	
CSE	yes	yes	A05	
MBA	yes	yes	1E	2019(R19 Regulation)
MBA(MARKETING)	yes	yes	1E	2017(R17 Regulation)
MBA(Finance)	yes	yes	1E	
MBA(Human resource)	yes	yes	1E	
MBA(ENTREPRENEURSHIP)	yes	yes	1E	
MBA	yes	yes	1E	2015(R15 Regulation)
MBA(MARKETING)	yes	yes	1E	
MBA(Finance)	yes	yes	1E	
MBA(Human resource)	yes	yes	1E	
MBA(SYSTEMS)	yes	yes	1E	
M.TECH(CSE)	yes	yes	D58	2019(R19 Regulation)
M.TECH(SE)	yes	yes	D25	
M.TECH(CAD/CAM)	yes	yes	D04	
M.TECH(DS&CE)	yes	yes	D06	
M.TECH(EMBEDED SYSTEMS)	yes	yes	D55	
M.TECH(EPS)	yes	yes	D07	

M.TECH(CSE)	yes	yes	D58	2017(R17 Regulation)
M.TECH(SE)	yes	yes	D25	
M.TECH(CAD/CAM)	yes	yes	D04	
M.TECH(DS&CE)	yes	yes	D06	
M.TECH(EMBEDED SYSTEMS)	yes	yes	D55	
M.TECH(EPS)	yes	yes	D07	
M.TECH(CSE)	yes	yes	D58	2015(R15 Regulation)
M.TECH(SE)	yes	yes	D25	
M.TECH(CAD/CAM)	yes	yes	D04	
M.TECH(DS&CE)	yes	yes	D06	
M.TECH(EMBEDED SYSTEMS)	yes	yes	D55	
M.TECH(EPS)	yes	yes	D07	
M.TECH(CSE)	yes	yes	D58	2013(R13 Regulation)
M.TECH(SE)	yes	yes	D25	
M.TECH(CAD/CAM)	yes	yes	D04	
M.TECH(DS&CE)	yes	yes	D06	
M.TECH(EMBEDED SYSTEMS)	yes	yes	D55	
M.TECH(EPS)	yes	yes	D07	



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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by Andhra Pradesh Act No. 30 of 2003)

Kukatpally, Hyderabad - 500 085, Telangana (India)

Dr. N.V. RAMANA RAO

B.E., M.Tech., PGDCS., Ph.D (UK) Post Doc. (UK).

Professor of Civil Engg., &
REGISTRAR

Lr. No. A1/2293/2015

Date: 23.06.2015

To

The Principal & Director of the Constituent Autonomous College and Institutions of JNTUH.
The Principals of Autonomous Affiliated Colleges of JNTUH.

Sir,

Sub: JNT University Hyderabad – Academic & Planning Office – Implementation of Choice Based Credit System proposed by the UGC in the Constituent Autonomous College and Academic Institutions of JNTUH, and Autonomous Affiliated Colleges of JNTUH from the academic year 2015-16.

- Ref: 1. DO Lr. No. F1-1/2014 (Seey) dated 12.11.2014 of Prof. Jaspal S. Sandhu, Secretary, UGC, New Delhi.
2. Minutes of the Committee meeting dated 22.05.2015 and 08.06.2015.
3. Note orders of the Vice-Chancellor dated 23.06.2015.

The University Grants Commission (UGC) proposed Choice Based Credit System (CBCS) to be adopted by all the Universities in the country. This ensures mobility of students across all the higher educational institutions of the country as well as abroad since credits earned by the students seeking migration from one institution to another can be transferred.

Based on the UGC proposal, the University has constituted Committees to examine the UGC proposed Choice Based Credit System (CBCS) to be adopted by the University. Based on the resolutions of the Committees, I am by direction, you are requested to implement the Choice Based Credit System in Under-Graduate and Post-Graduate Programs in your College/Institution from the academic year 2015-16. Guidelines and instructions will be intimated shortly.

Necessary steps may be initiated to implement the Choice Based Credit System as per the UGC Guidelines.


Encl: UGC Guidelines.

Yours faithfully,


REGISTRAR


Copy to:

The Director of Evaluation
The Controller of Examinations.
P.A. to Vice-Chancellor
PA to Rector
PA to Registrar


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R16 REGULATION**CIVIL ENGINEERING (01)**

Electives offered by the University	Electives opted by the college
Open Elective-I CE511OE: Disaster Management. CS511OE: Operating Systems CS512OE: Database Management Systems ME514OE: Fundamentals of Mechanical Engineering	Fundamentals of Mechanical Engineering
Open Elective-II CE621OE: Remote Sensing and GIS CE622OE: GeoInformatics CE623OE: Intellectual Property Rights CS621OE: Java Programming CS622OE: Software Testing Methodologies CS623OE: Cyber Security	Java Programming
Open Elective-III CE831OE: Environmental Impact Assessment	
Professional Elective-I CE611PE Air Pollution and Control. CE612PE Advanced Structural Analysis. CE613PE Ground Water Development and Management. CE614PE Earth and Rock fill Dams and Slope	Ground Water Development and Management.



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Stability.	
Professional Elective-II CE721PE Stochastic Hydrology. CE722PE Construction Technology and Management. CE723PE Foundation Engineering. CE724PE Rehabilitation and Retrofitting of Structures.	Rehabilitation and Retrofitting of Structures.
Professional Elective-III CE731PE Watershed Management. CE732PE Prestressed Concrete. CE733PE Ground Improvement Techniques. CE734PE Railway and Airport Engineering.	Ground Improvement Techniques
Professional Elective-IV CE741PE Traffic Engineering. CE742PE Bridge Engineering. CE743PE Soil Dynamics and Machine Foundation. CE744PE Irrigation and Hydraulic Structures:	Irrigation and Hydraulic Structures.
Professional Elective-V CE851PE Waste Management. CE852PE Pavement Design. CE853PE Elements of Earthquake Engineering. CE854PE Water Resources Systems Analysis.	
Professional Elective-VI CE861PE Finite Element Methods for Civil Engineering. CE862PE Geoenvironmental Engineering.	



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CE863PE Design and Drawing of Irrigation Structures. CE864PE Industrial Waste Water Treatment.	
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Electrical & Electronics Engineering (02) –R16

Electives offered by the University	Electives opted by the college
<p style="text-align: center;">Open Elective-I</p> <p>EE511OE: Non-Conventional Power Generation EE512OE: Electrical Engineering Materials EE513OE: Nanotechnology CS511OE: Operating Systems CS512OE: Database Management Systems</p>	<p style="text-align: center;">Database Management Systems</p>
<p style="text-align: center;">Open Elective-II</p> <p>EE621OE: Design Estimation and Costing of Electrical Systems EE622OE: Energy Storage Systems EE623OE: Introduction to Mechatronics CS621OE: Java Programming CS622OE: Software Testing Methodologies CS623OE: Cyber Security</p>	<p style="text-align: center;">Java Programming</p>
<p style="text-align: center;">Open Elective-III</p> <p>EE831OE: Entrepreneur Resource Planning EE832OE: Management Information Systems EE833OE: Organizational Behavior</p>	
<p style="text-align: center;">Professional Elective-I</p> <p>EM611PE Computer Organization EE612PE Linear Systems Analysis EE613PE Linear and Digital IC Applications</p>	<p style="text-align: center;">Linear and Digital IC Applications</p>

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EE614PE Electrical and Electronics Instrumentation	
Professional Elective-II EE721PE -Digital Signal Processing EE722PE -HVDC Transmission EE721PE -Switch Mode Power Supplies EE724PE -Reliability Engineering	HVDC Transmission
Professional Elective-III EE731PE Digital Control Systems EE732PE Power Quality EE733PE Modern Power Electronics EE734PE Optimization Techniques	Power Quality
Professional Elective-IV EE741PE Programmable Logic Controllers EE742PE EHV AC Transmission Systems EE743PE Flexible A.C. Transmission Systems EE744PE Special Machines	Flexible A.C. Transmission Systems
Professional Elective-V EE851PE Artificial Neural Networks and Fuzzy Systems EE852PE Electrical Distribution Systems EE853PE Wind, Solar and Hybrid Energy Systems EE854PE High Voltage Engineering	




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Professional Elective-VI EE861PE VLSI Design EE862PE Smart Electric Grid EE863PE Utilization of Electric Power EE864PE Electric and Hybrid Vehicles	
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R16 Regulation**Mechanical Engineering (03)**

Electives offered by the University	Electives opted by the college
<p style="text-align: center;">Open Elective-I</p> ME511OE: Optimization Techniques ME512OE: Computer Graphics ME513OE: Introduction to Mechatronics ME514OE: Fundamentals of Mechanical Engineering CS511OE: Operating Systems CS512OE: Database Management Systems	Fundamentals of Mechanical Engineering
<p style="text-align: center;">Open Elective-II</p> ME621OE: World Class Manufacturing ME622OE: Fundamentals of Robotics ME623OE: Fabrication Processes CS621OE: Java Programming CS622OE: Software Testing Methodologies CS623OE: Cyber Security	Fundamentals of Robotics
<p style="text-align: center;">Open Elective-III</p> ME831OE: Total Quality Management ME832OE: Industrial Safety, Health, and Environmental Engineering ME833OE: Basics of Thermodynamics ME834OE: Reliability Engineering	
<p style="text-align: center;">Professional Elective-I</p> ME611PE: Finite Element Methods ME612PE: Refrigeration and Air Conditioning	Finite Element Methods



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ME613PE Machine Tool Design ME614PE IC Engines and Gas Turbines	
Professional Elective-II ME721PE Composite materials ME722PE Industrial Management ME723PE Power Plant Engineering ME724PE Operations Research	Power Plant Engineering
Professional Elective-III ME731PE Engineering Tribology ME732PE Computational Fluid Dynamics ME733PE Robotics ME734PE CNC Technology	Robotics
Professional Elective-IV ME741PE Mechanical Vibrations ME742PE Turbo Machines ME743PE MEMS ME744PE Additive Manufacturing Technology	Additive Manufacturing Technology
Professional Elective-V ME851PE Automation in Manufacturing ME852PE Fluid Power System ME853PE Renewable Energy Sources ME854PE Production Planning and Control	
Professional Elective-VI ME861PE Automobile Engineering ME862PE Advanced Mechanics of Solids ME863PE Unconventional Machining Processes ME864PE Advanced Materials Technology	



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ELECTRONICS AND COMMUNICATION ENGINEERING (04)-R16

Electives offered by the University	Electives opted by the college
<p style="text-align: center;">Open Elective-I</p> <p>EC511OE: Principles of Electronic Communications</p> <p>CS511OE: Operating Systems</p> <p>CS512OE: Database Management Systems</p>	<p style="text-align: center;">Database Management Systems</p>
<p style="text-align: center;">Open Elective-II</p> <p>EC621OE: Principles of Computer Communications and Networks</p> <p>CS621OE: Java Programming</p> <p>CS622OE: Software Testing Methodologies</p> <p>CS623OE: Cyber Security</p>	<p style="text-align: center;">Java Programming</p>
<p style="text-align: center;">Open Elective-III</p> <p>EC831OE: Electronic Measuring Instruments</p>	
<p style="text-align: center;">Professional Elective-I</p> <p>EC611PE Computer Organization and Operating System</p> <p>EC612PE Digital Image Processing</p> <p>EC613PE Spread Spectrum Communications</p> <p>EC614PE Digital system Design</p>	<p style="text-align: center;">Digital Image Processing</p>
<p style="text-align: center;">Professional Elective-II</p> <p>EC721PE Computer Networks</p> <p>EC722PE FPGA Programming</p> <p>EC723PE Coding Theory and Techniques</p> <p>EC724PE Soft Computing Techniques</p>	<p style="text-align: center;">Computer Networks</p>

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<p>Professional Elective-III</p> <p>CS731PE Graph Theory</p> <p>CS732PE Distributed Systems</p> <p>CS733PE Machine Learning</p> <p>CS734PE Software Process and Project Management</p>	<p>Software Process and Project Management</p>
<p>Professional Elective-IV</p> <p>CS741PE Computational Complexity</p> <p>CS742PE Cloud Computing</p> <p>CS743PE Blockchain Technology</p> <p>CS744PE Social Network Analysis</p>	<p>Cloud Computing</p>
<p>Professional Elective-V</p> <p>CS851PE Information Theory & Coding</p> <p>CS852PE Real-Time Systems</p> <p>CS853PE Data Analytics</p> <p>CS854PE Modern Software Engineering</p>	
<p>Professional Elective-VI</p> <p>CS861PE Advanced Algorithms</p> <p>CS862PE Web Services and Service Oriented Architecture</p> <p>CS863PE Computer Forensics</p> <p>CS864PE Neural Networks and Deep Learning</p>	

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COMPUTER SCIENCE ENGINEERING (05)-R16

Electives offered by the University	Electives opted by the college
<p align="center">Open Elective-I</p> <p>CS511OE: Operating Systems CS512OE: Database Management Systems</p>	<p align="center">Database Management Systems</p>
<p align="center">Open Elective-II</p> <p>CS621OE: Java Programming CS622OE: Software Testing Methodologies CS623OE: Cyber Security</p>	<p align="center">Java Programming</p>
<p align="center">Open Elective-III</p> <p>CS831OE: Linux Programming CS832OE: R Programming CS833OE: PHP Programming</p>	
<p align="center">Professional Elective-I</p> <p>CS611PE Mobile Computing CS612PE Design Patterns CS613PE Artificial Intelligence CS614PE Information Security Management (Security Analyst - I) CS615PE Introduction to Analytics (Associate Analytics - I)</p>	<p align="center">Design Patterns</p>
<p align="center">Professional Elective-II</p> <p>CS721PE Python Programming CS722PE Mobile Application Development CS723PE Web Scripting Languages CS724PE Internet of Things</p>	<p align="center">Python Programming</p>


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<p>Professional Elective-III</p> <p>EC731PE Wireless Communications and Networks</p> <p>EC732PE Internet of Things</p> <p>EC733PE Radar Systems</p> <p>EC734PE Embedded System Design</p>	<p>Radar Systems</p>
<p>Professional Elective-IV</p> <p>EC741PE Optimization Techniques</p> <p>EC742PE Object Oriented Programming</p> <p>EC743PE Electronic Measurements and Instrumentation</p> <p>EC744PE Artificial Intelligence</p>	<p>Artificial Intelligence</p>
<p>Professional Elective-V</p> <p>EC851PE Network Security and Cryptography</p> <p>EC852PE System Design Using FPGAs</p> <p>EC853PE Optical Communications</p> <p>EC854PE Machine Learning</p>	
<p>Professional Elective-VI</p> <p>EC861PE Actuators and Robot Systems</p> <p>EC862PE Analog CMOS IC Design</p> <p>EC863PE Global Positioning System</p> <p>EC864PE Computer Vision</p>	

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Civil Engineering(R15)

Electives offered by the University	Electives opted by the college
<p>Open Elective</p> <p>Disaster Management</p> <p>Intellectual Property Rights</p> <p>Human Values and Professional Ethics</p>	<p>Disaster Management</p>
<p>Elective –I</p> <p>Elements of Earthquake Engineering</p> <p>Ground Improvement Techniques</p> <p>Ground Water Hydrology</p> <p>Environmental Impact Assessment</p> <p>Principles of Entrepreneurship</p>	<p>Ground Improvement Techniques</p>
<p>Elective –II</p> <p>Finite Element Methods</p> <p>Advanced Foundation Engineering</p> <p>Watershed Management</p> <p>Air Pollution and Control</p>	<p>Advanced Foundation Engineering</p>
<p>Elective –III</p> <p>Advanced Structural Design</p> <p>Earth and Rock fill Dams and Slops Stability</p> <p>Water Resources Systems Analysis</p> <p>Industrial Waste Water Treatment</p>	<p>Industrial Waste Water Treatment</p>
<p>Elective –IV</p> <p>Rehabilitation and Retrofitting of Structures</p> <p>Geo-Environmental Engineering</p> <p>Design and Drawing of Irrigation Structures</p> <p>Solid Waste Management</p>	<p>Rehabilitation and Retrofitting of Structures</p>



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R15 REGULATION


Electrical & Electronics Engineering

Electives offered by the University	Electives opted by the college
Open Elective Disaster Management Intellectual Property Rights Human Values and Professional Ethics	Disaster Management
Elective –I High Voltage Engineering VLSI Design Digital Control Systems	High Voltage Engineering
Elective –II Optimization Techniques Electrical Distribution Systems Electrical Estimation and Costing	Electrical Distribution Systems
Elective –III Neural Networks and Fuzzy Logic Renewable Energy Sources Principles of Reliability Engineering	Renewable Energy Sources
Elective –IV Advanced Control Systems EHV AC Transmission Nanotechnology	EHV AC Transmission


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Mechanical Engineering(R15)

Electives offered by the University	Electives opted by the college
<p>Open Elective</p> <p>Disaster Management</p> <p>Intellectual Property Rights</p> <p>Human Values and Professional Ethics</p>	<p>Human Values and Professional Ethics</p>
<p>Elective –I</p> <p>Robotics</p> <p>Mechanical Vibrations</p> <p>Mechatronics</p> <p>Mechanics of Composite Materials</p> <p>Industrial Management</p>	<p>Robotics</p>
<p>Elective –II</p> <p>Unconventional Machining Processes</p> <p>CNC Technology</p> <p>Automation in Manufacturing</p> <p>Design for Manufacturing</p> <p>Nanotechnology</p>	<p>Automation in Manufacturing</p>
<p>Elective –III</p> <p>Artificial Neural Networks</p> <p>Total Quality Management</p> <p>Maintenance and Safety Engineering</p> <p>Plant Layout & Material Handling</p>	<p>Maintenance and Safety Engineering</p>


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Elective –IV	
Renewable Energy Sources	Renewable Energy Sources
Jet Propulsion & Rocket Engineering	
Computational Fluid Dynamics	
Gas Dynamics	

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Electronics & Communication Engineering-R15

Electives offered by the University	Electives opted by the college
<p>Elective-I</p> <p>Human Values and Professional Ethics</p> <p>Disaster Management</p> <p>Intellectual Property Rights</p>	<p>Human Values and Professional Ethics</p>
<p>Elective –II</p> <p>Digital Image Processing</p> <p>Multimedia and Signal Coding</p> <p>Object Oriented Programming through Java</p>	<p>Object Oriented Programming through Java</p>
<p>Elective –III</p> <p>Television Engineering</p> <p>Optical Communication</p> <p>Embedded Systems Design</p>	<p>Embedded Systems Design</p>
<p>Elective –IV</p> <p>Telecommunication Switching Systems and Networks</p> <p>Radar Systems</p> <p>Network Security</p>	<p>Radar Systems</p>
<p>Elective –V</p> <p>Wireless Communication and Networks</p> <p>Digital Signal Processors and Architectures</p> <p>RF Circuit Design</p>	<p>Wireless Communication and Networks</p>

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Computer Science Engineering-R15

Electives offered by the University	Electives opted by the college
<p>Open Elective</p> <p>Human Values and Professional Ethics</p> <p>Intellectual Property Rights</p> <p>Disaster Management</p>	<p>Disaster Management</p>
<p>Elective –I</p> <p>Software Project Management</p> <p>Image Processing and Pattern Recognition</p> <p>Mobile Computing</p> <p>Computer Graphics</p> <p>Operations Research</p>	<p>Software Project Management</p>
<p>Elective –II</p> <p>Machine Learning</p> <p>Soft Computing</p> <p>Information Retrieval Systems</p> <p>Artificial Intelligence</p> <p>Computer Forensics</p>	<p>Information Retrieval Systems</p>
<p>Elective –III</p> <p>Web Services</p> <p>Semantic Web and Social Networks</p> <p>Scripting Languages</p> <p>Multimedia & Rich Internet Applications</p>	<p>Scripting Languages</p>
<p>Elective –IV</p>	<p>Ad hoc and Sensor Networks</p>


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Ad hoc and Sensor Networks	
Storage Area Networks	
Database Security	
Embedded Systems	



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**M. Tech. COMPUTER SCIENCE AND ENGINEERING/COMPUTER SCIENCE
(R19 REGULATION)**

Electives offered by the University	Electives opted by the college
Professional Elective – I 1. Information Security 2. Mobile Application Development 3. Machine Learning	Machine Learning
Professional Elective – II 1. Network Security 2. Cloud Computing 3. Data Mining	Cloud Computing
Professional Elective – III 1. Web and Database Security 2. Internet of Things 3. Data Science	Internet of Things
Professional Elective – IV 1. Cyber Security 2. Advanced Computer Networks 3. Big Data Analytics	Cyber security


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**M. Tech. COMPUTER SCIENCE AND ENGINEERING/COMPUTER SCIENCE
(R17 REGULATION)**

Electives offered by the University	Electives opted by the college
PE-1 Network Security and Cryptography Mobile Application Development Graph Theory Internet of Things	Network Security and Cryptography
PE-2 Game Theory Parallel and Distributed Algorithms Software Architecture and Design Patterns Embedded Systems	SOFTWARE ARCHITECTURE AND DESIGN PATTERNS
Open Elective – 1 PRINCIPLES OF ELECTRONIC COMMUNICATIONS	PRINCIPLES OF ELECTRONIC COMMUNICATIONS
PE-3 Data Warehousing and Data Mining Storage Area Networks Semantic Web and Social Networks Cyber Security	Data Warehousing and Data Mining
PE-4 Big Data Analytics Soft Computing Software Process and Project Management Machine Learning	Software Process and Project Management


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R15 Regulation M.TECH. (COMPUTER SCIENCE AND ENGINEERING)

Electives offered by the University	Electives opted by the college
<p>Core Elective III</p> <ol style="list-style-type: none"> 1. Data Mining 2. Storage Area Networks 3. Semantic Web and Social Networks <p>Cyber Security</p>	<p>Storage Area Networks</p>
<p>Core Elective IV</p> <ol style="list-style-type: none"> 1. Big Data Analytics 2. Soft Computing 3. Software Process and Project 4. Management <p>Distributed Computing</p>	<p>Distributed Computing</p>
<p>Open Elective – 2</p> <p>COMPUTER FORENSICS</p>	<p>COMPUTER FORENSICS</p>



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R15 Regulation M. Tech COURSE STRUCTURE AND SYLLABUS

Electives offered by the University	Electives opted by the college
Core Elective III 1. Scripting Languages 2. Information Retrieval Systems 3. Semantic Web and Social Networks E-Commerce	Scripting Languages
Core Elective IV 1. Software Security Engineering 2. Cyber Security 3. Information Security And Audit Business Process Management	INFORMATION SECURITY AND AUDIT
Open Elective – 2 COMPUTER FORENSICS	COMPUTER FORENSICS

SOFTWARE ENGINEERING

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R15 Regulation - M.Tech. (CAD/CAM)

Electives offered by the University	Electives opted by the college
<p>Core Elective I</p> <p>Mechanical Behavior of Materials</p> <p>Stress Analysis and Vibration</p> <p>Rapid Prototyping Technologies</p>	<p>Mechanical Behavior of Materials</p>
<p>Core Elective II</p> <p>Automation in Manufacturing</p> <p>Computer Aided Process Planning</p> <p>Performance Modelling and Analysis of Manufacturing Systems</p>	<p>Automation in Manufacturing</p>
<p>Open Elective I</p> <p>Numerical Methods for Partial Differential Equations</p> <p>Production and Operations Management</p>	<p>Production and Operations Management</p>
<p>Core Elective III</p> <p>Intelligent Manufacturing Systems</p> <p>Special Manufacturing Process</p> <p>Design Optimization</p>	<p>Special Manufacturing Process</p>
<p>Core Elective IV</p> <p>Advanced Mechatronics</p> <p>Design and Manufacturing of MEMS and Micro Systems</p> <p>Fuzzy Logic and Neural Networks</p>	<p>Advanced Mechatronics</p>
<p>Open Elective II</p> <p>Engineering Research and Methodology</p> <p>Quality Engineering in Manufacturing</p>	<p>Quality Engineering in Manufacturing</p>



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R15 Regulation - M.TECH. (EMBEDDED SYSTEMS)

Electives offered by the University	Electives opted by the college
Core Elective III CPLD and FPGA Architectures and Applications Wireless Communication and Networks System On Chip Architecture	System On Chip Architecture
Core Elective IV Multimedia and Signal Coding Network Security and Cryptography Hardware Software Co-Design	Hardware Software Co-Design
Open Elective II Scripting languages Adhoc Wireless and Sensor Networks Device Modeling	Adhoc Wireless and Sensor Networks



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R15 Regulation - M. TECH. (ELECTRICAL POWER SYSTEMS/POWER ENGINEERING AND ENERGY SYSTEMS/ POWER SYSTEM CONTROL AND AUTOMATION/ ELECTRICAL POWER ENGINEERING)

Electives offered by the University	Electives opted by the college
<p>Core Elective III</p> <p>Gas Insulated Systems(GIS)</p> <p>Programmable Logic Controllers and their applications</p> <p>High frequency magnetic components</p>	<p>Gas Insulated Systems(GIS)</p>
<p>Core Elective IV</p> <p>Reactive Power Compensation and Management</p> <p>Power System Reliability</p> <p>Voltage Stability</p>	<p>Reactive Power Compensation and Management</p>
<p>Open Elective II</p> <p>Instrumentation & Control</p> <p>Intelligent Control</p> <p>Smart grid technologies</p> <p>AI Techniques in Electrical Engineering</p> <p>Reliability Engineering</p> <p>Energy Auditing, Conservation & Management</p>	<p>AI Techniques in Electrical Engineering</p>



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M.TECH - COMPUTER SCIENCE ENGINEERING(R13)

Electives offered by the University	Electives opted by the college
Elective –I Software Process and Project Management Natural Language Processing Pattern Recognition	Software Process and Project Management
Elective –II Machine Learning Parallel and Distributed Algorithms Software Architecture and Design Patterns	Software Architecture and Design Patterns
Elective –III Advanced Data Mining StorageAreaNetworks DatabaseSecurity	Advanced Data Mining
Elective –IV Semantic Web and Social Networks Wireless Networks and Mobile Computing Information Retrieval Systems	Wireless Networks and Mobile Computing



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M.TECH (R13)**M.TECH - SOFTWARE ENGINEERING**

Electives offered by the University	Electives opted by the college
Elective –I Secure Software Engineering Cyber Security and Cyber Laws Information Security and Audit	Information Security and Audit
Elective –II Parallel Algorithms Advanced Data Mining Object Oriented Modeling	Object Oriented Modeling
Elective –III Scripting Languages Information Retrieval Systems Semantic Web and Social Networks	Semantic Web and Social Networks
Elective –IV Cloud Computing Advanced Databases Business Process Management	Cloud Computing



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(R13) M.TECH - DIGITAL SYSTEM & COMPUTER ELECTRONICS

Electives offered by the University	Electives opted by the college
Elective –I CMOS Analog Integrated Circuit Design Image and Video Processing Embedded Systems Design	Image and Video Processing
Elective –II CMOS Digital Integrated Circuit Design Internetworking Soft Computing Techniques	CMOS Digital Integrated Circuit Design
Elective –III CPLD and FPGA Architectures and Applications Network Security and Cryptography System on Chip Architecture	CPLD and FPGA Architectures and Applications
Elective –IV CMOS Mixed Signal Circuit Design Digital Signal Processors and Architectures TCP/IP And ATM Networks	Digital Signal Processors and Architectures




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(R13) M.TECH - EMBEDDED SYSTEMS

Electives offered by the University	Electives opted by the college
Elective –I Advanced Computer Architecture VLSI Technology and Design Embedded Computing	VLSI Technology and Design
Elective –II Digital System Design Soft Computing Techniques Advanced Operating Systems	Digital System Design
Elective –III Sensors and Actuators Wireless Communications and Networks Network Security and Cryptography	Wireless Communications and Networks
Elective –IV Multimedia and Signal Coding System On Chip Architecture Wireless LANs and PANs	System On Chip Architecture


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M.TECH - ELECTRICAL POWER SYSTEMS/POWER ENGINEERING AND ENERGY SYSTEMS/ POWER SYSTEM CONTROL AND AUTOMATION/ ELECTRICAL POWER ENGINEERING(R13)

Electives offered by the University	Electives opted by the college
Elective –I High Voltage Engineering EHV AC Transmission Microcontrollers and Applications	High Voltage Engineering
Elective –II Power Quality HVDC Transmission Distribution Automation	Distribution Automation
Elective –III Gas Insulated Systems(GIS) Electric Smart Grid Energy Auditing, Conservation and Management	Gas Insulated Systems(GIS)
Elective –IV Reactive Power Compensation and Management Power System Reliability Voltage Stability	Reactive Power Compensation and Management



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MBA**Open Electives (I & II Semester) and Specialization Electives(III & IV Semester)**


Academic Year 2016 – 17

Open Elective	
I Year I Semester	
Electives Offered by JNTUH	Open Elective Obtained by the College
Cross Culture Management	Total Quality Management
WTO & IPR	
Total Quality Management	
Project Management	

Open Elective	
I Year II Semester	
Electives Offered by JNTUH	Open Elective Obtained by the College
Foreign Trade	MSME Management
Banking, Insurance & Risk Management	
Logistics & Supply Chain Management	
MSME Management	

III Semester & IV Semester	
Electives Offered by JNTUH	Electives Obtained by the College
Marketing	Marketing
Finance	Finance
Human Resources	Human Resource
Systems	

MARKEING ELECTIVE	
III SEMESTER	IV SEMESTER
Consumer Behaviour	Retailing Management
Sales & Distribution	Services Marketing
International Marketing Communication	International Marketing


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FINANCE ELECTIVE	
III SEMESTER	IV SEMESTER
Strategic Management Accounting	Strategic Investment & Financial Decisions
Security Analysis & Portfolio Management	International Financial Management
Financial Institutions & Market Services	Financial Derivatives

HR ELECTIVE	
III SEMESTER	IV SEMESTER
Personnel Management	Compensation & Reward Management
Training & Development	International Human Resources Management
Management of Industrial Relations	Leadership & Change Management


Academic Year 2015-16

R15

Open Elective	
I Year I Semester	
Electives Offered by JNTUH	Open Elective Obtained by the College
Cross Culture Management	E-COMMERCE (M.Tech Subject)
Wto&ipr	
Total Quality Management	
Project Management	

Note:


Open Elective	
I Year II Semester	
Electives Offered by JNTUH	Open Elective Obtained by the College
Foreign Trade	Logistics & Supply Chain Management
Banking, Insurance & Risk Management	
Logistics & Supply Chain Management	
MSME Management	


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III Semester & IV Semester	
Electives Offered by JNTUH	Electives Obtained by the College
Marketing	Marketing
Finance	Finance
Human Resources	Human Resource
Systems	

MARKEING ELECTIVE	
III SEMESTER	IV SEMESTER
Consumer Behaviour	Retailing Management
Sales & Distribution	Services Marketing
International Marketing Communication	International Marketing

FINANCE ELECTIVE	
III SEMEATER	IV SEMESTER
Strategic Management Accounting	Strategic Investment & Financial Decisions
Security Analysis & Portfolio Management	International Financial Management
Financial Institutions & Market Services	Financial Derivatives


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HR ELECTIVE	
III SEMESTER	IV SEMESTER
Personnel Management	Compensation & Reward Management
Training & Development	International Human Resources Management
Management of Industrial Relations	Leadership & Change Management

Academic Year 2014-15R13

III Semester & IV Semester	
Electives Offered by JNTUH	Electives Obtained by the College
Marketing	Marketing
Finance	Finance
Human Resources	Human Resource
Systems	

Marketing Elective	
III SEMESTER	IV SEMESTER
13MBA27 Consumer Behaviour	13MBA30 Retailing Management
13MBA28 Sales and Distribution	13MBA31 Services Marketing
13MBA29 Integrated Marketing Communications	13MBA32 International Marketing

FINANCE ELECTIVE	
III SEMESTER	IV SEMESTER
13MBA33 Cost & Management Accounting	13MBA36 Strategic Investment and Financing Decisions
13MBA34 Security Analysis and Portfolio Management	13MBA36 Strategic Investment and Financing Decisions
13MBA35 Financial Institutions, Markets & Services	13MBA38 Financial Derivatives


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HR ELECTIVE	
III SEMESTER	IV SEMESTER
13MBA39 Performance Management	13MBA42 Compensation & Reward Management
13MBA40 Training and Development	13MBA43 Management of Change
13MBA41 Management of Industrial Relations	13MBA44 Leadership

Academic Year 2013-14R13

III Semester & IV Semester	
Electives Offered by JNTUH	Electives Obtained by the College
Marketing	Marketing
Finance	Finance
Human Resources	Human Resource
Systems	

Marketing Elective	
III SEMESTER	IV SEMESTER
13MBA27 Consumer Behaviour	13MBA30 Retailing Management
13MBA28 Sales and Distribution	13MBA31 Services Marketing
13MBA29 Integrated Marketing Communications	13MBA32 International Marketing

FINANCE ELECTIVE	
III SEMESTER	IV SEMESTER
13MBA33 Cost & Management Accounting	13MBA36 Strategic Investment and Financing Decisions
13MBA34 Security Analysis and Portfolio Management	13MBA36 Strategic Investment and Financing Decisions
13MBA35 Financial Institutions, Markets & Services	13MBA38 Financial Derivatives



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HR ELECTIVE	
III SEMESTER	IV SEMESTER
09MB305C- Recruitment & Selection	09MB401C Performance Management
09MB306C- Management of Industrial Relations	09MB403C Compensation & Reward Management
09MB3057C- Training & Development	09MB402C Management of Change



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HR ELECTIVE	
III SEMESTER	IV SEMESTER
13MBA39 Performance Management	13MBA42 Compensation & Reward Management
13MBA40 Training and Development	13MBA43 Management of Change
13MBA41 Management of Industrial Relations	13MBA44 Leadership

Academic Year 2012-13

R09

Electives Offered by JNTUH	Electives Obtained by the College
Marketing	Marketing
Finance	Finance
Human Resources	Human Resource
Systems	

MARKETING ELECTIVE	
III SEMESTER	IV SEMESTER
09MB305A-Consumer Behaviour	09MB401A- International Marketing
09MB306A- Marketing Communication(MC)	09MB402A-Sales & Distribution
09MB307-A Retailing Management	09MB403A- Services Marketing

FINANCE ELECTIVE	
III SEMESTER	IV SEMESTER
09MB305B Security Analysis Portfolio Management	09MB401B- International financial management
09MB306B-Financial Institutions Markets & Services	09MB402B -Strategic investment & financial decisions
09MB307B- Derivatives	09MB403B- Risk & Insurance Management



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Balaji Institute of Technology & Science

Estd.: 2001

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(Affiliated to JNTUH, Hyderabad and Approved by the AICTE, New Delhi)


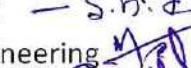

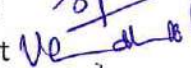




www.bitswgl.ac.in, email:principal@bitswgl.ac.in :: Ph. 98660 50044, Fax 08718-230521

Date: 1st July, 2015.

MINUTES OF MEETING

The College Academic Committee meeting was held on 01-07-2015 at 1.40.PM in the Principal Chamber.

The following members were present in the meeting:

- | | | |
|-------------------------|-------------------------------|---|
| • Dr.V.S . Hariharan | Principal (Chairperson) |  |
| • Mr.Manku Venkat reddy | HoD of CIVIL Engineering |  |
| • Mr.S. Manikandan | HoD of EEE Department |  |
| • Dr R. Murugan | HoD of Mechanical Engineering |  |
| • Dr.Vilas Nitnaware | HoD of ECE Department |  |
| • Mrs.Balne Sridevi | HoD of CSE Department |  |
| • Dr.V. Sudhakar Rao | HoD of H&S Department |  |
| • Dr.G.Naresh | HoD of MBA |  |

AGENDA:

- 1) JNTUH Letters and Academic Regulations In View Of Choice Based Credit System.
- 2) Academic Planning
- 3) Planning for Industrial Visits and Workshops.
- 4) Any Other.

Minutes of Meeting

- **Chairman** of the meeting Dr. V.S. Hariharan initiated the meeting with welcome note to all HoD's for new Academic Year.
- All The Heads of the departments are requested to go through the recent updations in syllabus and proceed accordingly in line curriculum and syllabus For B. Tech, M.Tech & MBA.
 1. JNTUH has Introduced Choice based Credit System in each Department for the Academic Year 2015-16.
 2. The CBCS syllabi of courses are useful to the student or knowledge seeker has the flexibility to choose their course from a list of elective, core and soft skill courses.


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3. All the faculty are requested to give the awareness to the students regarding the Choice based credit system.
4. The CBCS courses introduced for all the Departments.
5. Discussion Regarding the Grading for choice based course.
6. All HoD's also requested to check the availability of books related to choice based subjects and put request if required for any subjects.
7. HoD's should nominate senior faculty members for new courses for better results.
8. College Academic Committee considered as electives, open electives and Professional Electives as the CBCS Courses for the academic year.
9. Discussion regarding the previous CAC minutes.

The meeting concluded with a vote of thanks by Principal **Dr. V. S. Hariharan**.



PRINCIPAL

Principal

Balaji Institute of Technology & Science
Laknepally (V), Narsaraopet (M)
Warangal (Dt) - 506 331 (T.S)

Date: 3rd July, 2016.

MINUTES OF MEETING

The College Academic Committee meeting was held on 03-07-2016 at 1.40.PM in the Principal Chamber.

The following members were present in the meeting:

- | | |
|-------------------------|-------------------------------|
| • Dr.V.S . Hariharan | Principal (Chairperson) |
| • Mr.Manku Venkat reddy | HoD of CIVIL Engineering |
| • Dr.S. Manikandan | HoD of EEE Department |
| • Dr.R. Murugan | HoD of Mechanical Engineering |
| • Dr.N Venu | HoD of ECE Department |
| • Mr.Fasi Ahmed Parvez | HoD of CSE Department |
| • Dr.V. Sudhakar Rao | HoD of H&S Department |
| • Dr.G.Naresh | HoD of MBA |

AGENDA:

- 1) JNTUH letters and Academic Regulations In View Of Choice Based Credit System.
- 2) Academic Planning and Development.
- 3) Planning to conduct Technical events.
- 4) Any Other.

Minutes of Meeting

- **Chairman** of the meeting Dr. V. S. Hariharan initiated the meeting with welcome note to all HoD's for new academic year.
- All the heads of the departments are requested to go through the revised curriculum for B. Tech, M. Tech & MBA.
 1. JNTUH has Introduced Choice based Credit System in each Department for the Academic Year 2016-17.
 2. The Choice Based Credit System courses are useful the student skill Development .The Student has the flexibility to choose their course from a list of electives, core and soft skill courses.
 3. The CBCS courses introduced for all the Departments.



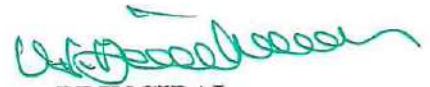
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4. All HoD's also requested to check the availability of books related to choice based subjects and put request if required for any subjects.
5. Faculty requested to guide the students to refer standard text books for improve their knowledge.
6. CBCS courses must be selected as per the present Technology basis. Based on the IQ level of individual student; a mentor guides students to select courses.
7. HoD's should nominate senior faculty members for new courses for better results
8. College Academic Committee considered as electives, open electives and Professional Electives as the CBCS Courses for the academic year.

The meeting concluded with a vote of thanks by Principal **Dr. V. S. Hariharan.**



PRINCIPAL

Principal

**Balaji Institute of Technology & Science
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Warangal (Dt) - 506 331 (T.S)**

