

**ANNAMACHARYA INSTITUTE OF TECHNOLOGY AND SCIENCES, RAJAMPET
(AN AUTONOMOUS INSTITUTION)**

Thallapaka Panchayat, New Boyanapalli, Rajampet, Kadapa Dist., A.P. – 516126

(Approved by AICTE, New Delhi & Affiliated to Jawaharlal Nehru Technological University Anantapur, Anantapur)

Department of Electrical and Electronics Engineering

Minutes of Meeting of the Board of Studies of EEE Department held on 22/06/2014

Members Present:

Dr. M. Padma Lalitha

Dr. V.Madhusudhan

Mr. T.Murali

Mr. O.Hemakesavulu

Mr. P.Bhaskara Prasad

BOS-04-01: Ratification of Earlier minutes of BOS meeting held on 12-05-2013.

BOS-04-02: The course structure and syllabi are finalized for UG as enclosed in Annexure-I.

BOS-04-03: The course structure and syllabi are finalized for PG as enclosed in Annexure-II.

BOS-04-04: Resolved to instruct the faculty members to identify the industries to be visited when dealing their subject.

BOS-04-05: Resolved to send the recommendations for the approval of the Academic Council.

Dr.M. PADMA LALITHA
Chairman

ANNEXURE-I

Curriculum for the Programmes under Autonomous Scheme

| | |
|-----------------------|--|
| Regulation | R 2014 |
| Department | Department of Electrical and Electronics Engineering |
| Programme Code & Name | G2, B.Tech-Electrical & Electronics Engineering |

I Year B.Tech

| Subject Code | Subject Name | Hours/ Week | | | C | Maximum marks | | |
|--------------|---|-------------|----------|-----------|-----------|---------------|------------|-------------|
| | | L | T | P | | Internal | External | Total |
| 1GC11 | English | 2 | 0 | 0 | 4 | 30 | 70 | 100 |
| 1GC12 | Engineering Physics | 2 | 0 | 0 | 4 | 30 | 70 | 100 |
| 1GC13 | Engineering Chemistry | 2 | 0 | 0 | 4 | 30 | 70 | 100 |
| 1GC14 | Mathematics – I | 3 | 1 | 0 | 6 | 30 | 70 | 100 |
| 1G311 | Electronic Devices and circuits | 3 | 1 | 0 | 6 | 30 | 70 | 100 |
| 1G112 | C Programming and Introduction to Data Structures | 3 | 1 | 0 | 6 | 30 | 70 | 100 |
| 1G513 | Engineering Drawing | 1 | 0 | 3 | 6 | 30 | 70 | 100 |
| 1G312 | Electronic Devices and circuits Lab | 0 | 0 | 3 | 4 | 30 | 70 | 100 |
| 1G114 | C Programming and Data Structures Lab | 0 | 0 | 3 | 4 | 30 | 70 | 100 |
| 1GC16 | Engineering Physics and Chemistry Lab | 0 | 0 | 3 | 4 | 30 | 70 | 100 |
| 1GC17 | English Language and Communication Skills Lab | 0 | 0 | 3 | 4 | 30 | 70 | 100 |
| 1G411 | Engineering and IT Workshop | 0 | 0 | 3 | 4 | 30 | 70 | 100 |
| Total | | 16 | 3 | 18 | 56 | 360 | 840 | 1200 |

Curriculum for the Programmes under Autonomous Scheme

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| Regulation | R 2014 |
| Department | Department of Electrical and Electronics Engineering |
| Programme Code & Name | G2, B.Tech-Electrical & Electronics Engineering |

II Year B.Tech I Semester

| Subject Code | Subject Name | Hours/ Week | | | C | Maximum marks | | |
|--------------|--|-------------|----------|----------|-----------|---------------|------------|------------|
| | | L | T | P | | Internal | External | Total |
| 1GC32 | Engineering Mathematics | 4 | 0 | 0 | 4 | 30 | 70 | 100 |
| 1G231 | Switching Theory and Logic Design | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G232 | Electrical Machines-I | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G233 | Electrical Circuits-I | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G536 | Fluid Mechanics and Hydraulic Machines | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G234 | Electromagnetic Fields | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G537 | Fluid Mechanics and Hydraulic Machines Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1G238 | Electrical Machines-I Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1G23B | Seminar - I | 0 | 0 | 2 | 2 | 100 | 00 | 100 |
| Total | | 24 | 5 | 8 | 30 | 340 | 560 | 900 |

Curriculum for the Programmes under Autonomous Scheme

| | |
|-----------------------|--|
| Regulation | R 2014 |
| Department | Department of Electrical and Electronics Engineering |
| Programme Code & Name | G2, B.Tech-Electrical & Electronics Engineering |

II Year B.Tech II Semester

| Subject Code | Subject Name | Hours/ Week | | | C | Maximum marks | | |
|--------------|---|-------------|----------|----------|-----------|---------------|------------|------------|
| | | L | T | P | | Internal | External | Total |
| 1G241 | Electrical Machines-II | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G242 | Electrical Circuits-II | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G343 | Pulse and Digital Circuits | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G243 | Generation of Electric Power | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G244 | Linear Control Systems | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1GC41 | Mathematics – III | 4 | 0 | 0 | 4 | 30 | 70 | 100 |
| 1G247 | Electrical Circuits and Simulation Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| | Advanced English Communication Skills Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1GC44 | Soft Skills – I | 2 | 0 | 0 | 2 | 30 | 70 | 100 |
| Total | | 26 | 5 | 6 | 30 | 270 | 630 | 900 |

Curriculum for the Programmes under Autonomous Scheme

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|-----------------------|--|
| Regulation | R 2014 |
| Department | Department of Electrical and Electronics Engineering |
| Programme Code & Name | G2, B.Tech-Electrical & Electronics Engineering |

III Year B.Tech I Semester

| Subject Code | Subject Name | Hours/ Week | | | C | Maximum marks | | |
|--------------|---|-------------|----------|----------|-----------|---------------|------------|------------|
| | | L | T | P | | Internal | External | Total |
| 1G356 | Linear and Digital Integrated Circuits Applications | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G251 | Electrical Machines-III | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G252 | Transmission of Electric Power | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G253 | Power Electronics | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G254 | Electrical and Electronics Measurements | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1GC52 | Environmental Science | 4 | 0 | 0 | 4 | 30 | 70 | 100 |
| 1G255 | Electrical Machines-II Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1G256 | Control systems Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1G257 | Seminar - II | 0 | 0 | 2 | 2 | 100 | 00 | 100 |
| Total | | 24 | 5 | 8 | 30 | 340 | 560 | 900 |

Curriculum for the Programmes under Autonomous Scheme

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|-----------------------|--|
| Regulation | R 2014 |
| Department | Department of Electrical and Electronics Engineering |
| Programme Code & Name | G2, B.Tech-Electrical & Electronics Engineering |

III Year B.Tech II Semester

| Subject Code | Subject Name | Hours/ Week | | | C | Maximum marks | | |
|--------------|---|-------------|----------|----------|-----------|---------------|------------|------------|
| | | L | T | P | | Internal | External | Total |
| 1GA61 | Managerial Economics and Financial Analysis | 4 | 0 | 0 | 4 | 30 | 70 | 100 |
| 1G261 | Power System Analysis | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G262 | Utilization of Electrical Energy | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G366 | Microprocessors and Microcontrollers | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G468 | Computer System Architecture | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G263 | Power System Operation and Control | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G264 | Electrical Measurements Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1G265 | Power Electronics and Simulation Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1GC62 | Soft Skills – II | 2 | 0 | 0 | 2 | 30 | 70 | 100 |
| Total | | 26 | 5 | 6 | 30 | 270 | 630 | 900 |

Curriculum for the Programmes under Autonomous Scheme

| | |
|-----------------------|--|
| Regulation | R 2014 |
| Department | Department of Electrical and Electronics Engineering |
| Programme Code & Name | G2, B.Tech-Electrical & Electronics Engineering |

IV Year B.Tech I Semester

| Subject Code | Subject Name | Hours/ Week | | | C | Maximum marks | | |
|--------------------|---|-------------|----------|----------|-----------|---------------|------------|------------|
| | | L | T | P | | Internal | External | Total |
| 1GA71 | Management Science | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G271 | Fundamentals of HVDC & FACTS Devices | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G272 | Switch Gear and Protection | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G372 | Digital Signal Processing | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| Elective-I | | | | | | | | |
| 1G273 | Instrumentation | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G274 | High Voltage Engineering | | | | | | | |
| 1G275 | Renewable Energy Sources | | | | | | | |
| Elective-II | | | | | | | | |
| 1G47C | Soft Computing Techniques | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G276 | Reliability Engineering and Applications To Power Systems | | | | | | | |
| 1G57E | Optimization Techniques | | | | | | | |
| 1G37B | Microprocessors and Microcontrollers Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1G277 | Power Systems Lab | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| 1G278 | Comprehensive Electrical and Electronics Engineering | 0 | 0 | 2 | 2 | 100 | 00 | 100 |
| Total | | 24 | 6 | 8 | 30 | 340 | 560 | 900 |

Curriculum for the Programmes under Autonomous Scheme

| | |
|-----------------------|--|
| Regulation | R 2014 |
| Department | Department of Electrical and Electronics Engineering |
| Programme Code & Name | G2, B.Tech-Electrical & Electronics Engineering |

IV Year B.Tech II Semester

| Subject Code | Subject Name | Hours/ Week | | | C | Maximum marks | | |
|---------------------|--|-------------|----------|-----------|-----------|---------------|------------|------------|
| | | L | T | P | | Internal | External | Total |
| 1G281 | Power Semiconductor Drives | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G282 | Distribution of Electrical Power | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| Elective-III | | | | | | | | |
| 1G283 | Modern Control Theory | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G284 | Special Electrical Machines | | | | | | | |
| 1G285 | Principles of Power Quality | | | | | | | |
| Elective-IV | | | | | | | | |
| 1G389 | Embedded Systems | 4 | 1 | 0 | 4 | 30 | 70 | 100 |
| 1G286 | Design of Electrical Systems | | | | | | | |
| 1G287 | Energy Auditing and Demand side Management | | | | | | | |
| 1G288 | Seminar - III | 0 | 0 | 2 | 2 | 100 | 00 | 100 |
| 1G289 | Project work | 0 | 0 | 12 | 12 | 30 | 70 | 100 |
| Total | | 16 | 4 | 14 | 30 | 250 | 350 | 600 |

ANNEXURE-II

| Curriculum for the Programs under Autonomous Scheme | | | | | | | | |
|---|--|-------------|----------|----------|-----------|---------------|----------|-------|
| Regulation | R 2014 | | | | | | | |
| Department | Department of Electrical And Electronics Engineering | | | | | | | |
| Programme Code & Name | M.Tech-Electrical Power Engineering | | | | | | | |
| Semester I | | | | | | | | |
| S.NO | Course Name | Hours/ Week | | | Credit | Maximum marks | | |
| | | L | T | P | C | Internal | External | Total |
| | THEORY | | | | | | | |
| 1 | Advanced Power System Analysis | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 2 | Power System Dynamics & Stability | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 3 | EHV AC/DC Transmission | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 4 | Reactive Power Compensation & Management | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 5 | Elective-I | | | | | | | |
| i) | AI Techniques in Power Systems | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Embedded Systems | | | | | | | |
| iii) | Power Quality | | | | | | | |
| 6 | Elective-II | | | | | | | |
| i) | Micro Processors & Micro Controllers | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Modern control Theory | | | | | | | |
| iii) | Energy Auditing , Conservation & Management | | | | | | | |
| 7 | SEMINAR-I | 1 | 0 | 0 | 2 | 40 | 60 | 100 |
| 8 | Machines &Power Systems Lab | 0 | 0 | 3 | 2 | 40 | 60 | 100 |
| Total | | 25 | 0 | 3 | 28 | 800 | | |
| Semester II | | | | | | | | |
| S.NO | Course Name | Hours/ Week | | | Credit | Maximum marks | | |
| | | L | T | P | C | Internal | External | Total |
| | THEORY | | | | | | | |
| 1 | Operation & Control Of Power System | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 2 | Flexible AC Transmission System | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 3 | Advanced Power System protection | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 4 | Distributed Generation & Micro Grid | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 5 | Elective-III | | | | | | | |
| i) | Power System Reliability | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Modern Power Electronics | | | | | | | |
| iii) | Special Machines | | | | | | | |
| 6 | Elective-IV | | | | | | | |
| i) | Electrical Power Distribution & Automation | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Transients In Power Systems | | | | | | | |
| iii) | Restructured Power System | | | | | | | |
| 7 | SEMINAR-II | 1 | 0 | 0 | 2 | 40 | 60 | 100 |
| 8 | Power System Simulation Lab | 0 | 0 | 3 | 2 | 40 | 60 | 100 |
| Total | | 25 | 0 | 3 | 28 | 800 | | |

| Curriculum for the Programmes under Autonomous Scheme | | | | |
|---|---------------------|--|----------------------|----------|
| Regulation | | R 2014 | | |
| Department | | Department of Electrical And Electronics Engineering | | |
| Programme Code & Name | | M.Tech-Electrical Power Engineering | | |
| Semester III & SEMESTER IV | | | | |
| Sl.no | Course Name | Credits | Maximum marks | |
| | | | Internal | External |
| <u>1</u> | PROJECT WORK | 16 | GRADE (A/B/C) | |
| TOTAL | | 16 | GRADE | |

| Curriculum for the Programs under Autonomous Scheme | | | | | | | | |
|---|--|--|----------|----------|-----------|---------------|----------|----------|
| Regulation | | R 2014 | | | | | | |
| Department | | Department of Electrical And Electronics Engineering | | | | | | |
| Programme Code & Name | | M.Tech-Electrical Power Systems | | | | | | |
| Semester I | | | | | | | | |
| Sl.no | Course Name | Hours/ Week | | | Credit | Maximum marks | | |
| | | L | T | P | | C | Internal | External |
| | THEORY | | | | | | | |
| 1 | Advanced Power System Analysis | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 2 | Power System Control & Stability | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 3 | EHV AC/DC Transmission | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 4 | Reactive Power Compensation & Management | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 5 | Elective-I | | | | | | | |
| i) | Soft Computing Techniques | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Embedded Systems | | | | | | | |
| iii) | Power Quality | | | | | | | |
| 6 | Elective-II | | | | | | | |
| i) | Advanced Digital Signal Processing | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Modern control Theory | | | | | | | |
| iii) | Energy Auditing , Conservation & Management | | | | | | | |
| 7 | SEMINAR-I | 1 | 0 | 0 | 2 | 40 | 60 | 100 |
| 8 | Machines &Power Systems Lab | 0 | 0 | 3 | 2 | 40 | 60 | 100 |
| Total | | 25 | 0 | 3 | 28 | 800 | | |
| Semester II | | | | | | | | |
| Sl.no | Course Name | Hours/ Week | | | Credit | Maximum marks | | |
| | | L | T | P | | C | Internal | External |
| | THEORY | | | | | | | |
| 1 | Operation & Control Of Power System | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 2 | Flexible AC Transmission System | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 3 | Advanced Power System protection | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 4 | Energy Conversion Systems | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| 5 | Elective-III | | | | | | | |
| i) | Power System Reliability | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Modern Power Electronics | | | | | | | |
| iii) | Power System Dynamics | | | | | | | |
| 6 | Elective-IV | | | | | | | |
| i) | Distribution Automation | 4 | 0 | 0 | 4 | 40 | 60 | 100 |
| ii) | Transients In Power Systems | | | | | | | |
| iii) | Restructured Power System | | | | | | | |
| 7 | SEMINAR-II | 1 | 0 | 0 | 2 | 40 | 60 | 100 |
| 8 | Power System Simulation Lab | 0 | 0 | 3 | 2 | 40 | 60 | 100 |
| Total | | 25 | 0 | 3 | 28 | 800 | | |

| Curriculum for the Programmes under Autonomous Scheme | | | | | |
|---|--|-----------|----------------------|----------|-------|
| Regulation | R 2014 | | | | |
| Department | Department of Electrical And Electronics Engineering | | | | |
| Programme Code & Name | M.Tech-Electrical Power Systems | | | | |
| Semester III & SEMESTER IV | | | | | |
| Sl.no | Course Name | Credits | Maximum marks | | |
| | | | Internal | External | Total |
| <u>1</u> | PROJECT WORK | 16 | GRADE (A/B/C) | | |
| | TOTAL | 16 | GRADE | | |