

SCHEME OF COURSES FOR BE (Electronics and Communications Engineering) 2009-2013

| First Semester | | | | | | |
|-----------------|------------------------------------|-----------|----------|----------|----------------------|-------------|
| | Course Name | L | T | P | Total Hours/ Week | Cr. |
| UEN001 | Environment Studies | 3 | 0 | 0 | 3 | 3.0 |
| UMA001 | Mathematics –I | 3 | 1 | 0 | 4 | 3.5 |
| UPH001 | Physics | 3 | 1 | 2 | 6 | 4.5 |
| UTA002 | Manufacturing Processes | 2 | 0 | 3 | 5 | 3.5 |
| UES001 | Electrical & Electronics Science | 3 | 1 | 2 | 6 | 4.5 |
| UES005 | Electrical Engineering Materials | 3 | 1 | 2 | 6 | 4.5 |
| | | 17 | 4 | 9 | 30 | 23.5 |
| Second Semester | | | | | | |
| UHU001 | Communication Skills | 2 | 0 | 2 | 4 | 3.0 |
| UMA002 | Mathematics –II | 3 | 1 | 0 | 4 | 3.5 |
| UTA001 | Engineering Graphics | 2 | 4 | 0 | 6 | 4.0 |
| UTA003 | Computer Programming | 3 | 0 | 2 | 5 | 4.0 |
| UES007 | Semiconductor Devices | 3 | 1 | 2 | 6 | 4.5 |
| UPH201 | Advanced Engineering Physics | 3 | 1 | 0 | 4 | 3.5 |
| UCB002 | Chemistry Lab | 0 | 0 | 3 | 3 | 1.5 |
| | | 16 | 7 | 9 | 32 | 24.0 |
| Third Semester | | | | | | |
| UHU031 | Organizational Behaviour | 3 | 1 | 0 | 4 | 3.5 |
| UMA031 | Optimization Techniques | 3 | 1 | 0 | 4 | 3.5 |
| UES033 | Measurement Science and Techniques | 3 | 1 | 0 | 4 | 3.5 |
| UEC301 | Analog Electronic Circuits | 3 | 1 | 2 | 6 | 4.5 |

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|-----------------|--------------------------------------|-----------|----------|----------|-----------|-------------|
| UEC302 | Digital Electronic Circuits | 3 | 1 | 2 | 6 | 4.5 |
| UEE302 | Electro Magnetic Field Theory | 3 | 1 | 0 | 4 | 3.5 |
| | | 18 | 6 | 4 | 28 | 23.0 |
| Fourth Semester | | | | | | |
| UMA032 | Numerical & Statistical Methods | 3 | 1 | 2 | 6 | 4.5 |
| UHU033 | Total Quality Management | 3 | 1 | 0 | 4 | 3.5 |
| UEC401 | Analog Communication Systems | 3 | 1 | 2 | 6 | 4.5 |
| UEC504 | Microprocessors | 3 | 1 | 2 | 6 | 4.5 |
| UEC403 | Circuit Analysis and Synthesis | 3 | 1 | 0 | 4 | 3.5 |
| UEC404 | Signals & Systems | 3 | 1 | 2 | 6 | 4.5 |
| | | 18 | 6 | 8 | 32 | 25.0 |
| Fifth Semester | | | | | | |
| UEC501 | Digital Communication Systems | 3 | 1 | 2 | 6 | 4.5 |
| UEC502 | Digital Signal Processing | 3 | 1 | 2 | 6 | 4.5 |
| UEC613 | Linear Integrated Circuit Analysis | 3 | 1 | 2 | 6 | 4.5 |
| UEC402 | Computer Architecture | 3 | 1 | 0 | 4 | 3.5 |
| UEC505 | Microwave Engineering | 3 | 1 | 2 | 6 | 4.5 |
| UEC506 | Microelectronics – IC Design and Fab | 3 | 1 | 0 | 4 | 3.5 |
| UEC591 | Six Weeks Summer Training | - | - | - | - | 4.0 |
| | | 18 | 6 | 8 | 32 | 29.0 |
| Sixth Semester | | | | | | |
| UEC601 | Antenna Theory and Wave Propagation | 3 | 1 | 2 | 6 | 4.5 |
| UEC602 | Data Communication | 3 | 0 | 0 | 3 | 3.0 |
| UEC603 | Microcontrollers & Embedded Systems | 3 | 1 | 2 | 6 | 4.5 |

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|------------------|--|-----------|----------|-----------|-----------|--------------|
| UCS | Data Structures & Analysis | 3 | 0 | 2 | 5 | 4.0 |
| | Elective-I | 3 | 1 | 2 | 6 | 4.5 |
| | Elective –II | 3 | 1 | 2 | 6 | 4.5 |
| | CAPSTONE Project – Part A (Starts) 4 Self Effort Hours | - | - | - | - | 2.0 |
| | | 18 | 4 | 10 | 32 | 27.0 |
| Seventh Semester | | | | | | |
| UEC802 | Fiber Optic Communication | 3 | 1 | 2 | 6 | 4.5 |
| UEC803 | Radar, Satellite and Navigational Aids | 3 | 1 | 0 | 4 | 3.5 |
| UEC804 | Wireless and Mobile Communication | 3 | 1 | 2 | 6 | 4.5 |
| UHU081 | Engineering Economics | 3 | 1 | 0 | 4 | 3.5 |
| UEC604 | Modern Control Theory | 3 | 1 | 0 | 4 | 3.5 |
| | Elective-III | 3 | 1 | 0 | 4 | 3.5 |
| | CAPSTONE Project – Part B (Continues) 6 Self effort Hours | - | - | - | - | 3.0 |
| | | 18 | 6 | 4 | 28 | 26.0 |
| Eighth Semester | | | | | | |
| | Project Semester | - | - | - | - | 16.0 |
| OR | | | | | | |
| UEC701 | ASICs and FPGAs | 3 | 0 | 0 | 3 | 3.0 |
| | Elective-IV | 2 | 1 | 2 | 5 | 3.5 |
| | Elective –V | 3 | 1 | 0 | 4 | 3.5 |
| UEC792 | Project | - | - | 12 | 12 | 6.0 |
| | | 8 | 2 | 14 | 24 | 16.0 |
| Total | | | | | | 193.5 |

List of Electives

Elective -I

| Course No. | Course Name | L | T | P | Total Hours / week | Cr. |
|------------|-------------------------------|---|---|---|--------------------|-----|
| UEC611 | Audio & Speech Processing | 3 | 1 | 2 | 6 | 4.5 |
| UEC612 | Digital Systems Design | 3 | 1 | 2 | 6 | 4.5 |
| UEC614 | Telecommunication Engineering | 3 | 1 | 2 | 6 | 4.5 |

Elective –II

| Course No. | Course Name | L | T | P | Total Hours / week | Cr. |
|------------|---------------------------|---|---|---|--------------------|-----|
| UEC621 | CMOS Circuit Design | 3 | 1 | 2 | 6 | 4.5 |
| UEC622 | DSP Processors | 3 | 1 | 2 | 6 | 4.5 |
| UEC623 | FPGA Based Systems | 3 | 1 | 2 | 6 | 4.5 |
| UEC624 | Soft Computing Techniques | 3 | 1 | 2 | 6 | 4.5 |

Elective –III

| Course No. | Course Name | L | T | P | Total Hours / week | Cr. |
|------------|--------------------------------|---|---|---|--------------------|-----|
| UEC851 | VLSI Digital Signal Processing | 3 | 1 | 0 | 4 | 3.5 |
| UEC852 | Wireless Sensor Networks | 3 | 1 | 0 | 4 | 3.5 |
| UEC853 | Wireless Adhoc Networks | 3 | 1 | 0 | 4 | 3.5 |
| UEC503 | Information Theory and Coding | 3 | 1 | 0 | 4 | 3.5 |
| UEC801 | Advanced Solid State Devices | 3 | 1 | 0 | 4 | 3.5 |

Elective –IV

| Course No. | Course Name | L | T | P | Total Hours / week | Cr. |
|-------------------|-------------------------------------|----------|----------|----------|---------------------------|------------|
| UEI717 | Bio-Medical Engineering | 3 | 1 | 0 | 4 | 3.5 |
| UEI718 | Virtual Instrumentation Engineering | 2 | 1 | 2 | 5 | 3.5 |
| UTA004 | Information Technology | 2 | 1 | 2 | 5 | 3.5 |
| UCH715 | Alternate Energy Sources | 3 | 1 | 0 | 4 | 3.5 |
| UPH062 | Nano Science and Nano Materials | 3 | 1 | 0 | 4 | 3.5 |
| UMA062 | Graph Theory and Applications | 3 | 1 | 0 | 4 | 3.5 |

Elective –V

| Course No. | Course Name | L | T | P | Total Hours / week | Cr. |
|-------------------|-------------------------|----------|----------|----------|---------------------------|------------|
| UEC741 | Artificial Intelligence | 3 | 1 | 0 | 4 | 3.5 |
| UEC742 | MEMS | 3 | 1 | 0 | 4 | 3.5 |
| UEC743 | Reliability Engineering | 3 | 1 | 0 | 4 | 3.5 |

Total Number of Credits: 193.5