GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)
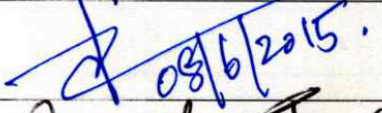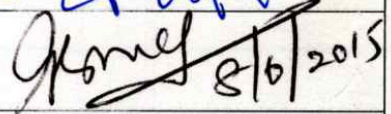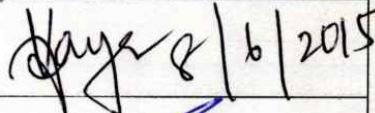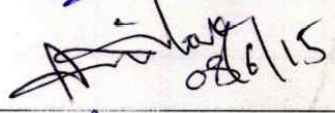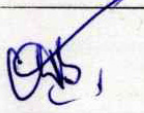
Seshadri Rao Knowledge Village

Gudlavalleru – 521 356, Krishna District, Andhra Pradesh

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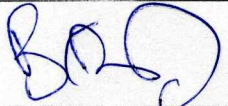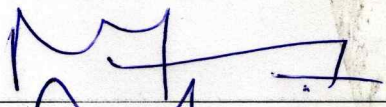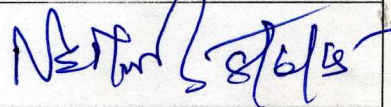
The **Fourth** Meeting of **Academic Council** of Gudlavalleru Engineering College (Autonomous), Seshadri Rao Knowledge Village, Gudlavalleru is held today i.e. 08-06-2015 (Monday) at 10-30 AM in the Management's Conference Hall of the college under the Chairmanship of Dr. P. Nageswara Reddy, Principal of the College.

MEMBERS PRESENT:

Sl. No.	Name of the Member	Designation	Signature
1	Dr. P. Nageswara Reddy Principal	Chairman	
2	Dr. P. Kodanda Rama Rao Professor & HoD of CE	Member	
3	Dr. M. Siva Kumar Professor & HoD of EEE	Member	Could not Attend
4	Dr. A. Jawahar Babu Professor & HoD of ME	Member	
5	Dr. M. Kama Raju Professor & HoD of ECE	Member	
6	Dr. M. Babu Rao Professor & HoD of CSE	Member	
7	Dr. M. V. L. N. Raja Rao Professor & HoD of IT	Member	
8	Dr. Ch. Nirmal Chand Professor & HoD of MBA	Member	
9	Dr. G. S. Bhaskara Rao Professor of Mathematics & HoD of BS&H	Member	
10	Dr. M. Vijaya Lakshmi Associate Professor & HoD of English	Member	
11	Dr. P. Ravindra Babu Professor of ME and Vice-Principal	Member	
12	Dr. A. V. N. Tilak Professor of ECE and Dean PG Studies, R&D and Consultancy	Member	
13	Dr. S. R. K. Reddy Professor of CE	Member	
14	Dr.(Mrs.) Ch. Kavitha Professor of CSE	Member	

15	Dr. D. V. L. N. Somayajulu Professor of CSE and Dean Academic Affairs, NIT, Warrangal	Member	Could not attend
16	Dr. B. G. Barki Professor of Education & Former Director of NITTTR, Chennai	Member	
17	Dr. Parimi S.R. Professor of Civil Engineering and Structural Engg. Consultant, Vijayawada	Member	
18	Er. D. Rama Krishna Managing Director, Efftronics Systems Pvt. Ltd. Vijayawada	Member	
19	Dr. N. S. Murthy, Professor of Electronics & Communication Engg., National Institute of Technology, Warangal	Member	
20	Mr. Jaya Rama Krishna Nutulapati, Client Partner & Principal Consultant, Tata Consultancy Services, Hyderabad	Member	Could not Attend
21	Dr. P. Udaya Bhaskar, Professor of Civil Engineering, Director, Academics & Planning, JNTUK, Kakinada	Member	Could not Attend
22	Dr. Ch. Sai Babu, Professor of Electrical & Electronics Engg., Director of Evaluation, JNTUK, Kakinada	Member	Could not Attend.
23	Dr. M. Ramalinga Raju, Professor of Electrical & Electronics Engg., Director, Foreign Universities Relations, JNTUK, Kakinada	Member	M.
24	Dr. G. V. S. N. R. V. Prasad Professor of CSE & Dean Academic Affairs	Member Secretary	

GUDLAVALLERU ENGINEERING COLLEGE

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Minutes of the Fourth Meeting of the Academic Council held on 08-06-2015, Monday in the Management Conference Hall.

4.1 **To consider and approve the Course Structure and Syllabi of II, III & IV B.Tech recommended by the various Boards of Studies.**

➢ Principal presented the course structure of II, III & IV B.Tech recommended by the Boards of Studies.

➢ The following general suggestions are made on the course structures.

i) Professional Ethics and Intellectual Property Rights & Patents may be offered as a single subject instead of offering them as separate subjects and giving choice to the students to choose one of the two subjects.

ii) Mini Project or branch specific laboratory with 2 credits can be introduced at second or third year level in place of NSS / Games and Sports / Creative Arts.

iii) NSS / Games and Sports / Creative Arts can be made as mandatory non credit course spreading over four semesters from second B.Tech first semester to third B.Tech second semester.

iv) The course "Advanced Employability Skills" may be renamed with suitable title.

Resolution:

The Course Structures of II, III & IV B.Tech recommended by the Boards of Studies is approved with the following modifications:

i) Making Professional Ethics and Patents as a single subject with 2 credits.

ii) Introducing Mini Project / branch specific laboratory with 2 credits at third year level.

iii) Renaming the course "Advanced Employability Skills" as "Employability Skills" and offering it at second year level.

iv) Making NSS and Games and Sports / Creative Arts as mandatory non credit courses, offering at second and third year level (for few branches NSS in second year either in the first or second semesters and Sports and Games / Creative Arts in third year either in the first or second semesters and vice versa for other branches).

The approved course structures of Civil Engineering, Electrical and Electronics Engineering, Mechanical Engineering, Electronics and Communication Engineering, Computer Science and Engineering and Information Technology are given in Annexure – A.

4.2 To consider and finalize the list of Open Electives and Self Study Courses recommended by the various Boards of Studies.

➢ Principal presented the list of Open Electives and Self Study Courses recommended by the Boards of Studies.

Resolution:

The list of Open Electives and Self Study Courses recommended by the Boards of Studies is approved with the following changes:

i) The Elective courses "Business English", "English for International ESL Examinations" and "Literature and Values" are removed from the list of Open Electives I, II & III.

ii) The list of MOOC courses offered as self study courses can be notified one month before the commencement of fourth B.Tech second semester class work depending on the courses offered by the various reputed foreign / Indian Institutes or Universities during that academic year.

iii) The evaluation procedures and award of grades in different MOOC courses and equivalent letter grading of the college shall also be prescribed for each MOOC course along with the notification of MOOC courses.

The approved lists of Open Electives and Self Study Courses are given in Annexure – B.

4.3 Any other matter with the permission of the chair.

i) The members suggested the Chair Persons of Boards of Studies to thoroughly verify the Course Objectives, Course Outcomes and Syllabi of each course and make the required modifications wherever necessary.

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Approved Course Structures

B.Tech - Civil Engineering

II Year - I Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Probability & Statistics	3+1*	-	3
2	Mechanics of Solids – I	3+1*	-	3
3	Fluid Mechanics	3+1*	-	3
4	Surveying	3+1*	-	3
5	Engineering Geology and GIS Applications	3+1*	-	3
6	Building Planning & Drawing	1	3	3
7	Professional Ethics and Patents	2	-	2
8	Surveying Field Work	-	3	2
9	Engineering Geology Lab	-	3	2
	Total :	**23**	**9**	**24**
10	NSS (Mandatory Non-Credit Course)	-	2	-

II Year - II Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Mechanics of Solids– II	3+1*	-	3
2	Hydraulics and Hydraulic Machines	3+1*	-	3
3	Structural Analysis – I	3+1*	-	3
4	Geotechnical Engineering – I	3+1*	-	3
5	Water Resources Engineering – I	3+1*	-	3
6	Concrete Technology	3+1*	-	3
7	Employability Skills	1	2	2
8	Strength of Materials Lab	-	3	2
9	Advanced Surveying & GIS Lab	-	3	2
	Total :	**25**	**8**	**24**

* Tutorial

III Year - I Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Structural Analysis – II	3+1*	-	3
2	Geotechnical Engineering – II	3+1*	-	3
3	Water Resources Engineering – II	3+1*	-	3
4	Design & Drawing of R.C Structures	3+1*	-	3
5	**Open Elective – I** (see the list of Open Electives)	3+1*	-	3
6	Concrete Technology Lab	-	3	2
7	Geotechnical Engineering Lab	-	3	2
8	Fluid Mechanics & Hydraulic Machines Lab	-	3	2
	Total :	**20**	**9**	**21**
9	Sports & Games / Creative Arts (Mandatory Non-Credit Course)	-	2	-

III Year - II Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Environmental Engineering	3+1*	-	3
2	Transportation Engineering	3+1*	-	3
3	Design & Drawing of Steel Structures	3+1*	-	3
4	**Elective – I** (i) Prestressed Concrete (ii) Structural Dynamics (iii) Project Management (iv) Ground Improvement Techniques	3+1*	-	3
5	**Open Elective – II** (see the list of Open Electives)	3+1*	-	3
6	Environmental Engineering Lab	-	3	2
7	Computer Aided Drawing (CAD) Practice Lab	-	3	2
8	Mini Project / Survey Camp	-	3	2
	Total :	**20**	**9**	**21**

* Tutorial

IV Year - I Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Managerial Economics and Financial Analysis	3+1*	-	3
2	Estimating, Costing and Valuation	3+1*	-	3
3	**Elective – II** (i) Finite Element Methods (ii) Advanced Structural Analysis (iii) Advanced Environmental Engineering (iv) Design & Drawing of Irrigation Structures	3+1*	-	3
4	**Elective - III** (i) Design of Industrial Structures (ii) Air Pollution & Its Control (iii) Earthquake Resistant Design (iv) Architecture & Town Planning	3+1*	-	3
5	**Open Elective – III** (see the list of Open Electives)	3+1*	-	3
6	Structural Engineering Lab	-	3	2
7	Transportation Engineering Lab	-	3	2
8	Computer Applications in Civil Engineering Lab	-	3	2
	Total :	**20**	**9**	**21**

IV Year -II Semester

Sl. No	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	**Elective-IV** (i) Advanced Concrete Structures (ii) Environmental Impact, Assessment & Management (iii) Soil Dynamics & Machine Foundations (iv) Docks & Harbour Engineering	3+1*	-	3
2	**Elective-V** (i) Pavement Analysis & Design (ii) Industrial Waste Water Management (iii) Ground Water Development & Management (iv) Repair and Rehabilitation of Structures	3+1*	-	3
3	Self Study Course (see the list of Self Study Courses)	-	-	2
4	Industrial / Practical Training	-	-	4
5	Project Work	-	9	9
	Total :	**8**	**9**	**21**

* Tutorial

B.Tech – Electrical and Electronics Engineering

II Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Complex Variables and Special Functions	3+1*	-	3
2	Semiconductor Devices and Circuits	3+1*	-	3
3	Electromagnetic Fields	3+1*	-	3
4	Circuit Theory – II	3+1*	-	3
5	Electrical Machines – I	3+1*	-	3
6	Power Systems – I	3+1*	-	3
7	Employability Skills	1	2	2
8	Fluid Mechanics & Hydraulic Machines Lab	-	3	2
9	Networks Lab	-	3	2
	Total :	**25**	**8**	**24**
10	NSS (Mandatory Non-Credit Course)	-	2	-

II Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week L	No. of Periods per week P	No. of Credits
1	Digital Circuits	3+1*	-	3
2	Managerial Economics and Financial Analysis	3+1*	-	3
3	Electrical Machines – II	3+1*	-	3
4	Power Systems – II	3+1*	-	3
5	Electrical Measurements & Instrumentation	3+1*	-	3
6	Control Systems	3+1*	-	3
7	Professional Ethics and Patents	2	-	2
8	Semiconductor Devices & Circuits Lab	-	3	2
9	Electrical Machines Lab – I	-	3	2
	Total :	**26**	**6**	**24**

* Tutorial

III Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week L	No. of Periods per week P	No. of Credits
1	Signals and Systems	3+1*	-	3
2	Pulse and Integrated Circuits	3+1*	-	3
3	Electrical Machines – III	3+1*	-	3
4	Power Electronics	3+1*	-	3
5	**Open Elective – I** (see the list of Open Electives)	3+1*	-	3
6	Electrical Measurements & Instrumentation Lab	-	3	2
7	Control Systems Lab	-	3	2
8	Mini Project	-	3	2
	Total :	**20**	**9**	**21**
9	Sports & Games / Creative Arts (Mandatory Non-Credit Course)	-	2	-

III Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week L	No. of Periods per week P	No. of Credits
1	Power Semiconductor Drives	3+1*	-	3
2	Microprocessors and Microcontrollers	3+1*	-	3
3	Switchgear and Protection	3+1*	-	3
4	**Elective – I** i) Optimization Techniques ii) Advanced Control Systems iii) Power Systems Operation Control iv) Data Structures Using C	3+1*	-	3
5	**Open Elective – II** (see the list of Open Electives)	3+1*	-	3
6	Integrated Circuits & PDC Lab	-	3	2
7	Power Electronics and Drives Lab	-	3	2
8	Electrical Machines Lab – II	-	3	2
	Total :	**20**	**9**	**21**

* Tutorial

IV Year 1ˢᵗ Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Power System Analysis	3+1*	-	3
2	Utilization of Electrical Energy	3+1*	-	3
3	**Elective – II** i) Electrical Distribution Systems ii) HVDC Transmission Systems iii) VLSI Design iv) Special Electrical Machines	3+1*	-	3
4	**Elective – III** i) Electrical Machine Design ii) Programmable Logic Controller iii) Computer Organization and Architecture iv) Flexible AC Transmission Systems	3+1*	-	3
5	**Open Elective – III** (see the list of Open Electives)	3+1*	-	3
6	Microprocessors and Microcontrollers Lab	-	3	2
7	Electrical Systems Simulation Lab	-	3	2
8	Power Systems Lab	-	3	2
	Total :	**20**	**9**	**21**

* Tutorial

IV Year 2ⁿᵈ Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	**Elective – IV** i) Electrical Costing & Estimation ii) Modeling and Analysis of Electrical Machines iii) High Voltage Engineering iv) Digital Signal Processing	3+1*	-	3
2	**Elective – V** i) Digital Control Systems ii) AI Techniques iii) EHV AC/DC Transmission Systems iv) Power Plant Instrumentation	3+1*	-	3
3	Self Study Course (see the list of Self Study Courses)	-	-	2
4	Industrial / Practical Training	-	-	4
5	Project Work	-	9	9
	Total :	**8**	**9**	**21**

* Tutorial

B.Tech – Mechanical Engineering

II Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Managerial Economics and Financial Analysis	3+1*	-	3
2	Electrical & Electronics Engineering	3+1*	-	3
3	Kinematics of Machines	3+1*	-	3
4	Mechanics of Solids	3+1*	-	3
5	Engineering Thermodynamics	3+1*	-	3
6	Material Science & Metallurgy	3+1*	-	3
7	Employability Skills	1	2	2
8	Electrical & Electronics Engineering Lab	-	3	2
9	Mechanics of Solids Lab & Metallurgy Lab	-	3	2
	Total :	25	8	24
10	NSS (Mandatory Non-Credit Course)	-	2	-

II Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Industrial Engineering & Management	3+1*	-	3
2	Dynamics of Machines	3+1*	-	3
3	Fluid Mechanics	3+1*	-	3
4	Manufacturing Processes	3+1*	-	3
5	Thermal Engineering – I	3+1*	-	3
6	Machine Drawing	1	4	3
7	Professional Ethics and Patents	2	-	2
8	Machine Dynamics Lab and Fuels & Lubricants Lab	-	3	2
9	Manufacturing Processes Lab	-	3	2
	Total :	23	10	24

* Tutorial

III Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Hydraulic Machines and systems	3+1*	-	3
2	Principles of Machine Design	3+1*	-	3
3	Metal Cutting & Machine Tools	3+1*	-	3
4	Thermal Engineering-II	3+1*	-	3
5	**Open Elective – I** (see the list of Open Electives)	3+1*	-	3
6	Machine Tools Lab	-	3	2
7	Thermal Engineering Lab	-	3	2
8	Fluid Mechanics and Hydraulic Machines Lab	-	3	2
	Total :	20	9	21
9	Sports & Games / Creative Arts (Mandatory Non-Credit Course)	-	2	-

III Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Operations Research	3+1*	-	3
2	Design of Mechanical Components	3+1*	-	3
3	Metrology and Instrumentation	3+1*	-	3
4	**Elective – I** i) Automobile Engineering ii) Finite Element Methods iii) Unconventional Machining Process iv) Control Systems	3+1*		3
5	**Open Elective – II** (see the list of Open Electives)	3+1*	-	3
6	Metrology and Instrumentation Lab	-	3	2
7	Computer Aided Modeling Lab	-	3	2
8	Mini Project	-	3	2
	Total :	**20**	**9**	**21**

* Tutorial

IV Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	CAD/CAM	3+1*	-	3
2	Heat Transfer	3+1*	-	3
3	**Elective – II** i) Computational Fluid Dynamics ii) Robotics iii) Interactive Computer Graphics iv) Mechanical Vibrations	3+1*	-	3
4	**Elective – III** i) Production Planning and Control ii) Tribology iii) Refrigeration & Air Conditioning iv) Fracture Mechanics	3+1*	-	3
5	**Open Elective – III** (see the list of Open Electives)	3+1*	-	3
6	CAD/CAM Lab	-	3	2
7	Heat Transfer Lab	-	3	2
8	Computational Methods for Engineers Lab	-	3	2
	Total :	**20**	**9**	**21**

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	**Elective – IV** i) Condition Monitoring ii) Rapid Prototyping iii) Power Plant Engineering iv) Design for Manufacturing & Assembly	3+1*	-	3
2	**Elective – V** i) Nanotechnology ii) Gas Dynamics& Jet Propulsion iii) Automation in Manufacturing iv) Supply Chain Management	3+1*	-	3
3	Self Study Course (see the list of Self Study Courses)	-	-	2
4	Industrial / Practical Training	-	-	4
5	Project Work	-	9	9
	Total :	**8**	**9**	**21**

B.Tech – Electronics and Communication Engineering

II Year 1ˢᵗ Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Electrical Technology	3+1*	-	3
2	Electronic Devices and Circuits	3+1*	-	3
3	Digital Circuits	3+1*	-	3
4	Signals and Systems	3+1*	-	3
5	Electromagnetic Field Theory	3+1*	-	3
6	Probability Theory and Random Variables	3+1*	-	3
7	Employability Skills	1	2	2
8	Electronic Devices and Circuits Lab	-	3	2
9	Networks and Electrical Technology Lab	-	3	2
	Total :	**25**	**8**	**24**

II Year 2ⁿᵈ Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Managerial Economics and Financial Analysis	3+1*	-	3
2	Analog Circuits	3+1*	-	3
3	Pulse Circuits	3+1*	-	3
4	Analog Communications	3+1*	-	3
5	Transmission Lines and Waveguides	3+1*	-	3
6	Control Systems	3+1*	-	3
7	Professional Ethics and Patents	2	-	2
8	Analog Circuits Lab	-	3	2
9	Analog Communications Lab	-	3	2
	Total :	**26**	**6**	**24**
10	Sports & Games / Creative Arts (Mandatory Non-Credit Course)	-	2	-

III Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Linear and Digital ICs	3+1*	-	3
2	Computer Organization and Microprocessors	3+1*	-	3
3	Antennas and Wave Propagation	3+1*	-	3
4	Digital Communications	3+1*	-	3
5	**Open Elective – I** (see the list of Open Electives)	3+1*	-	3
6	Pulse and Digital Circuits lab	-	3	2
7	Digital Communications Lab	-	3	2
8	Microprocessors and Interfacing Lab	-	3	2
	Total :	**20**	**9**	**21**

III Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Digital Signal Processing	3+1*	-	3
2	VLSI Design	3+1*	-	3
3	Microwave and Optical Communications	3+1*	-	3
4	**Elective – I** i) Digital Switching and Multiplexing ii) Computer Networks iii) Artificial Neural Networks iv) Electronic System Design	3+1*	-	3
5	**Open Elective – II** (see the list of Open Electives)	3+1*	-	3
6	IC Applications Lab	-	3	2
7	ECAD Lab	-	3	2
8	Mini Project	-	3	2
	Total :	**20**	**9**	**21**
9	NSS (Mandatory Non-Credit Course)	-	2	-

* Tutorial

IV Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Electronic Measurements and Instrumentation	3+1*	-	3
2	Microcontrollers and Embedded Systems	3+1*	-	3
3	**Elective – II** i) Cellular and Mobile Communications ii) Sensors and Instrumentation iii) Advanced Computer Architecture iv) DSP Architecture and Applications	3+1*	-	3
4	**Elective – III** i) FPGA Design ii) Digital TV Engineering iii) Digital Image Processing iv) Embedded Real Time Operating Systems	3+1*	-	3
5	**Open Elective – III** (see the list of Open Electives)	3+1*	-	3
6	Digital Signal Processing Lab	-	3	2

7	Microwave and Optical Communications Lab	-	3	2
8	VLSI and Embedded Systems lab	-	3	2
	Total :	**20**	**9**	**21**

IV Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	**Elective – IV** i) Testing and Verification of VLSI Circuits ii) Speech Processing iii) Satellite Communications iv) Wireless Sensor Networks	3+1*	-	3
2	**Elective – V** i) Low Power VLSI Design ii) Radar Engineering iii) Software Engineering iv) Biomedical Instrumentation	3+1*	-	3
3	Self Study Course (see the list of Self Study Courses)	-	-	2
4	Industrial / Practical Training	-	-	4
5	Project Work	-	9	9
	Total :	**8**	**9**	**21**

* Tutorial

B.Tech – Computer Science and Engineering

II Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Discrete Mathematical Structures	3+1*	-	3
2	Managerial Economics and Financial Analysis	3+1*	-	3
3	Digital Logic Design	3+1*	-	3
4	Formal Languages and Automata Theory	3+1*	-	3
5	Object Oriented Programming	3+1*	-	3
6	Data Structures using C	3+1*	-	3
7	Professional Ethics and Patents	2	-	2
8	Object Oriented Programming Lab	-	3	2
9	Data Structures using C Lab	-	3	2
	Total :	**26**	**6**	**24**

II Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week L	No. of Periods per week P	No. of Credits
1	Probability & Statistics	3+1*	-	3
2	Compiler Design	3+1*	-	3
3	Advanced Data Structures	3+1*	-	3
4	Computer Organization and Architecture	3+1*	-	3
5	Computer Graphics	3+1*	-	3
6	Operating System	3+1*	-	3
7	Employability Skills	1	2	2
8	Advanced Data Structures Lab	-	3	2
9	Operating System and Compiler Design Lab	-	3	2
	Total :	**25**	**8**	**24**
10	Sports & Games / Creative Arts (Mandatory Non-Credit Course)	-	2	-

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III Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week L	No. of Periods per week P	No. of Credits
1	Data Base Management Systems	3+1*	-	3
2	Computer Networks – I	3+1*	-	3
3	Web Technologies	3+1*	-	3
4	Object Oriented Analysis and Design	3+1*	-	3
5	**Open Elective – I** (see the list of Open Electives)	3+1*	-	3
6	Data Base Management Systems Lab	-	3	2
7	Case Tools Lab	-	3	2
8	Web Technologies Lab	-	3	2
	Total :	**20**	**9**	**21**

III Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week L	No. of Periods per week P	No. of Credits
1	Design and Analysis of Algorithms	3+1*	-	3
2	Software Engineering	3+1*	-	3
3	Computer Networks – II	3+1*	-	3
4	**Elective– I** i) Data Warehousing and Data Mining ii) Micro Processors and Multi Core systems iii) Human Computer Interface iv) Artificial Intelligence (or) Any other elective depending on industry needs	3+1*	-	3
5	**Open Elective – II** (see the list of Open Electives)	3+1*	-	3
6	Computer Networks Lab	-	3	2
7	Software Engineering Lab	-	3	2
8	Mini Project	-	3	2
	Total :	**20**	**9**	**21**
9	NSS (Mandatory Non-Credit Course)	-	2	-

IV Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Information Security	3+1*	-	3
2	Mobile Application Development	3+1*	-	3
3	**Core Elective– II** i) Digital Image Processing ii) Advanced Computer Architecture iii) Embedded Systems iv) Bio–Informatics	3+1*	-	3
4	**Core Elective– III** i) Distributed Systems ii) Parallel Computing iii) Software Testing Methodologies iv) Web Services	3+1*	-	3
5	**Open Elective – III** (see the list of Open Electives)	3+1*	-	3
6	Information Security Lab	-	3	2
7	Mobile Application Development Lab	-	3	2
8	Multi Media Application Development	-	3	2
	Total :	**20**	**9**	**21**

IV Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	**Elective– IV** i) Distributed Data Bases ii) Software Project Management iii) Semantic Web iv) Big Data	3+1*	-	3
2	**Elective– V** i) Machine Learning ii) Cloud Computing iii) Pattern Recognition iv) Wireless Sensor Networks	3+1*	-	3
3	Self Study Course (see the list of Self Study Courses)	-	-	2
4	Industrial / Practical Training	-	-	4
5	Project Work	-	9	9
	Total :	**8**	**9**	**21**

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B.Tech – Information Technology

II Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Discrete Mathematical Structures	3+1*	-	3
2	Probability & Statistics	3+1*	-	3
3	Managerial Economics and Financial Analysis	3+1*	-	3
4	Basic Electronics	3+1*	-	3
5	Digital Logic Design	3+1*	-	3
6	Object Oriented Programming	3+1*	-	3
7	Professional Ethics and Patents	2	-	2
8	Basic Electronics Lab	-	3	2
10	Object Oriented Programming Lab	-	3	2
	Total :	**26**	**6**	**24**

II Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Formal Languages & Automata Theory	3+1*	-	3
2	Software Engineering	3+1*	-	3
3	Computer Organization	3+1*	-	3
4	Advanced Data Structures Using C	3+1*	-	3
5	Database Management Systems	3+1*	-	3
6	Design Analysis of Algorithms	3+1*	-	3
7	Employability Skills	1	2	2
8	Advanced Data Structures & Algorithms Lab	-	3	2
9	Database Management Systems Lab	-	3	2
	Total :	**25**	**8**	**24**
10	Sports & Games / Creative Arts (Mandatory Non-Credit Course)	-	2	-

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III Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	Micro Processors and Interfacing	3+1*	-	3
2	Computer Networks	3+1*	-	3
3	Object Oriented Analysis & Design	3+1*	-	3
4	Operating Systems	3+1*	-	3
5	**Open Elective – I** (see the list of Open Electives)	3+1*	-	3
6	Micro Processors and Interfacing Lab	-	3	2
7	Computer Networks and Case Tools Lab	-	3	2
8	Operating Systems Lab	-	3	2
	Total :	**20**	**9**	**21**

III Year 2nd Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Compiler Design	3+1*	-	3
2	.Net Technologies	3+1*	-	3
3	Advanced Java and Web Technologies	3+1*	-	3
4	**Elective – I** 1. Advanced Operating System 2. Computer Graphics 3. Cryptography and Network Security 4. Computer Architecture	3+1*	-	3
5	**Open Elective – II** (see the list of Open Electives)	3+1*	-	3
6	.Net Technologies Lab	-	3	2
7	Advanced Java and Web Technologies Lab	-	3	2
8	Mini Project	-	3	2
	Total :	**20**	**9**	**21**
9	NSS (Mandatory Non-Credit Course)	-	2	-

IV Year 1st Semester

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	P	
1	Data Warehousing and Data Mining	3+1*	-	3
2	Multimedia Application Development	3+1*	-	3
3	**Elective – II** i) Distributed Databases ii) Human Computer Interaction iii) Bio-Metrics iv) Software Testing Methodologies	3+1*	-	3
4	**Elective – III** i) Information Retrieval Systems ii) Digital Image Processing iii) Mobile computing iv) Software Project Management	3+1*	-	3
5	**Open Elective – III** (see the list of Open Electives)	3+1*	-	3
6	Mobile Application Lab	-	3	2
7	Multimedia Application Development Lab	-	3	2
8	Free and Open Source Software Lab	-	3	2
	Total :	**20**	**9**	**21**

Sl. No.	Name of the Course / Laboratory	No. of Periods per week		No. of Credits
		L	**P**	
1	**Elective – IV** i) E-Commerce ii) Pattern Recognition iii) Cloud Computing iv) Business Intelligence	3+1*	-	3
2	**Elective – V** i) Big Data ii) Soft Computing iii) Computer Forensics iv) Software Quality Assurance	3+1*	-	3
3	Self Study Course (see the list of Self Study Courses)	-	-	2
4	Industrial / Practical Training	-	-	4
5	Project Work	-	9	9
	Total :	**8**	**9**	**21**

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List of Open Elective Courses and Self Study Courses

Open Elective – I

Sl. No.	Title of the Subject	Department Offering the Subject	L	P	Credits
1	Remote Sensing and GIS Techniques	CE	3+1*	-	3
2	Elements of Civil Engineering *(other than CE)*	CE	3+1*	-	3
3	Modeling and Simulation of Engineering Systems	EEE	3+1*	-	3
4	Renewable Energy Sources	ME	3+1*	-	3
5	Elements of Mechanical Engineering *(other than ME)*	ME	3+1*	-	3
6	Computer Networks *(other than CSE & IT)*	CSE	3+1*	-	3
7	Object Oriented Programming *(other than CSE & IT)*	CSE	2+1*	2	3
8	Data Structures Using C *(other than EEE, ECE, CSE & IT)*	CSE	2+1*	2	3
9	Cyber Laws	CSE	3+1*	-	3
10	Open Source Software	IT	3+1*	-	3
11	Fundamentals of Database Management Systems *(other than CSE & IT)*	IT	2+1*	2	3
12	Fuzzy Mathematics	Mathematics	3+1*	-	3

Open Elective – II

Sl. No.	Title of the Subject	Department Offering the Subject	L	P	Credits
1	Disaster Management	CE	3+1*	-	3
2	Solid Waste Management *(other than CE)*	CE	3+1*	-	3
3	Energy Audit, Conservation and Management	EEE	3+1*	-	3
4	Material Science *(other than ME)*	ME	3+1*	-	3
5	Automotive Electronics	ECE	3+1*	-	3
6	Introduction to MP&MC *(other than EEE, ECE, CSE & IT)*	ECE	3+1*	-	3
7	Cloud Computing *(other than CSE & IT)*	CSE	3+1*	-	3
8	Web Technologies *(other than CSE & IT)*	CSE	2+1*	2	3
9	Virtual Reality	CSE	3+1*	-	3
10	Scripting Languages	IT	3+1*	-	3
11	Big Data *(other than CSE & IT)*	IT	3+1*	-	3
12	Multi-variate analysis and Special Functions	Mathematics	3+1*	-	3

Open Elective – III

Sl. No.	Title of the Subject	Department Offering the Subject	L	P	Credits
1	Building Services *(other than CE)*	CE	3+1*	-	3
2	Modern Optimization Techniques	EEE	3+1*	-	3
3	Electrical Power Utilization *(other than EEE)*	EEE	3+1*	-	3
4	Robotics *(other than ME)*	ME	3+1*	-	3
5	Assistive Technologies	ECE	3+1*	-	3
6	Introduction to Embedded Systems *(other than ECE, CSE & IT)*	ECE	3+1*	-	3
7	Social Networks	CSE	3+1*	-	3
8	Mobile Application Development *(other than CSE & IT)*	CSE	3+1*	-	3
9	Real-Time Systems	CSE	3+1*	-	3
10	Network Management Systems	IT	3+1*	-	3
11	Fundamentals of E-Commerce *(other than CSE & IT)*	IT	3+1*	-	3
12	Statistical Methods using R Software	Mathematics	3+1*	-	3

Self Study Course

Sl. No.	Title of the Subject	Department Offering the Subject / URL	Credits
1	Global Positioning Systems	CE	2
2	Interior Design	CE	2
3	Electrical Safety Management	EEE	2
4	Green Engineering	ME	2
5	Managing Innovation & Entrepreneurship	ME	2
6	Internet of Things	ECE	2
7	Consumer Electronics	ECE	2
8	e-Waste Management	CSE	2
9	Management Information Systems	CSE	2
10	Information & Communication Technology	IT	2
11	Organizational Behaviour	MBA	2
12	MOOC Courses	----	2