

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. in ELECTRICAL AND ELECTRONICS ENGINEERING
COURSE STRUCTURE & SYLLABUS (R18)

Applicable From 2018-19 Admitted Batch

II YEAR I SEMESTER

| S. No. | Course Code | Course Title | L | T | P | Credits |
|--------|-------------|-----------------------------|-----------|----------|----------|-----------|
| 1 | EE301ES | Engineering Mechanics | 3 | 1 | 0 | 4 |
| 2 | EE302PC | Electrical Circuit Analysis | 3 | 1 | 0 | 4 |
| 3 | EE303PC | Analog Electronics | 3 | 0 | 0 | 3 |
| 4 | EE304PC | Electrical Machines - I | 3 | 1 | 0 | 4 |
| 5 | EE305PC | Electromagnetic Fields | 3 | 0 | 0 | 3 |
| 6 | EE306PC | Electrical Machines Lab - I | 0 | 0 | 2 | 1 |
| 7 | EE307PC | Analog Electronics Lab | 0 | 0 | 2 | 1 |
| 8 | EE308PC | Electrical Circuits Lab | 0 | 0 | 2 | 1 |
| 9 | *MC309 | Gender Sensitization Lab | 0 | 0 | 2 | 0 |
| | | Total Credits | 15 | 3 | 8 | 21 |

II YEAR II SEMESTER

| S. No. | Course Code | Course Title | L | T | P | Credits |
|--------|-------------|---|-----------|----------|----------|-----------|
| 1 | MA401BS | Laplace Transforms, Numerical Methods & Complex variables | 3 | 1 | 0 | 4 |
| 2 | EE402PC | Electrical Machines – II | 3 | 1 | 0 | 4 |
| 3 | EE403PC | Digital Electronics | 3 | 0 | 0 | 3 |
| 4 | EE404PC | Control Systems | 3 | 1 | 0 | 4 |
| 5 | EE405PC | Power System - I | 3 | 0 | 0 | 3 |
| 6 | EE406PC | Digital Electronics Lab | 0 | 0 | 2 | 1 |
| 7 | EE407PC | Electrical Machines Lab - II | 0 | 0 | 2 | 1 |
| 8 | EE408PC | Control Systems Lab | 0 | 0 | 2 | 1 |
| 9 | *MC409 | Constitution of India | 3 | 0 | 0 | 0 |
| | | Total Credits | 18 | 3 | 6 | 21 |

*MC – Satisfactory/Unsatisfactory


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 Ibrahimpatnam, R. K. Dt.-501 500

***MC409: CONSTITUTION OF INDIA**

B.Tech. II Year II Sem.


L T/P/D C
3 0/0/0 0

The Constitution of India is the supreme law of India. Parliament of India cannot make any law which violates the Fundamental Rights enumerated under the Part III of the Constitution. The Parliament of India has been empowered to amend the Constitution under Article 368, however, it cannot use this power to change the "basic structure" of the constitution, which has been ruled and explained by the Supreme Court of India in its historical judgments. The Constitution of India reflects the idea of "Constitutionalism" – a modern and progressive concept historically developed by the thinkers of "liberalism" – an ideology which has been recognized as one of the most popular political ideology and result of historical struggles against arbitrary use of sovereign power by state. The historic revolutions in France, England, America and particularly European Renaissance and Reformation movement have resulted into progressive legal reforms in the form of "constitutionalism" in many countries. The Constitution of India was made by borrowing models and principles from many countries including United Kingdom and America.

The Constitution of India is not only a legal document but it also reflects social, political and economic perspectives of the Indian Society. It reflects India's legacy of "diversity". It has been said that Indian constitution reflects ideals of its freedom movement; however, few critics have argued that it does not truly incorporate our own ancient legal heritage and cultural values. No law can be "static" and therefore the Constitution of India has also been amended more than one hundred times. These amendments reflect political, social and economic developments since the year 1950. The Indian judiciary and particularly the Supreme Court of India has played an historic role as the guardian of people. It has been protecting not only basic ideals of the Constitution but also strengthened the same through progressive interpretations of the text of the Constitution. The judicial activism of the Supreme Court of India and its historic contributions has been recognized throughout the world and it gradually made it "as one of the strongest court in the world".

Course content

1. Meaning of the constitution law and constitutionalism
2. Historical perspective of the Constitution of India
3. Salient features and characteristics of the Constitution of India
4. Scheme of the fundamental rights
5. The scheme of the Fundamental Duties and its legal status
6. The Directive Principles of State Policy – Its importance and implementation
7. Federal structure and distribution of legislative and financial powers between the Union and the States
8. Parliamentary Form of Government in India – The constitution powers and status of the President of India
9. Amendment of the Constitutional Powers and Procedure
10. The historical perspectives of the constitutional amendments in India
11. Emergency Provisions: National Emergency, President Rule, Financial Emergency
12. Local Self Government – Constitutional Scheme in India
13. Scheme of the Fundamental Right to Equality
14. Scheme of the Fundamental Right to certain Freedom under Article 19
15. Scope of the Right to Life and Personal Liberty under Article 21


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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Tech. COMPUTER SCIENCE AND ENGINEERING/COMPUTER SCIENCE
EFFECTIVE FROM ACADEMIC YEAR 2019 - 20 ADMITTED BATCH
R19 COURSE STRUCTURE AND SYLLABUS

I YEAR I – SEMESTER

| Course Code | Course Title | L | T | P | Credits |
|----------------------------|---|-----------|----------|----------|-----------|
| Professional Core - I | Mathematical Foundations of Computer Science | 3 | 0 | 0 | 3 |
| Professional Core - II | Advanced Data Structures | 3 | 0 | 0 | 3 |
| Professional Elective - I | 1. Information Security 2. Mobile Application Development 3. Machine Learning | 3 | 0 | 0 | 3 |
| Professional Elective - II | 1. Network Security 2. Cloud Computing 3. Data Mining | 3 | 0 | 0 | 3 |
| Lab - I | Advanced Data Structures Lab | 0 | 0 | 4 | 2 |
| Lab - II | Machine Learning Lab | 0 | 0 | 4 | 2 |
| | Research Methodology & IPR | 2 | 0 | 0 | 2 |
| Audit - I | Audit Course - I | 2 | 0 | 0 | 0 |
| | Total | 16 | 0 | 8 | 18 |

I YEAR II – SEMESTER

| Course Code | Course Title | L | T | P | Credits |
|-----------------------------|--|-----------|----------|-----------|-----------|
| Professional Core - III | Advanced Algorithms | 3 | 0 | 0 | 3 |
| Professional Core - IV | Advanced Computer Architecture | 3 | 0 | 0 | 3 |
| Professional Elective - III | 1. Web and Database Security 2. Internet of Things 3. Data Science | 3 | 0 | 0 | 3 |
| Professional Elective - IV | 1. Cyber Security 2. Advanced Computer Networks 3. Big Data Analytics | 3 | 0 | 0 | 3 |
| Lab - III | Advanced Algorithms Lab | 0 | 0 | 4 | 2 |
| Lab - IV | Data Science Lab | 0 | 0 | 4 | 2 |
| | Mini Project with Seminar | 0 | 0 | 4 | 2 |
| Audit - II | Audit Course - II | 2 | 0 | 0 | 0 |
| | Total | 14 | 0 | 12 | 18 |

II YEAR III – SEMESTER

| Course Code | Course Title | L | T | P | Credits |
|---------------------------|---|----------|----------|-----------|-----------|
| Professional Elective - V | 1. Digital Forensics 2. High Performance Computing 3. Deep Learning | 3 | 0 | 0 | 3 |
| Open Elective | Open Elective | 3 | 0 | 0 | 3 |
| Dissertation | Dissertation Work Review - II | 0 | 0 | 12 | 6 |
| | Total | 6 | 0 | 12 | 12 |

II YEAR II - SEMESTER

| Course Code | Course Title | L | T | P | Credits |
|--------------|--------------------------------|----------|----------|-----------|-----------|
| Dissertation | Dissertation Work Review - III | 0 | 0 | 12 | 6 |
| Dissertation | Dissertation Viva-Voce | 0 | 0 | 28 | 14 |
| | Total | 0 | 0 | 40 | 20 |

*For Dissertation Work Review - I, Please refer 7.8 in R19 Academic Regulations.

Audit Course I & II:

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by yoga
8. Personality Development Through Life Enlightenment Skills

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Tech. (CSE/CS)

CONSTITUTION OF INDIA (Audit Course - I & II)

Prerequisite: None

Course Objectives: Students will be able to:

- Understand the premises informing the twin themes of liberty and freedom from a civil rights perspective.
- To address the growth of Indian opinion regarding modern Indian intellectuals' constitutional role and entitlement to civil and economic rights as well as the emergence of nationhood in the early years of Indian nationalism.
- To address the role of socialism in India after the commencement of the Bolshevik Revolution in 1917 and its impact on the initial drafting of the Indian Constitution.

Course Outcomes: Students will be able to:

- Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.
- Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.
- Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution.
- Discuss the passage of the Hindu Code Bill of 1956.

UNIT-I:

History of Making of the Indian Constitution: History Drafting Committee, (Composition & Working),
Philosophy of the Indian Constitution: Preamble, Salient Features.

UNIT-II:

Contours of Constitutional Rights & Duties: Fundamental Rights Right to Equality, Right to Freedom, Right against Exploitation, Right to Freedom of Religion, Cultural and Educational Rights, Right to Constitutional Remedies, Directive Principles of State Policy, Fundamental Duties.

UNIT-III:

Organs of Governance: Parliament, Composition, Qualifications and Disqualifications, Powers and Functions, Executive, President, Governor, Council of Ministers, Judiciary, Appointment and Transfer of Judges, Qualification, Powers and Functions.

UNIT-IV:

Local Administration: District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation. Pachayati raj: Introduction, PRI: Zila Pachayat. Elected officials and their roles, CEO Zila Pachayat: Position and role. Block level: Organizational Hierarchy (Different departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy.

UNIT-V:

Election Commission: Election Commission: Role and Functioning. Chief Election Commissioner and Election Commissioners. State Election Commission: Role and Functioning. Institute and Bodies for the welfare of SC/ST/OBC and women.

TEXT BOOKS/ REFERENCES:

1. The Constitution of India, 1950 (Bare Act), Government Publication.
2. Dr. S. N. Busi, Dr. B. R. Ambedkar framing of Indian Constitution, 1st Edition, 2015.
3. M. P. Jain, Indian Constitution Law, 7th Edn., Lexis Nexis, 2014.
4. D.D. Basu, Introduction to the Constitution of India, Lexis Nexis, 2015.