



सेवा में

प्राविधिक विश्वविद्यालय से सम्बद्ध

B.Tech. पाठ्यक्रम संचालित करने वाली

समस्त संस्थाओं के निदेशक/प्राचार्य

विषय : पाठ्यचर्या के अन्तर्गत विषय कोड/निर्धारित अंकों में संशोधन के सम्बन्ध में।

महोदय,

उक्त के सम्बन्ध में यह अवगत कराना है कि विश्वविद्यालय द्वारा लागू की गई निम्न विषयों के कोड/अंकों में त्रुटिवश विवरण गलत अंकित हो गया है। इनमें संशोधन निम्नवत है-

| क्र. | पाठ्यक्रम | त्रुतिपूर्ण विवरण | संशोधन |
|------|--|------------------------------------|---|
| 1. | B.Tech. Electronics Engineering, B.Tech. Electronics & Communication Engg., B.Tech. Electronics & Tele Communication Engg. (Effective from the session 2010-11) 3 rd Year, VI Semester | EIC - 601 Microcontroller | EEC-014 Microcontroller & Embedded System |
| 2. | B.Tech. Instrumentation & Control Engg., B.Tech. Applied Electronics & Instrumentation Engg., B.Tech. Electronics & Instrumentation Engg., B.Tech. Electronics Instrumentation & Control Engg., B.tech. Instrumentation Engg. (Effective from the session 2010-11) 3 rd Year, VI Semester | EEC - 603 Microwave Engineering | EIC-013 Microwave Engg. & Measurements |

आपसे अनुरोध है कि कृपया तदनुसार Course structure एवं पाठ्यचर्या में संशोधन करने का कष्ट करें।

संलग्नक : संशोधित पाठ्यचर्या

भवदीय,

(यू०एस० तोमर)

कुलसचिव

पृष्ठांकन संख्या व दिनांक : उपरोक्त

प्रतिलिपि : निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित-

1. परीक्षा नियंत्रक, गौतमबुद्ध प्राविधिक प्राविधिक विश्वविद्यालय, लखनऊ।
2. प्रो. दिनेश चन्द्रा, (समन्वयक-बोर्ड आफ स्टडीज), इलेक्ट्रानिक्स इंजीनियरिंग विभाग, जे.एस.एस. एकेडमी आफ टेक्निकल एजुकेशन, सी-20/1, सेक्टर-62, नोएडा।
3. डा. वी.के. सिंह, (सदस्य-बोर्ड आफ स्टडीज), इलेक्ट्रानिक्स इंजीनियरिंग विभाग, आई.ई.टी., लखनऊ

(यू०एस० तोमर)

कुलसचिव

1. The elective course of B. Tech. EC is listed as EIC 601 Microcontroller. Please make a correction in the name and the course code as **EEC 014 Microcontroller and Embedded System**. The syllabus of the subject is:

| EEC 014 MICROCONTROLLER AND EMBEDDED SYSTEM | | | 3 1 0 |
|--|---|---|-----------------------------------|
| Unit | Topic | Chapter/ Section | Proposed number of Lectures |
| I | Introduction , Microcontrollers and Embedded processors, Overview of the 8051, Inside the 8051, Addressing modes, | 0.3, 1.1, 1.2, 2.1, 5.1-5.4, | 6 |
| II | Introduction to 8051 assembly programming, Assembling and running an 8051 program, The program counter and ROM space in the 8051, 8051 data types and directives, 8051 flag bits and the PSW register, 8051 register banks and stack, 8051 I/O programming, I/O bit manipulation programming. | 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 4.1, 4.2 | 8 |
| III | Programming the 8051 timers, Counter programming, Basics of serial communications, 8051 connection to RS-232, 8051 serial port programming assembly, 8051 interrupts, Programming timer interrupts, programming external hardware interrupts, programming the Serial communication interrupts, Interrupts priority in the 8051, | 9.1, 9.2, 10.1, 10.2, 10.3, 11.1, 11.2, 11.3, 11.4, 11.5 | 10 |
| IV | Interfacing with 8051: Memory address decoding 8031/ 51 interfacing with external ROM, 8051 data memory space, LCD, Keyboard, Parallel and Serial ADC, DAC interfacing, Sensor interfacing and Signal Conditioning, Stepper motor and DC motor, | 14.2, 14.3, 14.4, 12.1, 12.2, 13.1, 13.2, 13.3, 17.2, 17.3, | 10 |
| V | Programming the 8255 and Interfacing, Introduction to Intel 8096 and MC68HC11 microcontroller*. | 15.1, 15.2, Text Book 2: Ch. 3 & 4 | 6 |
| Text Book: | | | |
| 1. Mazidi Ali Muhammad, Mazidi Gillispie Janice, and McKinlay Rolin D., " The 8051 Microcontroller and Embedded Systems using Assembly and C", Pearson, 2 nd Edition. | | | |
| 2. Chhabra Bhupendra Singh, "Microcontrollers & its Applications" Dhanpat Rai Publishing Company | | | |
| Reference Book: | | | |
| 1. Ayala Kenneth, "The 8051 Microcontroller", Cengage Learning, 3 rd Edition | | | |
| 2. Shah Satish, " 8051 Microcontrollers MCS 51 Family and its variants", Oxford University Press. | | | |
| 3. Ghoshal Subrata, " 8051 Microcontroller Internals, Instructions, Programming and Interfacing" Pearson | | | |

2. The elective course of B. Tech. EI is listed as EEC 603 Microwave Engineering. Please make a correction in the name and the course code as **EIC 013 Microwave Engineering and Measurements** with following syllabus.

| EIC 013 MICROWAVE ENGINEERING AND MEASUREMENTS | | | 3 1 0 |
|--|---|-----------------------------|-----------------------------|
| Unit | Topic | Chapter/ Section | Proposed number of Lectures |
| I | Rectangular Wave Guide: Field Components, TE, TM Modes, Dominant TE ₁₀ mode, Field Distribution, Power, Attenuation. Circular Waveguides: TE, TM modes. Wave Velocities, Micro strip Transmission line (TL), Coupled TL, Strip TL, Coupled Strip Line, Coplanar TL, Microwave Cavities, | 4.1-4-3,11.0-11.3 | 8 |
| II | Scattering Matrix , Passive microwave devices: Microwave Hybrid Circuits. , Terminations, Attenuators, Phase Shifters, Directional Couplers: Two Hole directional couplers, S Matrix of a Directional coupler, Hybrid Couplers, Microwave Propagation in ferrites, Faraday Rotation, Isolators, Circulators. S parameter analysis of all components. | 4.4-4.6 | 8 |
| III | Microwave Tubes: Limitation of Conventional Active Devices at Microwave frequency, Two Cavity Klystron, Reflex Klystron, Magnetron, Traveling Wave Tube, Backward Wave Oscillators: Their Schematic, Principle of Operation, Performance Characteristic and their applications. | 9.0-9.5, 10.0-10.2 | 8 |
| IV | Solid state amplifiers and oscillators: Microwave Bipolar Transistor, Microwave tunnel diode, Microwave Field-effect Transistor, Transferred electron devices, Avalanche Transit -time devices: IMPATT Diode, TRAPPAT Diode, | 5.0-5.1,5.3,6.0-6.1,7.0-7.3 | 10 |
| V | Microwave Measurements: General set up of a microwave test bench, Slotted line carriage, VSWR Meter, microwave power measurements techniques, Crystal Detector, frequency measurement, wavelength measurements, Impedance and Reflection coefficient, VSWR, Insertion and attenuation loss measurements, measurement of antenna characteristics, microwave link design. | 14.1-14.4 (Book 2) | 8 |
| Text Books: | | | |
| 1. Samuel Y. Liao, "Microwave Devices and Circuits", 3 rd Ed, Pearson Education. | | | |
| 2. A. Das and S. K. Das, "Microwave Engineering", TMH. | | | |
| Reference Books: | | | |
| 1. R.E Collin, "Foundation for Microwave Engineering ", 2 nd Ed., John Wiley India. | | | |

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