

2009-10

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY
ANANTAPUR**

**Course structure for B.Tech. (Regular) I year (2009-10) for affiliated
Engineering Colleges.**

**ELECTRONICS AND COMMUNICATION
ENGINEERING (E.C.E)**

**(Common for Branches: E.C.E., E.E.E., E.I.E., C.S.E., I.T.,
C.S.S.E., E.Cont.E., E.C.M.)**

| Sl. No | Course code | Subject | Th | Tu/Drg/Lab | | | Credits |
|-----------------------------------|-------------|--|------------|------------|----|----|---------|
| 1. | 9ABS101 | English | 2 | | | | 4 |
| 2. | 9ABS102 | Engineering Physics | 2 | | | | 4 |
| 3. | 9ABS103 | Engineering Chemistry | 2 | | | | 4 |
| 4. | 9ABS104 | Mathematics – I | 3 | 1 | - | - | 6 |
| 5. | 9A05101 | Programming in C and Data Structures | 3 | 1 | - | - | 6 |
| 6. | 9A03101 | Engineering Drawing * | | - | 6 | - | 6 |
| 7. | 9ABS105 | Mathematical Methods | 3 | 1 | - | - | 6 |
| 8. | 9A05102 | C Programming & Data Structures Lab | | - | - | 3 | 4 |
| 9. | 9A03102 | Engineering & I.T. Workshop # | | - | - | 3 | 4 |
| 10. | 9ABS106 | Engineering Physics and Engineering Chemistry Lab ** | | - | - | 3 | 4 |
| 11. | 9ABS107 | English Language & Communication Skills Lab | | - | - | 3 | 4 |
| | | Contact periods/week | 15 | 3 | 6 | 12 | |
| | | | Total/week | | 36 | | |
| Total Credits (7 Theory + 4 Labs) | | | | | | | 52 |

Th = Theory; Tu = Tutorial; Drg = Drawing & Lab = Laboratory:

- * Engineering Drawing will have University External Exam.
- ** The Students attend the Physics lab and Chemistry lab in alternate weeks. The end exam shall be conducted separately and average of the two exams will be recorded by the University exam section.
- # Students attend Engineering and IT work shop as a single lab every week and the end exam is conducted as a single lab. Sharing the Maximum marks and time for one task each from Engineering workshop and IT workshop. The sum of the marks awarded will be recorded

ELECTRONICS AND COMMUNICATION ENGINEERING (E.C.E)

B.Tech II - I Semester

| S. No | Course code | Subject | Theory | Lab. | Credits |
|--|-------------|---|---------------|------|-----------|
| 1. | 9ABS302 | Mathematics – III | 4 | | 4 |
| 2. | 9ABS303 | Environmental Science | 4 | | 4 |
| 4. | 9A02305 | Electrical Circuits | 4 | | 4 |
| 5. | 9A04303 | Probability Theory & Stochastic Processes | 4 | | 4 |
| 3. | 9A04301 | Electronic Devices and Circuits | 4 | | 4 |
| 6. | 9A04304 | Signals and Systems | 4 | | 4 |
| 7. | 9A04302 | Electronic Devices & Circuits Lab | | 3 | 2 |
| 8. | 9A04305 | Basic Simulation Lab (using MATLAB) | | 3 | 2 |
| | | contact periods/week | 24 | 6 | |
| | | | Total/Week 30 | | |
| Total Credits (6 Theory + 2 Labs) | | | | | 28 |

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B.Tech II - II Semester

| S. No | Course code | Subject | Theor y | Lab. | Credits |
|-----------------------------------|-------------|---|------------|------|---------|
| 1. | 9AHS401 | Managerial Economics & Financial Analysis | 4 | | 4 |
| 2. | 9A02401 | Principles of Electrical Engineering | 4 | | 4 |
| 3. | 9A04402 | Electronic Circuit Analysis | 4 | | 4 |
| 4. | 9A04404 | Pulse & Digital Circuits | 4 | | 4 |
| 5. | 9A04401 | Switching Theory & Logic Design | 4 | | 4 |
| 6. | 9A04406 | Electromagnetic Theory & Transmission Lines | 4 | | 4 |
| 7. | 9A04403 | Electronic Circuit Analysis Lab | | 3 | 2 |
| 8. | 9A02402 | Electrical Engineering Lab | | 3 | 2 |
| | | contact periods/week | 24 | 6 | |
| | | | Total/Week | | 30 |
| Total Credits (6 Theory + 2 Labs) | | | | | 28 |

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III B. Tech. – I Semester (E.C.E)

| S. No. | Group | Subject | L | T | P | CP |
|-----------------------------------|--------------|--------------------------------------|---------------|----------|----------|-----------|
| 01. | 9A02503 | Control Systems | 3 | 1 | 0 | 4 |
| 02. | 9A04501 | Analog Communications | 3 | 1 | 0 | 4 |
| 03. | 9A04502 | Linear IC Applications | 3 | 1 | 0 | 4 |
| 04. | 9A04503 | Antennas & Wave Propagation | 3 | 1 | 0 | 4 |
| 05. | 9A05406 | Computer Organization | 4 | 0 | 0 | 4 |
| 06. | 9A04504 | Digital IC Applications | 3 | 1 | 0 | 4 |
| 07. | 9A04505 | Linear & Digital IC Applications Lab | 0 | 0 | 3 | 2 |
| 08. | 9A04506 | Pulse & Digital Circuits Lab | 0 | 0 | 3 | 2 |
| | | contact periods / week | 19 | 05 | 06 | |
| | | | Total/Week 30 | | | |
| Total Credits (6 Theory + 2 Labs) | | | | | | 28 |

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III B. Tech. – II Semester (E.C.E)

| S. No. | Group | Subject | L | T | P | CP |
|-----------------------------------|---------|--|---------------|----|----|----|
| 01. | 9A04601 | Digital Communications | 3 | 1 | 0 | 4 |
| 02. | 9A04602 | Microprocessors & Microcontrollers | 4 | 0 | 0 | 4 |
| 03. | 9A04603 | Digital Signal Processing | 3 | 1 | 0 | 4 |
| 04. | 9A04604 | Electronic Measurements and Instrumentation | 4 | 0 | 0 | 4 |
| 05. | 9A04605 | VLSI Design | 4 | 0 | 0 | 4 |
| 06. | 9A04606 | Microwave Engineering | 3 | 1 | 0 | 4 |
| 07. | 9A04607 | Analog & Digital Communications lab | 0 | 0 | 3 | 2 |
| 08. | 9AHS601 | Advanced English Language Communication skills lab | 0 | 0 | 3 | 2 |
| | | contact periods / week | 21 | 03 | 06 | |
| | | | Total/Week 30 | | | |
| Total Credits (6 Theory + 2 Labs) | | | | | | 28 |

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IV B. Tech. – I Semester (E.C.E)

| S. No. | Group | Subject | L | T | P | CP |
|-----------------------------------|---------|--|---------------|----|----|----|
| 01. | 9AHS701 | Management Science | 4 | 0 | 0 | 4 |
| 02. | 9A04701 | Embedded Real Time Operating Systems | 3 | 1 | 0 | 4 |
| 03. | 9A05506 | Computer Networks | 4 | 0 | 0 | 4 |
| 04. | 9A04702 | Optical Communications | 3 | 1 | 0 | 4 |
| 05. | 9A04703 | Elective – I 1. RADAR Systems 2. DSP Processors & Architectures 3. Operating Systems | 3 | 1 | 0 | 4 |
| | 9A04704 | | | | | |
| | 9A05505 | | | | | |
| 06. | 9A10802 | Elective – II 1. Bio-Medical Instrumentation 2. T.V. Engineering 3. Digital Design through Verilog HDL | 4 | 0 | 0 | 4 |
| | 9A04705 | | | | | |
| | 9A04706 | | | | | |
| 07. | 9A04707 | Microwave & Optical Communications Lab | 0 | 0 | 3 | 2 |
| 08. | 9A04708 | Microprocessors & DSP lab | 0 | 0 | 3 | 2 |
| | | contact periods / week | 21 | 03 | 06 | |
| | | | Total/Week 30 | | | |
| Total Credits (6 Theory + 2 Labs) | | | | | | 28 |

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IV B.Tech. – II Semester (E.C.E)

| S. No. | Group | Subject | L | T | P | C P |
|--|-------------------------------|---------------------------------------|---------------|----|----|-----|
| 01. | 9A04801 | Cellular & Mobile Communications | 3 | 1 | 0 | 4 |
| 02. | 9A04802 | Digital Image Processing | 3 | 1 | 0 | 4 |
| 03. | 9A04803 9A04804 9A05709 | Elective – III | 3 | 1 | 0 | 4 |
| | | 1. Satellite Communications | | | | |
| | | 2. Spread Spectrum Communications | | | | |
| 04. | 9A04805 9A04806 9A04807 | Elective – IV | 3 | 1 | 0 | 4 |
| | | 1. Adaptive Filter Theory | | | | |
| | | 2. Wireless Communications & Networks | | | | |
| 05. | 9A04808 | Seminar | 0 | 0 | 0 | 2 |
| 06. | 9A04809 | Project | -- | -- | -- | 10 |
| | | contact periods / week | 12 | 04 | 0 | |
| | | | Total/Week 16 | | | |
| Total Credits (4Theory + Seminar + Project Work) | | | | | | 28 |