



**ELECTRONICS AND  
COMMUNICATIONS  
ENGINEERING**

# SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (AUTONOMOUS)

(AFFILIATED TO ANDHRA UNIVERSITY, VISAKHAPATNAM) (RECOGNISED BY ALL INDIA COUNCIL FOR TECH. EDN., NEW DELHI)

Accredited by NAAC with 'A' Grade, Recognised as Scientific and Industrial Research Organisation

CHINNA AMIRAM (P.O):: BHIMAVARAM :: W.G.Dt., A.P., INDIA :: PIN: 534 204

Phones: Off : EPABX :08816-223332 Ext.201

Direct :08816-222748

Mobile No.98483 81818

Email: gpsvarma@gmail.com

principal@srkrec.ac.in

principalsrkrec@gmail.com

Web Site : www.srkrec.ac.in

**Dr. G. P. Saradhi Varma**

B.Tech.(CSE), M.Tech.(CSE), Ph.D.(CSE).

**PRINCIPAL**



## PROCEEDINGS OF THE PRINCIPAL

Ref No: SRKREC/Committee/BoS/ECE/1

Date: 06-07-2016

**Sub: Appointment of BoS members for Electronics and Communication Engineering (ECE) department-Reg**

The following members are nominated as Board of Studies members for the Department of Electronics and Communication Engineering (ECE). This order will come into force with immediate effect until further orders.

S No	Name	Position in committee	Associated with
01	Dr. K.V.S.N. Raju	Chairman	Professor & Head, SRKREC
02	Prof. G. Sasibhushana Rao	University Nominee	Prof. Dept. of ECE, AU
03	Dr. N.V.S.N. Sarma	Expert from other University	Prof. NITW
04	Dr. B.V. Ramana Reddy	Expert from other University	Prof. & Dean, Guru Gobind Indraprastha University
05	Dr. A.M. Prasad	Expert from other University	Prof. JNTUK
06	Sri Rama Raju	Industry Expert	Director, Envision Enterprise Solutions
07	Dr. M. Chakravarty	Research Organization	Scientist G, DLRL Hyderabad
08	Prof. N. Venkateswara Rao	Faculty of each specialization	Professor, SRKREC
09	Prof. D.V.R. Mohan		Professor, SRKREC
10	Prof. P. Subba Rao		Professor, SRKREC
11	Dr. P.V. Rama Raju		Professor, SRKREC
12	Prof. N. Udaya Kumar		Professor, SRKREC
13	Dr. B.V.S.S.N. Raju		Professor, SRKREC
14	Prof. G.V.S. Padma Rao		Professor, SRKREC
15	Sri M. Vijaya Rama Raju		Associate Prof., SRKREC
16	Sri S.S. Mohan Reddy		Associate Prof., SRKREC
17	Sri Y. Rama Lakshmana		Associate Prof., SRKREC
18	Student Representatives		

G.P.S.V. —

PRINCIPAL

PRINCIPAL

S.R.K.R. Engineering College  
(Autonomous)

China Amiram, Shimavaram-534 204

c.c.to:

1. Principal's table
2. HOD-ECE
3. All the above Members 4 Off



  
PRINCIPAL  
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BHIMAVARAM-534 204.

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principalsrkrec@gmail.com

gpsvarma@gmail.com

Web Site : www.srkrec.ac.in

SRKREC/BOS-1/ECE/2016-17

Date: 08.07.2016

To

Prof. G.Sasibhushana Rao

Department of Electronics and Communication Engineering

Andhra University

Visakhapatnam - 530 003.

Dear Sir,

Sub: S.R.K.R. Engineering College-Board of Studies Meeting-Invitation-Regarding

\*\*\*

We wish to inform you that UGC has granted Autonomous Status to our college from the Academic Year 2016-17.

In this connection, the meeting of the Joint Board of Studies will be held on 17.07.2016 at 11-00 A.M in A.C. Auditorium, I-Block.

The Boards of Studies meetings will be conducted on 17.07.2016 at 2.30 P.M. in respective departments as per the schedule mentioned below:

S.I. No.	BOARD	DATE	TIME
1	Civil Engineering	17-07-2016	2.30 P.M.
2	Computer Science & Engineering	17-07-2016	2.30 P.M.
3	Electronics & Communication Engineering	17-07-2016	2.30 P.M.
4	Electrical & Electronics Engineering	17-07-2016	2.30 P.M.
5	Information Technology	17-07-2016	2.30 P.M.
6	Mechanical Engineering	17-07-2016	2.30 P.M.
7	Combined Board of Studies in Engineering Chemistry/Engineering Mathematics/Engineering Physics / Humanities and Social Sciences	17-07-2016	2.30 P.M.

The T.A / D.A. will be paid to all the external members as per the university guidelines. We request you to make it convenient to attend the meetings.

Yours faithfully,

G.P.S. Varma

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SRKREC/BOS-1/ECE/2016-17

Date: 08.07.2016

To  
Dr. N.V.S.N.Sarma  
Department of ECE  
NIT-Warangal

Dear Sir,

Sub: S.R.K.R. Engineering College-Board of Studies Meeting-Invitation-Regarding

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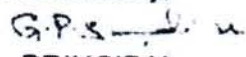
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Yours faithfully,

  
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SRKREC/BOS-1/ECE/2016-17

Date: 08.07.2016

To

Dr. B.V.Ramana Reddy

Professor & Dean

Guru Gobind Indra Prastha University

Dwarka, New Delhi

Dear Sir,

Sub: S.R.K.R. Engineering College-Board of Studies Meeting-Invitation-Regarding

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SRKREC/BOS-1/ECE/2016-17

Date: 08.07.2016

To  
Dr. A.M.Prasad  
Professor – Department of ECE  
JNTUK, Kakinda

Dear Sir,

Sub: S.R.K.R. Engineering College-Board of Studies Meeting-Invitation-Regarding

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We wish to inform you that UGC has granted Autonomous Status to our college from the Academic Year 2016-17.

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SRKREC/BOS-1/ECE/2016-17

Date: 08.07.2016

To  
Sri Rama Raju  
Director, Envision  
Jubilee Hills, Hyderabad-500033

Dear Sir,

Sub: S.R.K.R. Engineering College-Board of Studies Meeting-Invitation-Regarding

\*\*\*

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**SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE**  
CHINNA AMIRAM :: BHIMAVARAM-534204  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

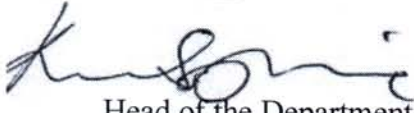
Dt: 15-07-2016

**CIRCULAR**

This is to inform you that the Department of ECE has convened a meeting on 17-07-2016 at 2.30 PM in M.Tech DSP Lab. In this connection, all the Board of Studies members are requested to attend the same.

**Agenda:**

1. Finalization of scheme for second, third and fourth years of UG and PG courses. Which will come into force from 2016-2017 first year admitted batch (R16).

  
Head of the Department  
**Head of ECE Department**  
**S.R.K.R. Engg. College**  
**BHIMAVARAM-534 204**

C.C to:

1. The Members of Board of studies
2. Office file

*H. Jagapathi Reddy*

**PRINCIPAL**  
**S.R.K.R. Engg. College**  
**BHIMAVARAM-534 204.**



30s meeting for ECE  
on 17-7-2016

4

17-7-2016

The Board of studies meeting for UG and PG Courses is conducted on 17-7-2016 at 2:30 PM in ECE department.

Venue: M Tech DSP lab. Time: 2:30 PM  
Date: 17-7-2016.

Agenda: Finalization of scheme for secas, 15th and 16th years of UG and PG courses. which will come into force from 2016-2017 first year admitted batch. (16)

Members present

- ① Dr N VEN SARMA, Prof in ECE, NITU
- ② Dr M. Chakravarthy, Sr-G, OLR, HOD
- ③ Dr K VEN RAJU
- ④ Prof N. V. RAO
- ⑤ Prof D V R Mohan
- ⑥ Prof P. Subba Rao
- ⑦ Dr PV Rama Raju
- ⑧ Prof N. Udaya Kumar
- ⑨ Dr Suresh Rao
- ⑩ Prof GVS Padma Rao
- ⑪ Sr M. Vijayakumar Raju
- ⑫ Sr S. S. Mohan Reddy
- ⑬ Sr Y. Rama Lakshmana
- ⑭ P. B. Sai Dileep
- ⑮ B V S N Raju
- ⑯ M. Ravi Teja
- ⑰ A. Manika Naga Devi

Signature  
Mishra

M. Chakravarthy

Kumar

N. V. Rao

D. V. R. Mohan

P. Subba Rao

P. V. Rama Raju

N. Udaya Kumar

Suresh Rao

G. V. S. Padma Rao

M. Vijayakumar Raju

S. S. Mohan Reddy

Y. Rama Lakshmana

H. Nagappa. Raji

PRINCIPAL  
S.R.K.R. ENGG. College  
BHIMAVARAM-524 294.

17-7-2016

Resolutions:

The scheme for  $2/4$ ,  $3/4$ ,  $4/4$  of UG and  $1/2$ ;  $2/2$  of PG (ECE) Courses is finalized. This will come into force from the academic year 2016-2017 (A16) which is done based on feedbacks into consideration.

H. Nagappa. Neji

PRINCIPAL  
S.R.K.R. ENGG. COLLEGE  
BHIMAVARAM-534 304.

# Resolution 1



**SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (AUTONOMOUS)**  
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## **SCHEME OF INSTRUCTION & EXAMINATION** (Regulation R16)

**II/IV B.TECH**  
(With effect from 2016-2017 Admitted Batch onwards)  
Under Choice Based Credit System

### **ELECTRONICS AND COMMUNICATION ENGINEERING**

#### **I-SEMESTER**

Code No.	Course	Credits	Lecture Hrs	Tutorial Hrs	Lab Hrs	Total Contact Hrs/Week	Sessional Marks	Exam Marks	Total Marks
B16 ENG 2101	Mathematics - IV	4	3	1	-	4	30	70	100
B16 EE 2104	Circuit Analysis & Synthesis	4	3	1	-	4	30	70	100
B16 EE 2105	Electrical Technology	4	3	1	-	4	30	70	100
B16 EC 2101	Analog Electronic Circuits	4	3	1	-	4	30	70	100
B16 CS 2104	Elementary Data Structures	4	3	1	-	4	30	70	100
B16 EC 2102	Probability Theory & Random Processes	4	3	1	-	4	30	70	100
B16 EE 2107	Network And Machines Lab	2	-	-	3	3	50	50	100
B16 EC 2105	Electronic Devices & Circuits Lab	2	-	-	3	3	50	50	100
B16 ENG 2104	English Proficiency	2	1	1	-	2	50	50	100
B16 ENG 2106	Industry Oriented Training	1	-	-	2	2	50	-	50
<b>Total</b>		<b>31</b>	<b>19</b>	<b>7</b>	<b>8</b>	<b>34</b>	<b>380</b>	<b>570</b>	<b>950</b>

*H. Jagapathi Reddy*

**PRINCIPAL**  
**S.R.K.R. Engg. College**  
**BHIMAVARAM-534 204.**

**SCHEME OF INSTRUCTION & EXAMINATION**  
(Regulation R16)

**II/IV B.TECH**  
(With effect from 2016-2017 Admitted Batch onwards)  
Under Choice Based Credit System

**ELECTRONICS AND COMMUNICATION ENGINEERING**

**II-SEMESTER**

Code No.	Course	Credits	Lecture Hrs	Tutorial Hrs	Lab Hrs	Total Contact Hrs/Week	Sessional Marks	Exam Marks	Total Marks
B16 EC 2201	Switching Theory and Logic Design	4	3	1	--	4	30	70	100
B16 EC 2202	Electromagnetic Field theory & Transmission Lines	4	3	1	--	4	30	70	100
B16 EC 2203	Pulse and Digital Circuits	4	3	1	--	4	30	70	100
B16 EC 2204	Analog Communications	4	3	1	--	4	30	70	100
B16 EC 2205	Signals & Systems	4	3	1	--	4	30	70	100
B16 ENG 2201	Environmental Studies	2	3	1	--	4	30	70	100
B16 EC 2207	Analog Communications Lab	2	--	--	3	3	50	50	100
B16 EC 2208	Analog Electronic Circuits Lab with Simulation	2	--	--	3	3	50	50	100
B16 EC 2209	Industry oriented Technology Lab	1	--	--	2	2	50	--	50
B16 ENG 2204	Industry Oriented Training	1	--	--	2	2	50	--	50
<b>Total</b>		<b>28</b>	<b>18</b>	<b>6</b>	<b>10</b>	<b>34</b>	<b>380</b>	<b>520</b>	<b>900</b>

*H. Jagapathi Reddy*  
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**SCHEME OF INSTRUCTION & EXAMINATION**  
 (Regulation R16)  
**III/IV B.TECH**  
 (With effect from 2016-2017 Admitted Batch onwards)  
 Under Choice Based Credit System  
**ELECTRONICS AND COMMUNICATION ENGINEERING**  
**I-SEMESTER**

Code No.	Course	Credits	Lecture Hrs	Tutorial Hrs	Lab Hrs	Total Contact Hrs/Week	Sessional Marks	Exam Marks	Total Marks
B16 EC 3101	Linear ICs and Applications	4	3	1	-	4	30	70	100
B16 ENG 3101	Principles of Economics and Management	4	3	1	-	4	30	70	100
B16 EC 3102	Computer Architecture and Organization	4	3	1	-	4	30	70	100
B16 EC 3103	Antennas and Propagation	4	3	1	-	4	30	70	100
B16 EC 3104	Electronic Measurements and Instrumentation	4	3	1	-	4	30	70	100
B16 EC 3106	Linear Integrated Circuits & Pulse Circuits Lab with Simulation	4	3	1	-	4	30	70	100
B16 EC 3107	Digital Integrated Circuits & Hardware Descriptive Language	2	-	-	3	3	50	50	100
B16 ENG 3102	Verbal & Quantitative Aptitude-I	2	5	-	-	5	100	-	100
#M-I	MOOCS-I	2	4	-	-	4	100	-	100
#M-II	MOOCS - II	2	4	-	-	4	100	-	100
<b>Total</b>		<b>34</b>	<b>31</b>	<b>6</b>	<b>6</b>	<b>43</b>	<b>580</b>	<b>520</b>	<b>1100</b>

<b>#M-I</b>	B16 ENG 3103	Basic Coding
	B16 EC 3109A	Microwave Theory and Techniques
	B16 EC 3109B	Analysis and Design Principles of Microwave Antennas
	B16 EC 3109C	Principles of Digital Communications
<b>#M-II</b>	B16 EC 3110A	Introduction to Wireless and Cellular Communications
	B16 EC 3110B	Fabrication Techniques for MEMS-based Sensors; Clinical Perspective
	B16 EC 3110C	Introduction to information theory, Coding and cryptography
	B16 EC 3110D	Digital Image Processing

*H. Jagapathi Reddy*

**PRINCIPAL**  
**S.R.K.R. ENGG. College**  
**BHIMAVARAM-534 204.**

**SCHEME OF INSTRUCTION & EXAMINATION**  
(Regulation R16)  
**III/IV B.TECH**  
(With effect from 2016-2017 Admitted Batch onwards)  
Under Choice Based Credit System  
**ELECTRONICS AND COMMUNICATION ENGINEERING**  
**II-SEMESTER**

Code No.	Course	Credits	Lecture Hrs	Tutorial Hrs	Lab Hrs	Total Contact Hrs/Week	Sessional Marks	Exam Marks	Total Marks
B16 EC 3201	Microwave Engineering	4	3	1	--	4	30	70	100
B16 EC 3202	Microprocessors and its Applications	4	3	1	--	4	30	70	100
B16 EC 3203	Digital Communication	4	3	1	--	4	30	70	100
#ELE-I	ELECTIVE-I	4	3	1	--	4	30	70	100
B16 EC 3206	Digital Signal Processing	4	3	1	--	4	30	70	100
#ELE-II	ELECTIVE-II	4	3	1	--	4	30	70	100
B16 EC 3211	DSP Laboratory	2	--	--	3	3	50	50	100
B16 EC 3212	Microprocessors and Microcontrollers Lab	2	--	--	3	3	50	50	100
B16 ENG 3202	Verbal & Quantitative Aptitude-II	2	5	--	--	5	100	--	100
B16 EC 3213	Mini Project	2	--	--	3	3	50	--	50
#M-III	MOOCS-III	2	4	--	--	4	100	--	100
<b>Total</b>		<b>34</b>	<b>27</b>	<b>6</b>	<b>9</b>	<b>42</b>	<b>530</b>	<b>520</b>	<b>1050</b>

<b># ELE-I</b>	B16 EC 3204	Radar & Navigation
	B16 EC 3205	Information Theory And Coding
	B16 CS 3210	Object oriented programming
	B16 CS 3211	Web technologies
	B16 CS 3212	Software Engineering
<b>#ELE-II</b>	B16 EC 3207	Embedded Systems & Microcontrollers
	B16 EC 3208	Micro Electronics
	B16 EC 3209	Telecommunication Switching Systems
	B16 EC 3210	Digital Signal Processors And Architectures
<b>#M-III</b>	B16 ENG 3204	Advanced Coding
	B16 EC 3214A	Principles of Signals and Systems
	B16 EC 3214B	Analog Circuits
	B16 EC 3214C	Microprocessors and Microcontrollers

*H. Nagappa Reddy*

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**SAGI RAMA KRISHNAM RAJU ENGINEERING COLLEGE (AUTONOMOUS)**

(Affiliated to Andhra University, Visakhapatnam), (Recognised by AICTE, New Delhi)

Accredited by NAAC with 'A' Grade

Recognised as Scientific and Industrial Research Organisation

CHINNA AMIRAM (P.O):: BHIMAVARAM :: W.G.Dt., A.P., INDIA :: PIN: 534 204

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**I-SEMESTER**

Code No.	Course	Credits	Lecture Hrs	Tutorial Hrs	Lab Hrs	Total Contact Hrs/Week	Sessional Marks	Exam Marks	Total Marks
B16 EC 4101	Digital Image Processing	4	3	1	-	4	30	70	100
B16 EC 4102	VLSI Design	4	3	1	-	4	30	70	100
B16 EC 4103	Fiber Optic Communications	4	3	1	-	4	30	70	100
B16 EC 4104	Microwave Engineering & Optical communications Lab	2	-	-	3	3	50	50	100
B16 EC 4105	Digital Communication Lab	2	-	-	3	3	50	50	100
B16 EC 4106	Project Phase-I	2	-	-	3	3	50	--	50
<b>Total</b>		<b>18</b>	<b>9</b>	<b>3</b>	<b>9</b>	<b>21</b>	<b>240</b>	<b>310</b>	<b>550</b>

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**II-SEMESTER**

Code No.	Course	Credits	Lecture Hrs	Tutorial Hrs	Lab Hrs	Total Contact Hrs/Week	Sessional Marks	Exam Marks	Total Marks
B16 EC 4201	Cellular and Mobile Communications	4	3	1	-	4	30	70	100
B16 EC 4202	Computer Networks	4	3	1	-	4	30	70	100
# ELE-III	ELECTIVE-III	4	3	1	-	4	30	70	100
B16 EC 4208	Project Phase-II	12	-	-	9	9	50	100	150
	<b>Total</b>	<b>24</b>	<b>9</b>	<b>3</b>	<b>9</b>	<b>21</b>	<b>140</b>	<b>310</b>	<b>450</b>

<b># ELE-III</b>	B16 EC 4203	Internet of things.
	B16 EC 4204	Digital System design Through HDL
	B16 EC 4205	Bio Medical Signal Processing.
	B16 EC 4206	Satellite Communication
	B16 EC 4207	Digital TV

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

M.TECH (COMMUNICATION SYSTEMS)

Scheme of Instruction and Examination

(Regulation:R16)

(with effect from 2016-2017 admitted batch onwards)

I - SEMESTER

Code No.	Course title	Credits	Lecture Hrs	Lab Hrs	Total Contact Hrs/ Week	Sessional Marks	Exam Marks	Total Marks
M16 CS 1101	Communication Theory	4	4	--	4	30	70	100
M16 CS 1102	Communication Techniques	4	4	--	4	30	70	100
M16 CS 1103	Satellite Communication and Phased Arrays	4	4	--	4	30	70	100
M16 CS 1104	Digital signal processing	4	4	--	4	30	70	100
M16 CS 1105	Optical Fibers and Applications	4	4	--	4	30	70	100
#1	Elective -I	4	4	--	4	30	70	100
M16 CS 1110	Communication Engineering Lab	2	-	4	4	50	50	100
M16 CS 1111	Seminar - I	2	-	3	3	100	--	100
<b>Total</b>		<b>28</b>	<b>24</b>	<b>7</b>	<b>31</b>	<b>330</b>	<b>470</b>	<b>800</b>

	Course Code	Course
#1-Elective-I	M16 CS 1106	EMI/EMC
	M16 CS 1107	Microwave Components and Networks
	M16 CS 1108	Advanced Microprocessor
	M16 CS 1109	Embedded Systems

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M.TECH (COMMUNICATION SYSTEMS)

Scheme of Instruction and Examination  
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**II – SEMESTER**

Code No.	Course title	Credits	Lecture Hrs	Lab Hrs	Total Contact Hrs/ Week	Sessional Marks	Exam Marks	Total Marks
M16 CS 1201	RF and Microwave Engineering	4	4	--	4	30	70	100
M16 CS 1202	Cellular and Mobile Communications	4	4	--	4	30	70	100
M16 CS 1203	GPS and Applications	4	4	--	4	30	70	100
M16 CS 1204	Telecommunication Switching and Networks	4	4	--	4	30	70	100
#2	Elective - II	4	4	--	4	30	70	100
#3	Elective - III	4	4	--	4	30	70	100
M16 CS 1213	Digital Signal Processing Lab	2	-	4	4	50	50	100
M16 CS 1214	Seminar - II	2	-	3	3	100	--	100
<b>Total</b>		<b>28</b>	<b>24</b>	<b>7</b>	<b>31</b>	<b>330</b>	<b>470</b>	<b>800</b>

	Course Code	Course
#2-Elective-II	M16 CS 1205	Modeling and Simulation of Communication Systems
	M16 CS 1206	Modern Radar Systems
	M16 CS 1207	Digital Image Processing
	M16 CS 1208	VLSI Design
#3-Elective-III	M16 CS 1209	Application Specific Integrated Circuits (ASIC)
	M16 CS 1210	Multimedia Communication Systems
	M16 CS 1211	Wavelet Transforms and Its Applications
	M16 CS 1212	Statistical Signal Processing

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**III – SEMESTER**

Course Code	Course Title	Credits	Scheme of Examination	Exam Marks	Total Marks
M16 CS 2101	Thesis Work - Preliminary	10	Review	100	100

1. Candidates can do their thesis work within the department or in any industry/research organization for two semesters (i.e. 3rd and 4th semesters). In case of thesis done in an industry/research organization, one advisor (Guide) should be from the department and one advisor (CO-Guide) should be from the industry/research organization.
2. The Thesis Work -Preliminary should be submitted at the end of 3rd semester and it will be evaluated through Review by a committee consisting of Head of the Department, External Examiner, PG coordinator and guide. The marks shall be awarded in the ratio of 20, 40, 20 and 20 percent by the members respectively.

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**IV – SEMESTER**

Course Code	Course Title	Credits	Scheme of Examination	Exam Marks	Total Marks
M16 CS 2201	Thesis Work-Final	14	Viva-voce	100	100

1. A publication of a paper on the thesis work in a National/International Journal at the end of 4<sup>th</sup> semester is mandatory for the submission of thesis work.
2. The Thesis should be submitted at the end of 4th semester and it will be evaluated through Viva-Voce examination by a committee consisting of Head of the Department, External Examiner, PG coordinator and thesis guide. The marks shall be awarded in the ratio of 20, 40, 20 and 20 percent by the members respectively.

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