



UTTARAKHAND BOARD OF TECHNICAL EDUCATION
INSTITUTE OF RESEARCH DEVELOPMENT & TRAINING
(STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME)



BRANCH NAME: COMMUNICATION AND COMPUTER NETWORKING

SEMESTER – III

BRANCH CODE: 47

| Course Code | Course Title | TH | T | P | T O T | EVALUATION SCHEME | | | | | | Total Marks | Total Credit |
|------------------|---|-----------|----------|-----------|-------------|---------------------|------------|------------|------------------|------------|------------------|-------------|--------------|
| | | | | | | Internal Assessment | | External | | | | | |
| | | | | | | Theory | Practical | Theory | | Practical | | | |
| | | | | | | Max Marks | Max Marks | Max Marks | Duration in Hrs. | Max Marks | Duration in Hrs. | | |
| Periods Per Week | | | | | | Max Marks | Max Marks | Max Marks | Duration in Hrs. | Max Marks | Duration in Hrs. | Total Marks | Total Credit |
| 473001 | Principle of Electronic Communication | 4 | 0 | 4 | 8 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 6 |
| 453004 | Analog Electronics & Devices | 4 | 0 | 4 | 8 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 6 |
| 433006 | E-Governance | 4 | 0 | 0 | 4 | 50 | 0 | 100 | 2.5 | 0 | - | 150 | 4 |
| 433003 | Data Structure using 'C' | 4 | 0 | 4 | 8 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 6 |
| 473002 | Python Programming Basics | 4 | 0 | 4 | 8 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 6 |
| 473003 | Computer Networking | 4 | 0 | 4 | 8 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 6 |
| 013054 | General Proficiency | 0 | 0 | 4 | 4 | 0 | 25 | - | - | - | - | 25 | 0 |
| 473052 | Industrial Exposure | - | - | - | 0 | 0 | 25 | - | - | - | - | 25 | 0 |
| AS301 | Summer Internship (3-4 Week duration after II sem) | - | - | - | 0 | 0 | 25 | - | - | 25 | 3.0 | 50 | 2 |
| | Total | 24 | 0 | 24 | 48 | 200 | 175 | 350 | - | 275 | - | 1000 | 36 |



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BRANCH NAME: COMMUNICATION AND COMPUTER NETWORKING

SEMESTER – IV

BRANCH CODE: 47

| Course Code | Course Title | TH | T | P | T O T | EVALUATION SCHEME | | | | | | Total Marks | Total Credit |
|------------------|--|-----------|----------|-----------|-------------|---------------------|------------|------------|------------------|------------|------------------|-------------|--------------|
| | | | | | | Internal Assessment | | External | | | | | |
| | | | | | | Theory | Practical | Theory | | Practical | | | |
| | | | | | | Max Marks | Max Marks | Max Marks | Duration in Hrs. | Max Marks | Duration in Hrs. | | |
| Periods Per Week | | | | | | Max Marks | Max Marks | Max Marks | Duration in Hrs. | Max Marks | Duration in Hrs. | Total Marks | Total Credit |
| 474001 | Digital Communication Systems | 4 | 0 | 2 | 6 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 5 |
| 474002 | Advance Networking | 4 | 0 | 2 | 6 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 5 |
| 474003 | Electronic Measurement & Instrumentation | 4 | 0 | 0 | 4 | 30 | 0 | 70 | 2.5 | 0 | - | 100 | 4 |
| 434003 | Introduction to Operating System | 4 | 0 | 2 | 6 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 5 |
| 474004 | Microprocessors and Peripheral Devices | 4 | 0 | 2 | 6 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 5 |
| 474005 | Object Oriented Programming Using Java | 4 | 0 | 2 | 6 | 30 | 20 | 50 | 2.5 | 50 | 3.0 | 150 | 5 |
| 454007 454008 | Elective: Artificial Intelligence & Machine Learning or , Soft Computing | 4 | 0 | 0 | 4 | 30 | 0 | 70 | 2.5 | 0 | - | 100 | 4 |
| AS401 | Essence of Indian Traditional Knowledge (Audit Course) | 2 | 0 | 0 | 2 | 0 | 0 | 50 | 2.5 | 0 | - | 50 | 0 |
| AS402 | Minor Project | 0 | 0 | 4 | 4 | 0 | 20 | - | - | 30 | 3.0 | 50 | 2 |
| 014054 | General Proficiency | 0 | 0 | 4 | 4 | - | 25 | - | - | - | - | 25 | 0 |
| 474052 | Industrial Exposure | 0 | 0 | 0 | 0 | - | 25 | - | - | - | - | 25 | 0 |
| | Total | 30 | 0 | 18 | 48 | 210 | 170 | 440 | - | 280 | - | 1100 | 35 |



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BRANCH NAME: COMMUNICATION AND COMPUTER NETWORKING

SEMESTER – V

BRANCH CODE: 47

| Course Code | Course Title | TH | T | P | T O T | EVALUATION SCHEME | | | | | | Total Marks | Total Credit |
|------------------|---|-----------|----------|-----------|-------------|---------------------|------------|------------|------------------|------------|------------------|-------------|--------------|
| | | | | | | Internal Assessment | | External | | | | | |
| | | | | | | Theory | Practical | Theory | | Practical | | | |
| | | | | | | Max Marks | Max Marks | Max Marks | Duration in Hrs. | Max Marks | Duration in Hrs. | | |
| Periods Per Week | | | | | | | | | | | | | |
| 475001 | Mobile & Wireless Communication System | 6 | 0 | 8 | 14 | 30 | 20 | 75 | 2.5 | 75 | 3.0 | 200 | 10 |
| 475002 | System Administration | 6 | 0 | 8 | 14 | 30 | 20 | 75 | 2.5 | 75 | 3.0 | 200 | 10 |
| 475003 435005 | Elective-1: Electronic Equipment Maintenance or, Data Sciences: Data Warehousing & Data Mining | 5 | 0 | 0 | 5 | 50 | 0 | 50 | 2.5 | 0 | - | 100 | 5 |
| 455005 435006 | Elective-2: Total Quality Management or, Multimedia Technologies | 5 | 0 | 0 | 5 | 50 | 0 | 50 | 2.5 | 0 | - | 100 | 5 |
| 435002 435007 | Open Elective: Internet of Things or, Smart System | 4 | 0 | 0 | 4 | 50 | 0 | 50 | 2.5 | 0 | - | 100 | 4 |
| AS501 | Summer Internship-II (4-6 week duration after IV Sem) | - | - | - | 0 | 0 | 50 | 0 | - | 50 | 3.0 | 100 | 3 |
| AS502 | Major Project-I | 0 | 0 | 2 | 2 | 0 | 50 | 0 | - | 100 | 3.0 | 150 | 1 |
| 015054 | General Proficiency | 0 | 0 | 4 | 4 | - | 25 | - | - | - | - | 25 | 0 |
| 475052 | Industrial Exposure | 0 | 0 | 0 | 0 | - | 25 | - | - | - | - | 25 | 0 |
| | Total | 26 | 0 | 22 | 48 | 210 | 190 | 300 | - | 300 | - | 1000 | 38 |



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BRANCH NAME: COMMUNICATION AND COMPUTER NETWORKING

SEMESTER – VI

BRANCH CODE: 47

| Course Code | Course Title | TH | T | P | T O T | EVALUATION SCHEME | | | | | | Total Marks | Total Credit |
|------------------|--|-----------|----------|-----------|-------------|---------------------|------------|------------|------------------|------------|------------------|-------------|--------------|
| | | | | | | Internal Assessment | | External | | | | | |
| | | | | | | Theory | Practical | Theory | | Practical | | | |
| | | | | | | Max Marks | Max Marks | Max Marks | Duration in Hrs. | Max Marks | Duration in Hrs. | | |
| Periods Per Week | | | | | | Max Marks | Max Marks | Max Marks | Duration in Hrs. | Max Marks | Duration in Hrs. | Total Marks | Total Credit |
| 476001 | Cloud Computing Concepts | 8 | 0 | 4 | 12 | 30 | 20 | 75 | 2.5 | 75 | 3.0 | 200 | 10 |
| 436006 476002 | Open Elective-1: Information Security or, Network Security | 6 | 0 | 0 | 6 | 50 | 0 | 50 | 2.5 | 0 | - | 100 | 6 |
| 436002 476004 | Open Elective-2: Operation Research or, Optical Communication & Networking | 6 | 0 | 0 | 6 | 50 | 0 | 50 | 2.5 | 0 | - | 100 | 6 |
| 476005 476006 | Program Elective-1: Mobile Computing or, Basics of Web Technologies | 6 | 0 | 0 | 6 | 50 | 0 | 50 | 2.5 | 0 | - | 100 | 6 |
| AS601 | Indian Constitution (Audit Course) | 2 | 0 | 0 | 2 | 0 | 0 | 50 | 2.5 | 0 | - | 50 | 0 |
| AS602 | Entrepreneurship and Starts-Ups | 4 | 0 | 0 | 4 | 50 | 0 | 100 | 2.5 | 0 | - | 150 | 4 |
| AS603 | Major Project-II | 0 | 0 | 6 | 6 | 0 | 50 | 0 | - | 150 | 3.0 | 200 | 3 |
| AS604 | Seminar | 2 | 0 | 0 | 2 | 0 | 50 | 0 | - | 0 | - | 50 | 1 |
| 016054 | General Proficiency | 0 | 0 | 4 | 4 | - | 25 | - | - | - | - | 25 | 0 |
| 476052 | Industrial Exposure | 0 | 0 | 0 | 0 | - | 25 | - | - | - | - | 25 | 0 |
| | Total | 34 | 0 | 14 | 48 | 230 | 170 | 375 | - | 225 | - | 1000 | 36 |

General Proficiency : will comprise of various co-curricular activities like games, hobby clubs, seminars, declamation contests, extension lectures, NCC, NSS, cultural activities and discipline etc.

Industrial Exposure : compulsory at minimum 2 Industries or Departments.

Major Project: It is divided in to two parts (Major Project-I & Major Project-II). Major Project will be initiated in V Semester and will get complete in VI Semester.

Note :-

1. Each period will be of 50 minutes.
2. Each session will be of 16 weeks.
3. Effective teaching will be at least 12.5 weeks.