B.Tech. 1st Year Course Structure : 2026-2027 – Odd Semester									
Semester 1 (Group – A)									
Sl. No.	**Type of Course**	**Subject code**	**Subject name**	**L**	**T**	**P**	**S**	**Total Contact Hours**	**Credit Points**
THEORY									
1	**Basic Science Course**	**BSCPH101**	**Physics**	**3**	**1**	**0**	**0**	**4**	**4**
2	**Basic Science Course**	**BSCM103A**	**Mathematics - Calculus**	**3**	**1**	**0**	**0**	**4**	**4**
3	**Basic Science Course**	**BSCBE104**	**Biology for Engineers**	**2**	**0**	**0**	**0**	**2**	**2**
4	**Engineering Science Course**	**ESCEE101**	**Basic Electrical Engineering**	**3**	**1**	**0**	**0**	**4**	**4**
5	**Engineering Science Course**	**ESME102A**	**Engineering Mechanics - Principles**	**1**	**1**	**0**	**0**	**2**	**2**
6	**Engineering Science Course**	**ESCCS101**	**Programming for Problem Solving using C**	**2**	**1**	**0**	**0**	**3**	**3**
7	**General Studies Course**	**ESP101**	**Essential Studies for Professionals - I**	**1**	**0**	**0**	**0**	**1**	**1**
PRACTICAL									
8	**Basic Science Course**	**BSCPH191**	**Physics Laboratory**	**0**	**0**	**3**	**0**	**3**	**1.5**
9	**Basic Science Course**	**BSCBE194**	**Biology for Engineers Laboratory**	**0**	**0**	**2**	**0**	**2**	**1**

10	Engineering Science Course	ESCEE191	Basic Electrical Engineering Laboratory	0	0	2	0	2	1
11	Engineering Science Course	ESCME192	Engineering Graphics & Design	1	0	4	0	5	3
12	Engineering Science Course	ESCCS191	Programming for Problem Solving Laboratory using C	0	0	4	0	4	2
SESSIONAL									
13	Mandatory Courses	IKS171	Indian Knowledge System for Engineers	0	0	0	2	2	2
Mandatory Industry and Value Added Courses (IVC)									
14	Mandatory Industry and Value Added Courses (IVC)	IVC181	Design Thinking & Innovation- Basic	0	0	0	1	1	0
15	Mandatory Industry and Value Added Courses (IVC)	IVC182	Economics, Finance and Entrepreneurship Skills - Basic	0	0	0	1	1	0
Total Credit Points of Semester				16	5	15	4	40	30.5
16	Mandatory Courses	MAR	Mandatory Additional Requirements	0	0	0	0	0	0
17	Mandatory Online Courses	MOOCs	Massive Open Online Courses	0	0	0	0	0	0
18	Mandatory Online Courses	IFC	Industry and Foreign Certification	0	0	0	0	0	0
19	Mandatory Courses	SAR	Skill Additional Requirements	0	0	0	0	0	0
Skill Addition Requirements (SAR) 1. Foreign Language, 2. Physical Education, 3. Soft Skill									

B.Tech. 1st Year Course Structure : 2026-2027 – Odd Semester									
Semester 1 (Group – B)									
Sl. No.	**Type of Course**	**Subject code**	**Subject name**	**L**	**T**	**P**	**S**	**Total Contact Hours**	**Credit Points**
THEORY									
1	**Basic Science Course**	**BSCCH102**	**Chemistry**	**3**	**1**	**0**	**0**	**4**	**4**
2	**Basic Science Course**	**BSCM103B**	**Mathematics and Basic Statistics**	**3**	**1**	**0**	**0**	**4**	**4**
3	**Humanities and social sciences including Management**	**HSMC101**	**English**	**2**	**0**	**0**	**0**	**2**	**2**
4	**Engineering Science Course**	**ESCEC101**	**Basic Electronics Engineering**	**3**	**1**	**0**	**0**	**4**	**4**
5	**Engineering Science Course**	**ESME102B**	**Engineering Mechanics - Essentials**	**1**	**1**	**0**	**0**	**2**	**2**
6	**Engineering Science Course**	**ESCCS101**	**Programming for Problem Solving using C**	**2**	**1**	**0**	**0**	**3**	**3**
7	**General Studies Course**	**ESP101**	**Essential Studies for Professionals - I**	**1**	**0**	**0**	**0**	**1**	**1**
PRACTICAL									
8	**Basic Science Course**	**BSCCH192**	**Chenistry Laboratory**	**0**	**0**	**3**	**0**	**3**	**1.5**
9	**Humanities and social sciences including Management**	**HSMC191**	**Language laboratory**	**0**	**0**	**2**	**0**	**2**	**1**
10	**Engineering Science Course**	**ESCEC191**	**Basic Electronics Engineering Laboratory**	**0**	**0**	**2**	**0**	**2**	**1**

11	Engineering Science Course	ESCME193	Workshop/ Manufacturing Practices	1	0	4	0	5	3
12	Engineering Science Course	ESCCS191	Programming for Problem Solving Laboratory using C	0	0	4	0	4	2
SESSIONAL									
13	Mandatory Courses	IKS171	Indian Knowledge System for Engineers	0	0	0	2	2	2
Mandatory Industry and Value Added Courses (IVC)									
14	Mandatory Industry and Value Added Courses (IVC)	IVC181	Design Thinking & Innovation- Basic	0	0	0	1	1	0
15	Mandatory Industry and Value Added Courses (IVC)	IVC182	Economics, Finance and Entrepreneurship Skills - Basic	0	0	0	1	1	0
Total Credit Points of Semester				16	5	15	4	40	30.5
16	Mandatory Courses	MAR	Mandatory Additional Requirements	0	0	0	0	0	0
17	Mandatory Online Courses	MOOCs	Massive Open Online Courses	0	0	0	0	0	0
18	Mandatory Online Courses	IFC	Industry and Foreign Certification	0	0	0	0	0	0
19	Mandatory Courses	SAR	Skill Additional Requirements	0	0	0	0	0	0
Skill Addition Requirements (SAR) 1. Foreign Language, 2. Physical Education, 3. Soft Skill									

B.Tech. 1st Year Course Structure : 2026-2027 – Even Semester									
Semester 2 (Group – A)									
Sl. No.	**Type of Course**	**Subject code**	**Subject name**	**L**	**T**	**P**	**S**	**Total Contact Hours**	**Credit Points**
THEORY									
1	**Basic Science Course**	**BSCCH202**	**Chemistry**	**3**	**1**	**0**	**0**	**4**	**4**
2	**Basic Science Course**	**BSCM203B**	**Mathematics and Basic Statistics**	**3**	**1**	**0**	**0**	**4**	**4**
3	**Humanities and social sciences including Management**	**HSMC201**	**English**	**2**	**0**	**0**	**0**	**2**	**2**
4	**Engineering Science Course**	**ESCEC201**	**Basic Electronics Engineering**	**3**	**1**	**0**	**0**	**4**	**4**
5	**Engineering Science Course**	**ESME202B**	**Engineering Mechanics - Essentials**	**1**	**1**	**0**	**0**	**2**	**2**
6	**Engineering Science Course**	**ESCCS202**	**Introduction to AI and Data Science using Python**	**2**	**1**	**0**	**0**	**3**	**3**
7	**General Studies Course**	**ESP201**	**Essential Studies for Professionals - II**	**1**	**0**	**0**	**0**	**1**	**1**
PRACTICAL									
8	**Basic Science Course**	**BSCCH292**	**Chemistry Laboratory**	**0**	**0**	**3**	**0**	**3**	**1.5**
9	**Humanities and social sciences including Management**	**HSMC291**	**Language laboratory**	**0**	**0**	**2**	**0**	**2**	**1**
10	**Engineering Science Course**	**ESCEC291**	**Basic Electronics Engineering Laboratory**	**0**	**0**	**2**	**0**	**2**	**1**
11	**Engineering Science Course**	**ESCME293**	**Workshop/ Manufacturing Practices**	**1**	**0**	**4**	**0**	**5**	**3**

12	Engineering Science Course	ESCCS292	Introduction to AI and Data Science Laboratory using Python	0	0	4	0	4	2
SESSIONAL									
13	Humanities and social sciences	UHV272	Universal Human Values- II	0	0	0	2	2	3
Mandatory Industry and Value Added Courses (IVC)									
14	Mandatory Industry and Value Added Courses (IVC)	IVC281	Design Thinking & Innovation- Imtermediate	0	0	0	1	1	0
15	Mandatory Industry and Value Added Courses (IVC)	IVC282	Economics, Finance and Entrepreneurship Skills – Intermediate	0	0	0	1	1	0
Total Credit Points of Semester				16	5	15	4	40	31.5
16	Mandatory Courses	MAR	Mandatory Additional Requirements	0	0	0	0	0	0
17	Mandatory Online Courses	MOOCs	Massive Open Online Courses	0	0	0	0	0	0
18	Mandatory Online Courses	IFC	Industry and Foreign Certification	0	0	0	0	0	0
19	Mandatory Courses	SAR	Skill Additional Requirements	0	0	0	0	0	0
Skill Addition Requirements (SAR) 1. Foreign Language, 2. Physical Education, 3. Soft Skill									

B.Tech. 1st Year Course Structure : 2026-2027 – Even Semester									
Semester 2 (Group – B)									
Sl. No.	**Type of Course**	**Subject code**	**Subject name**	**L**	**T**	**P**	**S**	**Total Contact Hours**	**Credit Points**
THEORY									
1	Basic Science Course	BSCPH201	Physics	3	1	0	0	4	4
2	Basic Science Course	BSCM203A	Mathematics - Calculus	3	1	0	0	4	4
3	Basic Science Course	BSCBE204	Biology for Engineers	2	0	0	0	2	2
4	Engineering Science Course	ESCEE201	Basic Electrical Engineering	3	1	0	0	4	4
5	Engineering Science Course	ESME202A	Engineering Mechanics - Principles	1	1	0	0	2	2
6	Engineering Science Course	ESCCS202	Introduction to AI and Data Science using Python	2	1	0	0	3	3
7	General Studies Course	ESP201	Essential Studies for Professionals - II	1	0	0	0	1	1
PRACTICAL									
8	Basic Science Course	BSCPH291	Physics Laboratory	0	0	3	0	3	1.5
9	Basic Science Course	BSCBE294	Biology for Engineers Laboratory	0	0	2	0	2	1
10	Engineering Science Course	ESCEE291	Basic Electrical Engineering Laboratory	0	0	2	0	2	1
11	Engineering Science Course	ESCME292	Engineering Graphics & Design	1	0	4	0	5	3

12	Engineering Science Course	ESCCS292	Introduction to AI and Data Science Laboratory using Python	0	0	4	0	4	2
SESSIONAL									
13	Humanities and social sciences	UHV272	Universal Human Values- II	0	0	0	2	2	3
Mandatory Industry and Value Added Courses (IVC)									
14	Mandatory Industry and Value Added Courses (IVC)	IVC281	Design Thinking & Innovation- Intermediate	0	0	0	1	1	0
15	Mandatory Industry and Value Added Courses (IVC)	IVC282	Economics, Finance and Entrepreneurship Skills - Intermediate	0	0	0	1	1	0
Total Credit Points of Semester				16	5	15	4	40	31.5
16	Mandatory Courses	MAR	Mandatory Additional Requirements	0	0	0	0	0	0
17	Mandatory Online Courses	MOOCs	Massive Open Online Courses	0	0	0	0	0	0
18	Mandatory Online Courses	IFC	Industry and Foreign Certification	0	0	0	0	0	0
19	Mandatory Courses	SAR	Skill Additional Requirements	0	0	0	0	0	0
Skill Addition Requirements (SAR) 1. Foreign Language, 2. Physical Education, 3. Soft Skill									

SyllabusStructure:

SlNo	TypeofCourse	CourseCode	CourseName	L	T	P	TotalContact Hours	Credit Points
1	Basic Science Courses	BSM301	Mathematics-III	2	1	0	3	3
2	Professional Core Courses	PCCEE301	Electrical Circuit Analysis	2	1	0	3	3
3	Professional Core Courses	PCCEE302	Analog Electronics	3	0	0	3	3
4	Professional Core Courses	PCCEE303	Electromagnetic Field theory	3	1	0	3	4
5	Professional Core Courses	PCCEE304	Data Structure and Algorithm	2	1	0	3	3
6	Humanities and social sciences including Management	MC301	Indian Constitution	2	0	0	2	0
7	Humanities and social sciences including Management	ESP301	Essential Studies for Professionals III	2	0	0	2	0.5
8	Professional Core Courses	PCCEE391	Electrical Circuit Analysis Laboratory	0	0	2	2	1
9	Professional Core Courses	PCCEE392	Analog Electronics Lab	0	0	2	2	1
10	Professional Core Courses	PCCEE394	Data Structure and Algorithm Lab	0	0	2	2	1
11	Humanities and social sciences including Management	SDP381	Skill Development for Professionals III			2	2	0.5
12	Project. Seminar and Industrial Training	PWEE381	Mini Project I			1	1	1
13	Massive Open Online Courses (MOOCs)	MOOCs	Massive Open Online Courses (MOOCs)					
14	Industry and Foreign Certification (IFC)	IFC	Industry and Foreign Certification (IFC)					
15	Mandatory Additional Requirements (MAR)	MAR381	Mandatory Additional Requirements (MAR)					
Total Credit Points of Semester				**16**	**4**	**9**	**28**	**21**

University of Engineering and Management

Institute of Engineering & Management, Salt Lake Campus

4th Semester Syllabus for B.Tech Admission Batch 2023

Syllabus Structure:

Sl No	Type of Course	Course Code	Course Name	L	T	P	Total Contact Hours	Credit Points
1	Basic Science Courses	BSM401	Mathematics-IV	2	1	0	3	3
2	Basic Science Courses	MCC471	Sustainability, Climate Actions & Environmental Sciences	2	0	0	2	2
3	Professional Core Courses	PCCEE401	Electrical Machines-I	3	0	0	3	3
4	Professional Core Courses	PCCEE402	Digital Electronics	3	0	0	3	3
5	Professional Core Courses	PCCEE403	Power Electronics	3	0	0	3	3
6	Professional Core Courses	PCCEE404	Signals & Systems	3	0	0	3	3
7	Humanities and social sciences including Management	ESP401	Essential Studies for Professionals IV	2	0	0	2	0.5
8	Professional Core Courses	PCCEE491	Electric Machine Laboratory-I	0	0	2	2	1
9	Professional Core Courses	PCCEE492	Digital Electronics Laboratory	0	0	2	2	1
10	Professional Core Courses	PCCEE493	Power Electronics Laboratory	0	0	2	2	1
11	Open Elective Courses	OECEE481	A. Object Oriented Programming & Java Lab B. Programming using Python	0	0	2	2	1
12	Humanities and social sciences including Management	SDP481	Skill Development for Professionals IV	0	0	2	2	0.5
13	Project. Seminar and Industrial Training	PWEE481	Mini Project II	0	0	1	1	1
14	Massive Open Online Courses	MOOCs	Massive Open Online Courses (MOOCs)	0	0	0	0	0
15	Industry and Foreign Certification	IFC	Industry and Foreign Certification (IFC)	0	0	0	0	0
16	Mandatory Additional Requirements	MAR481	Mandatory Additional Requirements (MAR)	0	0	0	0	0
							Total Credit Points of Semester =	**23**

Syllabus Structure:

Sl No	Type of Course	Course Code	Course Name	L	T	P	Total Contact Hours	Credit Points
1	Professional Core Courses	PCCEE501	Electrical Machines-II	3	0	0	3	3
2	Professional Core Courses	PCCEE502	Power system-I	3	0	0	3	3
3	Professional Core Courses	PCCEE503	Control System	3	0	0	3	3
4	Humanities and social sciences including Management	HSMCEE501	Engineering Economics	3	0	0	3	3
5	Professional Elective Courses	PECEE501	A. Electromagnetic Waves B. Industrial Electrical System	3	0	0	3	3
6	Open Elective Courses	OECEE501	A. Database Management System B. Analog and Digital Communication C. Industrial Automation- I	2	0	0	2	2
7	Humanities and social sciences including Management	ESPEE501	Essential Studies for Professionals V	2	0	0	2	0.5
8	Professional Core Courses	PCCEE591	Electrical Machines Laboratory - II	0	0	2	2	1
9	Professional Core Courses	PCCEE592	Power System Laboratory - I	0	0	2	2	1
10	Professional Core Courses	PCCEE593	Control System Lab	0	0	2	2	1
11	Humanities and social sciences including Management	SDP581	Skill Development for Professionals V			2	2	0.5
12	Project. Seminar and Industrial Training	PWEE581	Mini Project III			0	1	1
13	Massive Open Online Courses (MOOCs)	MOOCs	Massive Open Online Courses (MOOCs)					
14	Industry and Foreign Certification (IFC)	IFC	Industry and Foreign Certification (IFC)					
15	Mandatory Additional Requirements (MAR)	MAR581	Mandatory Additional Requirements (MAR)					
Total Credit Points of Semester				**19**	**0**	**8**	**28**	**22**

Semester VI [Third year]
Branch/Course: Electrical Engineering

Sl No	Type of Course	Course Code	Course Name	L	T	P	Total Contact Hours	Credit Points
1	Professional Core Courses	PCC-EE 601	Power System-II (Operation and Control)	3	1	0	4	3
2	Professional Core Courses	PCC-EE 602	Microprocessor & Microcontroller	3	0	0	3	3
3	Professional Elective Courses	PEC-EE 601	A. Wind and Solar Power Energy System B. Electric and Hybrid Vehicles	3	0	0	3	3
4	Professional Elective Courses	PEC-EE 602	A. Measurement and Instrumentation B. Semiconductor Design and Simulation	2	0	0	2	2
5	Open Elective Courses	OEC-EE 601	A. IoT B. AI & ML C. Industrial Automation- II	2	0	0	2	2
6	Humanities and social sciences including Management	HSMCEE 671	Principles of Management	2	0	0	2	2
7	Humanities and social sciences including Management	ESP(EE) 601	ESSENTIAL STUDIES FOR PROFESSIONAL- VI	2	0	0	2	0.5
8	Professional Core Courses	PCC-EE 691	Power System Laboratory - II	0	0	3	3	1
9	Professional Core Courses	PCC-EE 692	Microprocessor & Microcontroller Laboratory	0	0	3	3	1
10	Professional Elective Courses	PEC-EE 691	A. Wind and Solar Power Energy System Laboratory B. Electric and Hybrid Vehicles	0	0	3	3	1
11	Professional Core Courses	PEC-EE 692	A. Measurement and Instrumentation Laboratory	0	0	3	3	1

			B. Semiconductor Design and Simulation Laboratory					
12	**Humanities and social sciences including Management**	**SDP 681**	**Skill Development for Professionals VI**				**2**	**0.5**
13	**Project. Seminar and Industrial Training**	**PWEE681**	**Mini Project IV**				**1**	**1**
14	**Massive Open Online Courses (MOOCs)**	**MOOCs**	**Massive Open Online Courses (MOOCs)**					
15	**Industry and Foreign Certification (IFC)**	**IFC**	**Industry and Foreign Certification (IFC)**					
16	**Mandatory Additional Requirements (MAR)**	**MAR681**	**Mandatory Additional Requirements (MAR)**					
Total Credit Points of Semester				**17**	**0**	**8**	**33**	**21**

Syllabus structure

Sl. No	Type of Course	Course Code	Course Name	L	T	P	S	Total Contact Hours	Credit Points
Theory									
1	Professional Elective Courses	PEC-EE 701	A. Digital Signal Processing B. Digital Control System C. Electric Drives	3	0	0		3	3
2	Open Elective Courses	OEC-EE 701	A. Embedded System B. VLSI Circuits	3	0	0		3	2
3	Open Elective Courses	OEC-EE 702	A. Big Data Analysis B. Computer Network	2	0	0		2	2
4	Humanities and Social Sciences including Management	HSMC-701	Human Resource Development & Organisational Behaviour	3	0	0		2	2
5	Humanities and Social Sciences including Management	ESPEE 701	Essential Studies for Professionals VII	2	0	0		2	0.5
SESSIONAL									
6	Project. Seminar and Industrial Training	PI-EE 781	Industrial Training/Internship				12w	-	4
7	Humanities and Social Sciences including Management	SDP 781	Skill Development for Professionals VII				2	2	0.5
8	Project. Seminar and Industrial Training	PWEE781	Project (Phase I)				6	6	3
Value Added Courses									
9	Massive Open Online Courses (MOOCs)	MOOCs	Massive Open Online Courses (MOOCs)						
10	Industry and Foreign Certification (IFC)	IFC	Industry and Foreign Certification (IFC)						
11	Mandatory Additional Requirements (MAR)	MAR781	Mandatory Additional Requirements (MAR)						
Total Credit Points of Semester				**13**	**0**	**0**	**8**	**20**	**17**

Semester VIII [Fourth year]
Branch/Course: Electrical Engineering
Course structure

Sl No	Type of Course	Course Code	Course Name	L	T	P	S	Total Contact Hours	Credit Points
Theory									
1	Professional Elective Courses	PEC-EE801	A. Control System Design B. Electrical Energy Conservation and Audit C. Electrical Machine Design	3	0	0	0	3	3
2	Professional Elective Courses	PEC-EE802	A. H.V.D.C. Transmission System B. Power quality & FACTS C. Power System Protection	3	0	0	0	3	3
3	Open Elective Courses	OEC-EE801	A. Power Plant Engineering B. Automobile Engineering C. Sensors & Transducers	3	0	0	0	3	3
4	Humanities and social sciences including Management	ESPEE 801	Essential Studies for Professionals VIII	2	0	0	0	2	0.5
SESSIONAL									
5	Project. Seminar and Industrial Training	PI 881	Industrial Training/Internship				12w	-	4
6	Humanities and social sciences including Management	SDP 881	Skill Development for Professionals VII				2	2	0.5
7	Project. Seminar and Industrial Training	PWEE881	Project (Phase II)				6	6	3
Value Added Courses									
8	Massive Open Online Courses (MOOCs)	MOOCs	Massive Open Online Courses (MOOCs)						
9	Industry and Foreign Certification (IFC)	IFC	Industry and Foreign Certification (IFC)						
10	Mandatory Additional Requirements (MAR)	MAR781	Mandatory Additional Requirements (MAR)						
Total Credit Points of Semester									**17**

Coursera Bucket for EED

Subject Code	Subject_Name	Sem	Dept	Course Title	Coursera Link
ESCEE201/ESCEE101	Basic Electrical Engineering	II	EE	1. Physics 102 - Electric Potential and DC Circuits (SPL) 2. Electric Power Systems (SPL)	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/physics-102-electric-potential-and-dc-circuits?fromClip=sfc_page_course_link~hyOky. 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electric-power-systems?source=search#modules 4.
PCCEE301	Electrical Circuit Analysis	3	EE	1. Electrical Design Engineer - Circuit Analysis 2 Linear Circuits 2: AC Analysis 3. Fundamentals of Credit Analysis	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electrical-design-engineer---circuit-analysis?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/linear-circuits-ac-analysis?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/fundamentals-of-credit-analysis?source=search
PCCEE302	Analog Electronics	3		1. Basic Electronics 2. Introduction to Electronics 3. Analog-to-Digital and Digital-to-Analog Conversion	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/basic-electronics-odc?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electronics?source=search 3. https://www.coursera.org/videos/dsp3/dQzrU?query=Analog+Electronics&source=search
PCCEE303	Electromagnetic Field theory	3		1. Physics Fundamentals: Electromagnetics 2. Electrodynamics: Analysis of Electric Fields 3. Development of Particle Fields in Mechanics 4. Introduction to Electromagnetic Radiations	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/fundamentals-in-electromagnetics?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electrodynamics-analysis-of-electric-fields?source=search 3. https://www.coursera.org/videos/the-discovery-of-the-higgs-boson/wBVBy?query=Electromagnetic+Field+theory&source=search 4. https://www.coursera.org/videos/design-of-transmission-line-modelling-and-performance/CndRI?query=Electromagnetic+Field+theory&source=search
PCCEE304	Data Structure and Algorithm	3		1. Data Structures and Algorithms Specialization 2. Data Structures and Algorithms 3. Data Structures and Algorithms 4. Data Structures and Algorithms 5. Data Structures and Algorithms Specialization	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/data-structures-algorithms?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/msft-data-structures-and-algorithms?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/developer-data-structures-and-algorithms?source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/bits-data-structures-and-algorithms?source=search 5. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/data-structures-algorithms-tsinghua?source=search
BSM401	Mathematics-IV	4	EE	1. Introduction to Complex Analysis 2.Introduction to Python Programming Basics 3.Differential Equations for Engineers 4.Basic Engineering Mathematics	1.https://www.coursera.org/learn/complex-analysis 2.https://www.coursera.org/videos/aws-python-serverless/VLogE 3.https://www.coursera.org/learn/differential-equations-engineers 4.https://www.coursera.org/learn/basic-mathematics-engineering
MCC471	Sustainability, Climate Action & Environmental Science	4		1. Introduction to Sustainability 2. Environmental Issues, Policies, and Practice 3. Applied Sustainability for Technical Managers 4. Environmental Protection and Sustainability	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/sustainability?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/environmental-issues-policies-and-practice-1?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/applied-sustainability-technical-managers?source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/course-3-environmental-protection-and-sustainability?source=search
PCCEE401	Electric Machine-I	4		1. Motors and Motor Control Circuits 2. Batteries and Electric Vehicles 3. Fundamentals of Robotics & Industrial Automation	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/motors-circuits-design?source=search#modules 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/batteries-and-electric-vehicles?fromClip=sfc_page_course_link~cP6BM 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/fundamentals-of-robotics--industrial-automation?fromClip=sfc_page_course_link~i0Uiy
PCCEE402	Digital Electronics	4		1. Digital Systems: From Logic Gates to Processors 2. FPGA Design for Embedded Systems Specialization 3. Basic Electronics 4. Introduction to Electronics 5. Introduction to Boolean Algebra and Logic Gates	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/digital-systems?source=search 2. https://www.coursera.org/specializations/fpga-design 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/basic-electronics-odc?source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electronics?source=search 5. https://www.coursera.org/videos/cs-algorithms-theory-machines/91A4N?query=logic+gates&source=search
PCCEE403	Power Electronics	4		1. Basic Electronics 2. Power Electronics Specialization 3. Introduction to Power Electronics 4. Converter Circuits 5. Converter Control	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/basic-electronics-odc?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/power-electronics?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/power-electronics?source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/converter-circuits?specialization=power-electronics 5. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/converter-control?specialization=power-electronics
PCCEE404	Signals & Systems	4		1.Digital Signal Processing 1: Basic Concepts and Algorithms 2.Digital Signal Processing 3: Analog vs Digital 3.data-acquisition-with-labview:analog-signal-generation-fundamentals	1. https://www.coursera.org/learn/dsp1?specialization=digital-signal-processing 2.https://www.coursera.org/learn/dsp3?specialization=digital-signal-processing 3.https://www.linkedin.com/learning/data-acquisition-with-labview/analog-signal-generation-fundamentals?resume=false&u=229219690
ESP401	Essential Studies for Professionals IV	4		1. Understanding Political Concepts 2.The Sustainable Development Goals – A global, transdisciplinary vision for the future 3. Basics Economics 4. Microeconomics: Foundations and Insights	1.https://www.coursera.org/programs/uemj-passout-batch-2028-54ok2/learn/understanding-political-concepts?source=search 2.https://www.coursera.org/programs/uemj-passout-batch-2028-54ok2/learn/global-sustainable-development?source=search 3.https://www.coursera.org/programs/uemj-passout-batch-2028-54ok2/learn/basics-economics?source=search 4.https://www.coursera.org/programs/uemj-passout-batch-2028-54ok2/learn/microeconomics-foundations-insights-jgu?source=search

PCCEE501	Electrical Machines-II	5	EE	1. Motors and Motor Control Circuits 2. Batteries and Electric Vehicles 3. Fundamentals of Robotics & Industrial Automation	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/motors-circuits-design?source=search#modules 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/batteries-and-electric-vehicles?fromClip=sfc_page_course_link~cP6BM 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/fundamentals-of-robotics--industrial-automation?fromClip=sfc_page_course_link~i0Uiy
PCCEE502	Power system-I	5		1. Power System: Generation, Transmission and Protection Specialization 2. Design of Transmission Line: Modelling and Performance 3. Power System Stability 4. Electrical Power Distribution 5. Load Flow Analysis 6. Basics of Electrical Protection System	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/power-system-generation-transmission-and-protection?collectionId=skill~electric-power-systems&source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/design-of-transmission-line-modelling-and-performance?collectionId=skill~electric-power-systems&source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/power-system-stability?collectionId=skill~electric-power-systems&source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electrical-power-distribution?collectionId=skill~electric-power-systems&source=search 5. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/load-flow-analysis?collectionId=skill~electric-power-systems&source=search 6. coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/basics-of-electrical-protection-system?source=search&collectionId=skill~electric-power-systems
PCCEE503	Control System	5		1. Control System Configuration in Thermal Power Plants 2. Overview of Power Plant Control Systems 3. Control System Configuration in Power Plants	1. https://www.coursera.org/videos/electrical-power-generation-an-industrial-outlook/Udd47?query=Control+System&source=search 2. https://www.coursera.org/videos/electrical-power-generation-an-industrial-outlook/uXUb0?query=Control+System&source=search 3. https://www.coursera.org/videos/electrical-power-generation-an-industrial-outlook/KA6Cp?query=Control+System&source=search
PECEE501	Industrial Electrical System	5		1. Basics of Electrical Protection System 2. Design of Utility Systems for Industrial Plants Specialization 3. Electric Power Systems 4. Power System: Generation, Transmission and Protection Specialization	1.https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/basics-of-electrical-protection-system?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/design-of-utility-systems-for-industrial-plants?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electric-power-systems?source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/power-system-generation-transmission-and-protection?source=search
OECEE501	Database Management System	5		1. Database Management Systems 2. Database Management Essentials 3. Database Structures and Management with MySQL	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/cpsc-6620-database-management-systems?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/database-management?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/database-structures-and-management-with-mysql?source=search
PCCEE601	Power System-II (Operation and Control)	6	EE	1. Power System: Generation, Transmission and Protection Specialization 2. Design of Transmission Line: Modelling and Performance 3. Power System Stability 4. Electrical Power Distribution 5. Load Flow Analysis 6. Basics of Electrical Protection System	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/power-system-generation-transmission-and-protection?collectionId=skill~electric-power-systems&source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/design-of-transmission-line-modelling-and-performance?collectionId=skill~electric-power-systems&source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/power-system-stability?collectionId=skill~electric-power-systems&source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electrical-power-distribution?collectionId=skill~electric-power-systems&source=search 5. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/load-flow-analysis?collectionId=skill~electric-power-systems&source=search 6. coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/basics-of-electrical-protection-system?source=search&collectionId=skill~electric-power-systems
PCCEE602	Microprocessor & Microcontroller	6		1. Introduction to Microprocessors 2. Microcontroller and Industrial Applications 3. Fundamentals of Microprocessor Design 4. Introduction to Microcontrollers in Embedded Systems 5. Understanding Embedded Processors and Microcontrollers	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/arm-education-introduction-to-microprocessors?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/microcontroller-and-industrial-applications?source=search 3. https://www.coursera.org/videos/computer-architecture-essentials-on-arm/L7pwf?query=Microprocessor+%26+Microcontroller&source=search 4. https://www.coursera.org/videos/iot/tYKoY?query=Microprocessor+%26+Microcontroller&source=search 5. https://www.coursera.org/videos/embedded-operating-system/QtQ5r?query=Microprocessor+%26+Microcontroller&source=search
PECEE601	A. Wind and Solar Power Energy System	6		1. Solar Energy Basics 2. Renewable Energy Specialization 3. Renewable Power and Electricity Systems 4. Solar Power Generation	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/solar-energy-basics?collectionId=skill~electric-power-systems&source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/renewable-energy?collectionId=skill~electric-power-systems&source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/renewable-power-electricity-systems?collectionId=skill~electric-power-systems&source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/solar-power-generation?collectionId=skill~electric-power-systems&source=search
OECEE601	B. AI & ML	6		1. Artificial Intelligence and Machine Learning (AI/ML) 2. Supervised Machine Learning: Regression and Classification 3.Advanced Learning Algorithms 4. Unsupervised Learning, Recommenders, Reinforcement Learning	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/skills/artificial-intelligence-and-machine-learning-ai-ml?query=AI&source=search 2. https://www.coursera.org/learn/machine-learning?specialization=machine-learning-introduction 3. https://www.coursera.org/learn/advanced-learning-algorithms?specialization=machine-learning-introduction 4. https://www.coursera.org/learn/unsupervised-learning-recommenders-reinforcement-learning?specialization=machine-learning-introduction

HSMCEE671	Principles of Management	6		1. Principles of Management 2.Principles of Management 3.Principles of business management: Drivers for change 4. Managing Cross-Functional Collaboration as a Leader	1. https://www.coursera.org/learn/principles-of-management/home/module/1 2.https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/principlesofmanagement?source=search 3.https://www.linkedin.com/learning/business-fundamentals-for-customer-success-managers/principles-of-business-management-drivers-for-change?u=229219690 4.http://linkedin.com/learning/managing-cross-functional-collaboration-as-a-leader/the-power-of-cross-functional-collaboration?u=229219690
ESPEE601	Essential Studies for Professionals VI	6		1. Motors and Motor Control Circuits 2. Power System: Generation, Transmission and Protection Specialization 3. Control Systems Analysis: Modeling of Dynamic Systems	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/motors-circuits-design?source=search#modules 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/power-system-generation-transmission-and-protection?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/modeling-feedback-systems?source=search#modules
PEC-EE 701	Electric Drives	7	EE	1. Electric Vehicle Systems and Technologies Specialization 2. Powering the Drive: Unveiling EV Electronics 3. Power Electronic Systems in Electric Vehicles 4. Electric Motors and Drive Systems in EVs	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/electric-vehicle-systems-and-technologies?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/powering-the-drive-unveiling-ev-electronics?source=search 3. https://www.coursera.org/videos/electric-vehicle-operation-and-diagnosis/3OKh9?query=Electric+Drives+&source=search 4. https://www.coursera.org/videos/electric-vehicle-operation-and-diagnosis/clztu?query=Electric+Drives+&source=search
OEC-EE 701	Embedded system	7		1. Introduction to the Internet of Things and Embedded Systems 2. Introduction to Embedded Systems Software and Development Environments 3. Embedded Systems using C	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/iot?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/introduction-embedded-systems?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/embedded-systems-using-c?source=search
OEC-EE 702	Computer Network	7		1. The Bits and Bytes of Computer Networking 2. Computer Networks and Network Security 3. Fundamentals of Computer Network Security Specialization	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/computer-networking?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/network-security-database-vulnerabilities?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/computer-network-security?source=search
HSMC-701	Human Resource Development & Organisational Behaviour	7		1. Understand Human Resource Management Fundamentals 2. Human Resources Management and GenAI Specialization 3. Human Resource Management: HR for People Managers Specialization	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/understand-human-resource-management-fundamentals?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/human-resources-management-and-genai?source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/human-resource-management?source=search
PECEE801	Electrical Machine Design	8	EE	1. Fundamentals of Robotics & Industrial Automation 2. Renewable Energy Futures 3. Powering the Future with Electrification 4. Bridging the Gap: EV Grid Integration & V2G Systems	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/fundamentals-of-robotics--industrial-automation 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/renewable-energy-futures?collectionId=skill~electric-power-systems&source=search 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electrification?collectionId=skill~electric-power-systems&source=search 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/bridging-the-gap-ev-grid-integration--v2g-systems?collectionId=skill~electric-power-systems&source=search
PECEE802	Power quality & FACTS	8		1. Industrial Power Systems Analysis and Stability Specialization 2.Solar Power Sensors 3. Power System Stability	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/industrial-power-systems-analysis-and-stability?source=search#outcomes 2.https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/solar-power-sensors?fromClip=sfc_page_course_link~w3293#modules 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/power-system-stability?source=search#modules
OECEE801	Power Plant Engineering	8		1. Power System: Generation, Transmission and Protection Specialization 2. Electrical Power Generation - An Industrial Outlook 3. Basics of Electrical Protection System 4. Advanced Study of Protection Schemes and Switchgear 5. Design of Transmission Line: Modelling and Performance 6. Renewable Power and Electricity Systems 7. Electrical Power Generation - An Industrial Outlook 8. Plant Design & Economics	1. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/specializations/power-system-generation-transmission-and-protection?source=search 2. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/electrical-power-generation-an-industrial-outlook?specialization=power-system-generation-transmission-and-protection 3. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/basics-of-electrical-protection-system?specialization=power-system-generation-transmission-and-protection 4. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/advanced-study-of-protection-schemes-and-switchgear?specialization=power-system-generation-transmission-and-protection 5. https://www.coursera.org/programs/iem-faculty-learning-program-rtyr7/learn/design-of-transmission-line-modelling-and-performance?specialization=power-system-generation-transmission-and-protection 6. https://www.coursera.org/learn/renewable-power-electricity-systems 7. https://www.coursera.org/learn/electrical-power-generation-an-industrial-outlook 8. https://www.coursera.org/learn/plant-design-economics
ESPEE801	Essential Studies for Professionals VIII	8		1. Banking & Finance in India 2.Contemporary Issues in World Politics 3.Basics Economics 4. Microeconomics: Foundations and Insights	1. 1. 1. https://www.coursera.org/learn/banking-and-finance-in-india 2.https://www.coursera.org/learn/contemporary-issues-in-world-politics 3.https://www.coursera.org/programs/uemj-passout-batch-2028-54ok2/learn/basics-economics?source=search 4.https://www.coursera.org/programs/uemj-passout-batch-2028-54ok2/learn/microeconomics-foundations-insights-jgu?source=search