

# ELECTRONICS AND COMMUNICATION ENGINEERING

## B.Tech. V Semester

### Electronics and Communication Engineering

S. No.	Course Code	Course Title	Periods			Evaluation Scheme				End Semester		Total	Credits
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KEC-501	Integrated Circuits	3	1	0	30	20	50		100		150	4
2	KEC-502	Microprocessor & Microcontroller	3	1	0	30	20	50		100		150	4
3	KEC-503	Digital Signal Processing	3	1	0	30	20	50		100		150	4
4	KEC-051-054	Department Elective-I	3	0	0	30	20	50		100		150	3
5	KEC-055-058	Department Elective-II	3	0	0	30	20	50		100		150	3
6	KEC-551	Integrated Circuits Lab	0	0	2				25		25	50	1
7	KEC-552	Microprocessor & Microcontroller Lab	0	0	2				25		25	50	1
8	KEC-553	Digital Signal Processing Lab	0	0	2				25		25	50	1
9	KEC-554	Mini Project/Internship **	0	0	2				50			50	1
10	KNC501/KNC502	Constitution of India, Law and Engineering / Indian Tradition, Culture and Society	2	0	0	15	10	25		50			NC
11		MOOCs (Essential for Hons. Degree)											
		<b>Total</b>										<b>950</b>	<b>22</b>

\*\*The Mini Project or Internship (4weeks) conducted during summer break after IV Semester and will be assessed during Vth Semester.

#### Course Code

#### Course Title

#### Department Elective-I

- KEC-051 Computer Architecture and Organization
- KEC-052 Industrial Electronics
- KEC-053 VLSI Technology
- KEC-054 Advance Digital Design using Verilog

#### Department Elective-II

- KEC-055 Electronics Switching
- KEC-056 Advance Semiconductor Device
- KEC-057 Electronics Measurement & Instrumentation
- KEC-058 Optical Communication

  
 Director  
 R.D. Engineering College  
 Delhi, Ghaziabad



AICTE ID: 1-3548321

College Code: 231

# R. D. ENGINEERING COLLEGE

Approved by AICTE New Delhi & Affiliated to Dr. APJ Abdul Kalam Technical University, Lucknow  
under the aegis of IQAC

## Course on Constitution of India, Law and Engineering

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Director  
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Duhai, Ghaziabad

DR. A.P.J. ABDUL KALAM TECHNICAL  
UNIVERSITY, LUCKNOW



EVALUATION SCHEME & SYLLABUS

FOR

NON CREDIT COURSE  
(V & VI Semester)

1	KNC501/ KNC601	CONSTITUTION OF INDIA, LAW AND ENGINEERING
2	KNC502/ KNC602	INDIAN TRADITION, CULTURE AND SOCIETY

[Effective from the Session: 2020-21]

**B.Tech.  
V & VI Semester**

1	KNC501/ KNC601	CONSTITUTION OF INDIA, LAW AND ENGINEERING
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## CONSTITUTION OF INDIA, LAW AND ENGINEERING

L:T: P: 2: 0:0

### Module 1--Introduction and Basic Information about Indian Constitution:

Meaning of the constitution law and constitutionalism, Historical Background of the Constituent Assembly, Government of India Act of 1935 and Indian Independence Act of 1947, Enforcement of the Constitution, Indian Constitution and its Salient Features, The Preamble of the Constitution, Fundamental Rights, Fundamental Duties, Directive Principles of State Policy, Parliamentary System, Federal System, Centre-State Relations, Amendment of the Constitutional Powers and Procedure, The historical perspectives of the constitutional amendments in India, Emergency Provisions: National Emergency, President Rule, Financial Emergency, and Local Self Government – Constitutional Scheme in India.

### Module 2-Union Executive and State Executive:

Powers of Indian Parliament Functions of Rajya Sabha, Functions of Lok Sabha, Powers and Functions of the President, Comparison of powers of Indian President with the United States, Powers and Functions of the Prime Minister, Judiciary – The Independence of the Supreme Court, Appointment of Judges, Judicial Review, Public Interest Litigation, Judicial Activism, LokPal, Lok Ayukta, The Lokpal and Lok ayuktas Act 2013, State Executives – Powers and Functions of the Governor, Powers and Functions of the Chief Minister, Functions of State Cabinet, Functions of State Legislature, Functions of High Court and Subordinate Courts

### Module 3- Introduction and Basic Information about Legal System:

**The Legal System:** Sources of Law and the Court Structure: Enacted law -Acts of Parliament are of primary legislation, Common Law or Case law, Principles taken from decisions of judges constitute binding legal rules. The Court System in India and Foreign Courtiers (District Court, District Consumer Forum, Tribunals, High Courts, Supreme Court) Arbitration: As an alternative to resolving disputes in the normal courts, parties who are in dispute can agree that this will instead be referred to arbitration. Contract law, Tort, Law at workplace.

### Module 4- Intellectual Property Laws and Regulation to Information:

**Intellectual Property Laws** Introduction, Legal Aspects of Patents, Filing of Patent Applications, Rights from Patents, Infringement of Patents, Copyright and its Ownership, Infringement of Copyright, Civil Remedies for Infringement, Regulation to Information-Introduction, Right to Information Act, 2005, Information Technology Act, 2000, Electronic Governance, Secure Electronic Records and Digital Signatures, Digital Signature Certificates, Cyber Regulations Appellate Tribunal, Offences, Limitations of the Information Technology Act.

### Module 5 -Business Organizations and E-Governance:

**Sole Traders, Partnerships, Companies:** The Company's Act: Introduction, Formation of a Company, Memorandum of Association, Articles of Association, Prospectus, Shares, Directors, General Meetings and Proceedings, Auditor, Winding up.

E-Governance and role of engineers in E-Governance, Need for reformed engineering serving at the Union and State level, Role of I.T. professionals in Judiciary, Problem of Alienation and Secessionism in few states creating hurdles in Industrial development.

### COURSE OBJECTIVE:

- To acquaint the students with legacies of constitutional development in India and help those to understand the most diversified legal document of India and philosophy behind it.
- To make students aware of the theoretical and functional aspects of the Indian Parliamentary System.
- To channelize students' thinking towards basic understanding of the legal concepts and its implications for engineers.
- To acquaint students with latest intellectual property rights and innovation environment with related regulatory framework.
- To make students learn about role of engineering in business organizations and e-governance.

**COURSE OUTCOME:** At the end of the course, learners should be able to-

1. Identify and explore the basic features and modalities about Indian constitution.
2. Differentiate and relate the functioning of Indian parliamentary system at the center and state level.
3. Differentiate different aspects of Indian Legal System and its related bodies.
4. Discover and apply different laws and regulations related to engineering practices.
5. Correlate role of engineers with different organizations and governance models.

**Pedagogy:** Lecture, Problem based learning, Group discussions, Visual media, Films, Documentaries, Debate forums.

### Suggested Readings:

- Brij Kishore Sharma: *Introduction to the Indian Constitution*, 8<sup>th</sup> Edition, PHI Learning Pvt. Ltd.
- Granville Austin: *The Indian Constitution: Cornerstone of a Nation (Classic Reissue)*, Oxford University Press.
- Subhash C. Kashyap: *Our Constitution: An Introduction to India's Constitution and Constitutional Law*, NBT, 2018.
- Madhav Khosla: *The Indian Constitution*, Oxford University Press.
- PM Bakshi: *The Constitution of India*, Latest Edition, Universal Law Publishing.
- V K. Ahuja: *Law Relating to Intellectual Property Rights* (2007)
- Suresh T. Viswanathan: *The Indian Cyber Laws*, Bharat Law House, New Delhi-88
- P. Narayan: *Intellectual Property Law*, Eastern Law House, New Delhi
- Prabudh Ganguli: *Gearing up for Patents: The Indian Scenario*, Orient Longman
- BL Wadehra: *Patents, Trademarks, Designs and Geographical Indications* Universal Law Publishing - LexisNexis.
- *Intellectual Property Rights: Law and Practice, Module III* by ICSI (only relevant sections)
- Executive programme study material Company Law, Module II, by ICSI (The Institute of Companies Secretaries of India) (Only relevant sections i.e., Study 1, 4 and 36). <https://www.icsi.edu/media/webmodules/publications/Company%20Law.pdf>
- Handbook on e-Governance Project Lifecycle, Department of Electronics & Information Technology, Government of India, [https://www.meity.gov.in/writereaddata/files/e-Governance\\_Project\\_Lifecycle\\_Participant\\_Handbook-5Day\\_CourseV1\\_20412.pdf](https://www.meity.gov.in/writereaddata/files/e-Governance_Project_Lifecycle_Participant_Handbook-5Day_CourseV1_20412.pdf)
- Companies Act, 2013 Key highlights and analysis by PWC. <https://www.pwc.in/assets/pdfs/publications/2013/companies-act-2013-key-highlights-and-analysis.pdf>

**Referred Case Studies:**

- Keshavanand Bharati V. State of Kerala, AIR 1973 SC 1461.
- Maneka Gandhi V. Union of India AIR, 1978 SC 597
- S.R. Bammai V. Union of India. AIR 1994 SC 1918
- Kuldip Nayyar V. Union of India, AIR 2006 SC312
- A.D.M. Jabalpur V. ShivkantShakla, AIR 1976 SC1207
- Remshwar Prasad V. Union of India, AIR 2006 SC980
- Keshav Singh in re, AIR 1965 SC 745.
- Union of India V. Talsiram, AIR 1985 SC 1416.
- Atiabari Tea Estate Co.V. State of Assam, AIR 1961SC232.
- SBP & Co. Vs. Patel Engg. Ltd. 2005 (8) SCC 618.
- Krishna Bhagya Jala Nigam Ltd. Vs. G. Arisandra Reddy (2007) 2 SCC 720.
- Oil & Natural Gas Corporation Vs. Saw Pipes Ltd. 2003 (4) SCALE 92 – 185.

**\*\* (Other relevant case studies can be consulted by the teacher as per the topic).**

**Prescribed Legislations:**

1. Information Technology Act, 2000 with latest amendments.
2. RTI Act 2005 with latest amendments.
3. Information Technology Rules, 2000
4. Cyber Regulation Appellate Tribunal Rules, 2000

**Suggested aid for Students and Pedagogic purpose:**

- RSTV debates on corporate law, IPR and patent issues
- NPTEL lectures on IPR and patent rights

**Episodes of 10 -part mini TV series "Samvidhan: The Making of Constitution of India" by RSTV.**