

**Scheme and Syllabus of Semesters III to VIII of B.E
(With effect from 2010-2011)**

Information Science and Engineering

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM

**SCHEME OF TEACHING AND EXAMINATION
B.E. INFORMATION SCIENCE AND ENGINEERING
(Common to CSE & ISE)**

III SEMESTER

| S. No. | Subject Code | Subject | Teaching Dept. | Teaching Hrs / Week | | Examination | | | |
|--------|--------------|--|----------------|---------------------|-----------|----------------|-------|------|-------|
| | | | | Theory | Practical | Duration (Hrs) | Marks | | |
| | | | | | | | IA | Exam | Total |
| 1 | 10MAT31 | Engineering Mathematics - III | Mathematics | 04 | - | 03 | 25 | 100 | 125 |
| 2 | 10CS32 | Electronic Circuits | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 3 | 10CS33 | Logic Design | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 4 | 10CS34 | Discrete Mathematical Structures | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 5 | 10CS35 | Data Structures with C/C++ | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 6 | 10CS36 | Object Oriented Programming with C++ | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 7 | 10CSL37 | Data Structures with C/C++ Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| 8 | 10CSL38 | Electronic Circuits & Logic Design Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| Total | | | | 24 | 06 | - | 200 | 700 | 900 |

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IV SEMESTER

| S. No. | Subject Code | Subject | Teaching Dept. | Teaching Hrs / Week | | Examination | | | |
|--------|--------------|--|----------------|---------------------|-----------|----------------|-------|------|-------|
| | | | | Theory | Practical | Duration (Hrs) | Marks | | |
| | | | | | | | IA | Exam | Total |
| 1 | 10MAT41 | Engineering Mathematics - IV | Maths | 04 | - | 03 | 25 | 100 | 125 |
| 2 | 10CS42 | Graph Theory and Combinatorics | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 3 | 10CS43 | Design and Analysis of Algorithms | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 4 | 10CS44 | Unix and Shell Programming | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 5 | 10CS45 | Microprocessors | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 6 | 10CS46 | Computer Organization | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 7 | 10CSL47 | Design and Analysis of Algorithms Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| 8 | 10CSL48 | Microprocessors Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| Total | | | | 24 | 06 | - | 200 | 700 | 900 |

**SCHEME OF TEACHING AND EXAMINATION
B.E. INFORMATION SCIENCE AND ENGINEERING**

V SEMESTER

| S. No. | Subject Code | Subject | Teaching Dept. | Teaching Hrs / Week | | Examination | | | |
|--------|--------------|---|----------------|---------------------|-----------|----------------|-------|------|-------|
| | | | | Theory | Practical | Duration (Hrs) | Marks | | |
| | | | | | | | IA | Exam | Total |
| 1 | 10IS51 | Software Engineering | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 2 | 10CS52 | Systems Software | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 3 | 10CS53 | Operating Systems | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 4 | 10CS54 | Database Management Systems | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 5 | 10CS55 | Computer Networks - I | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 6 | 10CS56 | Formal Languages and Automata Theory | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 7 | 10CSL57 | Database Applications Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| 8 | 10CSL58 | Systems Software & Operating Systems Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| Total | | | | 24 | 06 | - | 200 | 700 | 900 |

SCHEME OF TEACHING AND EXAMINATION
B.E. INFORMATION SCIENCE AND ENGINEERING

VI SEMESTER

| S. No. | Subject Code | Subject | Teaching Dept. | Teaching Hrs /Week | | Duration (Hrs) | Examination | | |
|--------|--------------|---------------------------------|----------------|--------------------|-----------|----------------|-------------|------|-------|
| | | | | Theory | Practical | | Marks | | |
| | | | | | | | IA | Exam | Total |
| 1 | 10AL61 | Management and Entrepreneurship | CSE/ISE/MB A | 04 | - | 03 | 25 | 100 | 125 |
| 2 | 10CS62 | Unix System Programming | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 3 | 10IS63 | File Structures | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 4 | 10CS64 | Computer Networks - II | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 5 | 10IS65 | Software Testing | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 6 | 10IS66x | Elective I (Group-A) | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 7 | 10ISL67 | File Structures Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| 8 | 10ISL68 | Software Testing Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| Total | | | | 24 | 06 | - | 200 | 700 | 900 |

Elective I – Group A

10IS661/10CS661
10IS662/10CS63
10IS663/10CS663
10IS664/10CS664
10IS665/10CS65
10IS666/10CS666

Operations Research
Compiler Design
Data Compression
Pattern Recognition
Computer Graphics and Visualization
Programming Languages

SCHEME OF TEACHING AND EXAMINATION
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VII SEMESTER

| S. No. | Subject Code | Subject | Teaching Dept. | Teaching Hrs / Week | | Duration (Hrs) | Examination | | |
|--------|--------------------|-------------------------------------|----------------|---------------------|-----------|----------------|-------------|------|-------|
| | | | | Theory | Practical | | Marks | | |
| | | | | | | | IA | Exam | Total |
| 1 | 10CS71 | Object Oriented Modeling and Design | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 2 | 10IS72 | Information Systems | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 3 | 10CS73 | Programming the Web | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 4 | 10IS74/ 10CS755 | Data Warehousing and Data Mining | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 5 | 10IS75x | Elective II (Group-B) | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 6 | 10IS76x | Elective III(Group-C) | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 7 | 10CSL77 | Networks Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| 8 | 10CSL78 | Web Programming Laboratory | CSE/ISE | - | 03 | 03 | 25 | 50 | 75 |
| Total | | | | 24 | 06 | - | 200 | 700 | 900 |

Elective II – Group B

| | |
|-----------------|-------------------------------|
| 10IS751/10CS751 | Advanced DBMS |
| 10IS752/10CS72 | Embedded Computing Systems |
| 10IS753/10CS753 | JAVA and J2EE |
| 10IS754/10CS754 | Multimedia Computing |
| 10IS755 | Advanced Software Engineering |
| 10IS756/10CS756 | Neural Networks |

Elective III – Group C

| | |
|-----------------|--------------------------|
| 10IS761/10CS761 | C# Programming and .Net |
| 10IS762/10CS762 | Digital Image Processing |
| 10IS763/10CS763 | Game Theory |
| 10IS764/10CS764 | Artificial Intelligence |
| 10IS765/10CS765 | Storage Area Networks |
| 10IS766/10CS766 | Fuzzy Logic |

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VIII SEMESTER

| S. No. | Subject Code | Subject | Teaching Dept. | Teaching Hrs / Week | | Duration | Examination | | |
|--------|--------------|--------------------------------|----------------|---------------------|-----------|----------|-------------|------|-------|
| | | | | Theory | Practical | | Marks | | |
| | | | | | | | IA | Exam | Total |
| 1 | 10IS81 | Software Architectures | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 2 | 10CS82 | System Modeling and Simulation | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 3 | 10IS83x | Elective IV(Group-D) | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 4 | 10IS84x | Elective V(Group-E) | CSE/ISE | 04 | - | 03 | 25 | 100 | 125 |
| 5 | 10IS85 | Project Work | ISE | | 06 | 03 | 100 | 100 | 200 |
| 6 | 10IS86 | Seminar | ISE | | - | - | 50 | - | 50 |
| Total | | | | 16 | 06 | | 250 | 500 | 750 |

Elective IV – Group D

| | |
|-----------------|--|
| 10IS831/10CS831 | Wireless Networks and Mobile Computing |
| 10IS832/10CS832 | Web 2.0 and Rich Internet Applications |
| 10IS833 | User Interface Design |
| 10IS834/10CS834 | Network Management Systems |
| 10IS835/10CS835 | Information and Network Security |
| 10IS836/10CS836 | Microcontroller-Based Systems |

Elective V– Group E

| | |
|-----------------|--------------------------------|
| 10IS841/10CS841 | Ad-hoc Networks |
| 10IS842 | Information Retrieval |
| 10IS843 | Supply Chain Management |
| 10IS844/10CS844 | Services Oriented Architecture |
| 10IS845/10CS845 | Clouds, Grids and Clusters |
| 10IS846 | Decision Support Systems |

NOTE: Students have to register for one Elective from each of the five Elective Group

