Institutional Information for Quality Assessment(IIQA)

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG. DHENKANAL. ODISHA,SARANG,ORISSA

(Draft Dated on 30/05/2024)

	AISHE ID	:	C-30127

1	Application For	Accreditation
	Cycle of Accreditation	Cycle1
2	Name of the College	INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG. DHENKANAL. ODISHA
3	Date of establishment of the Institution	01/01/1983
4	Name of the Head of the Institution	Prof. SATYABRATA MOHANTA
	Designation	Principal
5	Does the college function from Own Campus	Yes
6	Address of the College	INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG, DHENKANAL, ODISHA, 759146
	State/UT	ORISSA
	District	DHENKANAL
	City	SARANG
	Pin	759146
	Phone No	06768-267003
	Fax No	-
	Mobile No	9437211582
	Registered Email	principal@igitsarang.ac.in
	Alternate Email	
7	Alternate Faculty Contact Details	Prof. URMILA BHANJA Professor
	Address	DEPT OF ETC, IGIT, SARANG
	State/UT	ORISSA
	City	SARANG
	Pin	759146
	Phone No	06768-267113

	Fax No	-
	Mobile No	9437142056
	Email	urmilabhanja@gmail.com
	Alternate Email	urmila@igitsarang.ac.in
8	Website	www.igitsarang.ac.in
9	Has the Institution completed 6 years of existence / Years of graduation of last two batches	Yes Year1- 2022 Year2- 2023
10	Nature of the college	Government
11	College Affiliation	Affiliated
12	Name of the affiliating University(ies) and the state(s) in which the University(ies) is located	

State	University Name	Documents
Orissa	Biju Patnaik University of Technology	View Document

13	Is the Institution recognized under section 2(f) of the UGC Act?	Yes 09/03/2016 View Document
14	Is the Institution recognized under section 12B of the UGC Act? If yes, date of recognition by UGC under section 12B along with latest Plan General Development Grant release letter	Yes 09/03/2016 View Document
15	Is the institution recognised as an Autonomous College by the UGC?	Yes View Document
16	Is the institution recognised as a 'College with Potential for Excellence (CPE)' by the UGC?	No
17	Is the institution recognised as a 'College of Excellence' by the UGC?	No
18	Is the College offering any programmes recognised by any Statutory Regulatory Authority (SRA)	Yes
	Statutory Regulatory Authorities	

SRA program	Document
AICTE	View Document
COA	View Document

19	If the institution is not affiliated to a university and is offering programmes recognized by any Statutory Regulatory Authorities (SRA), are the programmes recognized by Association of Indian Universities(AIU) or other appropriate Government authorities as equivalent to UG / PG Programmes of a University	Not Applicable

20	Whether the Institution is registered in the National Academic Depository (NAD) system	No

21 Number of programmes offered

Programmes	Number
UG	9
PG	22
Post Master's (DM,Ayurveda Vachaspathi,M.Ch)	0
Pre Doctoral (M.Phil)	0
Doctoral (Ph.D)	11
Post Doctoral (D.Sc , D.Litt , LLD)	0
PG Diploma recognised by statutory authority including university	0
Diploma	5
Certificate / Awareness	0
M.D.	0
M.S.	0

22 Programme Details

Program	Department	University Affiliation	SRA Recognition	Affiliation Status
BTech	Electrical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
BTech	Mechanical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
BTech	Electronics And Telecommunication Engg	Biju Patnaik University of Technology	AICTE	Permanent
BTech	Computer Sc And Engg	Biju Patnaik University of Technology	AICTE	Permanent
BTech	Chemical Engg	Biju Patnaik University of Technology	AICTE	Permanent
BTech	Production Engg	Biju Patnaik University of Technology	AICTE	Permanent
BTech	Civil	Biju Patnaik University of Technology	AICTE	Permanent
BTech	Metallurgy And Materials Engg	Biju Patnaik University of Technology	AICTE	Permanent
BArch(Architecture and Planning)	Architecture And Planning Dept	Biju Patnaik University of Technology	COA	Temporary

Mtech(WIRELESS COMMUNICATION TECHNOLOGY)	Electronics And Telecommunication Engg	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(CHEMICAL ENGINEERING)	Chemical Engg	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(COMPUTER SCIENCE AND ENGINEERING)	Computer Sc And Engg	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(COMPUTER SCIENCE AND INFORMATION SECURITY)	Computer Sc And Engg	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(INDUSTRIAL METALLURGY)	Metallurgy And Materials Engg	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(METALLURGICAL AND MATERIALS ENGINEERING)	Metallurgy And Materials Engg	Biju Patnaik University of Technology	AICTE	Permanent
MCA(MASTERS IN COMPUTER APPLICATIONS)	Computer Sc And Engg	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(GEOTECHNICAL ENGINEERING)	Civil	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(ENVIORNMENTAL SCIENCE AND ENGINEERING)	Civil	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(STRUCTURAL ENGINEERING)	Civil	Biju Patnaik University of Technology	AICTE	Permanent
MSc(PHYSICS)	Physics	Biju Patnaik University of Technology		Permanent
MSc(CHEMISTRY)	Chemistry	Biju Patnaik University of Technology		Permanent
MSc(MATHEMATICS)	Mathematics	Biju Patnaik University of Technology		Permanent
Mtech(TRANSPORATION ENGINEERING)	Civil	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(POWER ELECTRONICS AND DRIVES)	Electrical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(POWER SYSTEM ENGINEERING)	Electrical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(ENERGY SYSTEM ENGINEERING)	Electrical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(INDUSTR	Electrical	Biju Patnaik	AICTE	Permanent

IAL POWER CONTROL AND DRIVES)	Engineering	University of Technology		
Mtech(MECHANICAL SYSTEM DESIGN)	Mechanical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(PRODUCTION ENGINEERING)	Mechanical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(THERMAL ENGINEERING)	Mechanical Engineering	Biju Patnaik University of Technology	AICTE	Permanent
Mtech(ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING)	Electronics And Telecommunication Engg	Biju Patnaik University of Technology	AICTE	Permanent
PhD or DPhil	Electrical Engineering	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Mechanical Engineering	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Electronics And Telecommunication Engg	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Chemical Engg	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Computer Sc And Engg	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Metallurgy And Materials Engg	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Civil Engineering	Biju Patnaik University of Technology		Permanent
PhD or DPhil(COMPUTER APPLICATION)	Computer Sc And Engg	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Physics	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Chemistry	Biju Patnaik University of Technology		Permanent
PhD or DPhil	Mathematics	Biju Patnaik University of Technology		Permanent

View Document

23 Number of Teaching Staff by employment status (permanent / temporary) and by gender

Male	Female	Transgender	Total

62	17	0	79
66	43	0	109

24 Number of Non-Teaching Staff by employment status (permanent / temporary) and by gender

Male	Female	Transgender	Total
179	26	0	205

25 Number of Students on roll by gender

Male	Female	Transgender	Total
3585	1269	0	4854

26	Does the institution have statutory cells / committees	1.Grievance Redressal Committee 2.Internal Compliant Committee 3.Anti-ragging Committee
27	Date of establishment of IQAC	30/04/2019
28	Has the institution made statutory declaration on the institution website under Section 4 (1) (b) of the RTI Act 2005 as issued and amended from time to time.	Yes https://igitsarang.ac.in/instprofile/infotopublic/rti
29	Does the college have an academic MoU with any foreign institution	No
30	Date of uploading data on MHRD website for All India Survey on Higher Education (AISHE).	19/03/2024 View Document
31	Attach Certification by the Head of the Institution for having complied with Rules & Regulations of Central Government, UGC and other Statutory Bodies, State Government and Affiliating University in the prescribed format enclosed herewith.	View Document
32	Registration Fee paid details.	

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for 4th Year B.Tech CIVIL ENGINEERING

(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCCE4411	Quantity Survey and Estimation	3-0-0	3
PCCE4412	Advanced Surveying	3-0-0	3
(Any One) PECE5404/	***Programme Elective III*** Advanced Geo Technical Engineering	3-0-0	3
(Any One) PECE5405/	***Programme Elective IV*** Advanced Transportation Engineering	3-0-0	3
(Any One)	***Open Elective IV*** Refer List of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNCE0405	Environmental Impact Assessment		

Practical/ Sessional

PJCE8402	Minor Project	0-0-6	3
PJCE8403	Seminar and Technical Paper Writing	0-0-3	2
Total (Practical/ Sessional)		**9**	**5**
TOTAL		**24**	**20**

TOTAL SEMESTER CREDITS: 20

TOTAL CUMULATIVE CREDITS: 145

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One) PECE5406/	***Programme Elective V*** Advanced Environmental Engineering	3-0-0	3
(Any One) PECE5407/	***Programme Elective VI*** Traffic Planning and Transportation Planning	3-0-0	3
	Total (Theory)	**6**	**6**
	Practical/ Sessional		
PJCE8405	Major Project	0-0-12	6
PJCE8406	Comprehensive Viva Voce	0-0-3	1
PJCE8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

Practical/ Sessional

PJCE8407	Internship based Major Project	---	12
PJCE8406	Comprehensive Viva Voce	---	1
PJCE8404	Internship	---	2
Total (Practical/ Sessional)			**15**
TOTAL			**15**

TOTAL SEMESTER CREDITS: 15

TOTAL CUMULATIVE CREDITS: 160

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for 4th Year B.Tech ELECTRICAL ENGINEERING

(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCEE4411	Utilization of Electrical Energy	3-0-0	3
PCEE4412	High Voltage Engineering	3-0-0	3
(Any One)	***Programme Elective III***	3-0-0	3
PEEE5406/	HVDC Transmission Systems		
PEEE5407	Restructured Power Systems		
(Any One)	***Programme Elective IV***	3-0-0	3
PEEE5408/	Switch Gear & Protective Devices		
PEEE5409	Advanced Control System		
PEEE5415	Renewable Energy Systems		
(Any One)	**Open Elective IV** Refer List of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNEE0405/	Power Plant Engineering/		
MNEE0405	Switch Gear & Protective Devices		
	Practical/ Sessional		
PJEE8402	Minor Project	0-0-6	3
PJEE8403	Seminar and Technical Paper Writing	0-0-3	2
	Total (Practical/ Sessional)	**9**	**5**
	TOTAL	**24**	**20**

TOTAL SEMESTER CREDITS: 20

TOTAL CUMULATIVE CREDITS: 145

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One)	***Programme Elective V***	3-0-0	3
PEEE5410/	Energy Audit and Management		
PEEE5411	Smart Grid		
(Any One)	***Programme Elective VI***	3-0-0	3
PEEE5412/	Electrical and Hybrid Vehicles/		
PEEE5413	Advanced Electric Drives		
PEEE5414	Artificial Intelligence & Machine Learning		
	Total (Theory)	**6**	**6**
	Practical/ Sessional		
PJEE8405	Major Project	0-0-12	6
PJEE8406	Comprehensive Viva Voce	0-0-3	1
PJEE8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

	Practical/ Sessional		
PJEE8407	Internship based Major Project	---	12
PJEE8406	Comprehensive Viva Voce	---	1
PJEE8404	Internship	---	2
	Total (Practical/ Sessional)		**15**
	TOTAL		**15**

TOTAL SEMESTER CREDITS: 15

TOTAL CUMULATIVE CREDITS: 160

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure of 4th Year B.Tech CHEMICAL ENGINEERING

(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCCH4411	Process Equipment Design	3-0-0	3
PCCH4412	Transport Phenomena	3-0-0	3
(Any One)	***Programme Elective III***	3-0-0	3
PECH5405/	Chemical Engineering Thermodynamics /		
PECH5406	Computational Fluid Dynamics		
(Any One)	***Programme Elective IV***	3-0-0	3
PECH5407/	Process Instrumentation/		
PECH5408	Process Simulation and Modeling		
(Any One)	**Open Elective IV** Refer List of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNCH0405	Advanced Heat Transfer		
MNCH0405	Environmental Pollution Control		
	Practical/ Sessional		
PJCH8402	Minor Project	0-0-6	3
PJCH8403	Seminar and Technical Paper Writing	0-0-3	2
	Total (Practical/ Sessional)	**9**	**5**
	TOTAL	**24**	**20**

TOTAL SEMESTER CREDITS: 20

TOTAL CUMULATIVE CREDITS: 145

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One)	***Programme Elective V***	3-0-0	3
PECH5409/	Separation Technology/		
PECH5410	Fertilizer Technology		
(Any One)	***Programme Elective VI***	3-0-0	3
PECH5411/	Plant Design and Economics/		
PECH5412	Pulp and Paper Technology		
	Total (Theory)	**6**	**6**
	Practical/ Sessional		
PJCH8405	Major Project	0-0-12	6
PJCH8406	Comprehensive Viva Voce	0-0-3	1
PJCH8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

Practical/ Sessional

PJCH8407	Internship based Major Project	---	12
PJCH8406	Comprehensive Viva Voce	---	1
PJCH8404	Internship	---	2
	Total (Practical/ Sessional)		**15**
	TOTAL		**15**

TOTAL SEMESTER CREDITS: 15

TOTAL CUMULATIVE CREDITS: 160

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for 4th Year B.Tech COMPUTER SCIENCE & ENGINEERING

(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCCS4411	Software Engineering	3-0-0	3
PCCS4412	Artificial Intelligence and Expert Systems	3-0-0	3
(Any One)	***Programme Elective III***	3-0-0	3
PECS5407/	Parallel and Distributed System/		
PECS5408/	Fault Tolerant Systems/		
PECS5409/	Statistical Natural Language Processing		
(Any One)	***Programme Elective IV***	3-0-0	3
PECS5410/	Computer Graphics/		
PECS5411/	Digital Image Processing/		
PECS5412	Data Analytics		
(Any One)	***Open Elective IV*** Refer List of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNCS0405	Software Development for Portable Devices		
MNCS0405	Operating System		

Practical/ Sessional

PJCS8402	Minor Project	0-0-6	3
PJCS8403	Seminar and Technical Paper Writing	0-0-3	2
	Total (Practical/ Sessional)	**9**	**5**
	TOTAL	**24**	**20**

TOTAL SEMESTER CREDITS: 20

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One)	***Programme Elective V***	3-0-0	3
PECS5413/	Internet and Web Technology/		
PECS5414/	Social Network Analysis/		
PECS5415	Semantic and Text Processing		
(Any One)	***Programme Elective VI***	3-0-0	3
PECS5416/	Software Project Management/		
PECS5417/	Bioinformatics/		
PECS5418	Real Time Systems		
	Total (Theory)	**6**	**6**

Practical/ Sessional

PJCS8405	Major Project	0-0-12	6
PJCS8406	Comprehensive Viva Voce	0-0-3	1
PJCS8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

Practical/ Sessional

PJCS8407	Internship based Major Project	---	12
PJCS8406	Comprehensive Viva Voce	---	1
PJCS8404	Internship	---	2
	Total (Practical/ Sessional)		**15**
	TOTAL		**15**

TOTAL SEMESTER CREDITS: 15

Course Structure for 4th Year B.Tech
ELECTRONICS AND TELECOMMUNICATION ENGINEERING
(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCEC4411	Mobile Communication and Networks	3-0-0	3
PCEC4412	Internet of Things	3-0-0	3
(Any One)	***Programme Elective III*** Refer the list of programme elective III	3-0-0	3
(Any One)	***Programme Elective IV*** Refer the list of programme elective IV	3-0-0	3
(Any One)	**Open Elective IV** Refer List of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNEC0405	Wireless Access Technology		
MNEC0405	Mobile Communication and Networks		
	Practical/ Sessional		
PJEC8402	Minor Project	0-0-6	3
PJEC8403	Seminar and Technical Paper Writing	0-0-3	2
	Total (Practical/ Sessional)	**9**	**5**
	TOTAL	**24**	**20**
TOTAL SEMESTER CREDITS: 20			
TOTAL CUMULATIVE CREDITS: 145			

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One)	***Programme Elective V*** Refer the list of programme elective V	3-0-0	3
(Any One)	***Programme Elective VI*** Refer the list of programme elective VI	3-0-0	3
	Total (Theory)	**6**	**6**
	Practical/ Sessional		
PJEC8405	Major Project	0-0-12	6
PJEC8406	Comprehensive Viva Voce	0-0-3	1
PJEC8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

	Practical/ Sessional		
PJEC8407	Internship based Major Project	---	12
PJEC8406	Comprehensive Viva Voce	---	1
PJEC8404	Internship	---	2
	Total (Practical/ Sessional)		**15**
	TOTAL		**15**
TOTAL SEMESTER CREDITS: 15			
TOTAL CUMULATIVE CREDITS: 160			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for 4th Year B.Tech MECHANICAL ENGINEERING

(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCME4411	Heat and Mass Transfer	3-0-0	3
PCME4412	Mechanical Handling Equipment	3-0-0	3
(Any One)	***Programme Elective III***	3-0-0	3
PEME5407/	Mechatronic		
PEME5408/	Reverse Engineering and Rapid Prototyping		
PEME5409	Refrigeration and Air conditioning		
(Any One)	***Programme Elective IV***	3-0-0	3
PEME5410/	CAD, CAM & Robotics/		
PEME5411/	Machine Design - II/		
PEME5412	Project Management		
(Any One)	***Open Elective IV*** Refer list of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNME0410	Computational Fluid Dynamics		
HNME0411	Finite Element Method		
HNME0412	Automatic Control System		
MNME0405	Machine Dynamics and Design		
	Practical/ Sessional		
PJME8402	Minor Project	0-0-6	3
PJME8403	Seminar and Technical Paper Writing	0-0-3	2
	Total (Practical/ Sessional)	**9**	**5**
	TOTAL	**24**	**20**

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One)	***Programme Elective V***	3-0-0	3
PEME5413/	Ergonomics and Human Factor Engineering/		
PEME5414/	Gas Dynamics/		
PEME5415	Finite Element Method		
(Any One)	***Programme Elective VI***	3-0-0	3
PEME5416/	Engineering Tribology/		
PEME5417/	Automobile Engineering/		
PEME5418	Optimization in Engineering		
	Total (Theory)	**6**	**6**
	Practical/ Sessional		
PJME8405	Major Project	0-0-12	6
PJME8406	Comprehensive Viva Voce	0-0-3	1
PJME8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

	Practical/ Sessional		
PJME8407	Internship based Major Project	---	12
PJME8406	Comprehensive Viva Voce	---	1
PJME8404	Internship	---	2
	Total (Practical/ Sessional)	---	**15**
	TOTAL		**15**

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for 4th Year B.Tech METALLURGICAL AND MATERIALS ENGINEERING

(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCMT4411	X-Ray and Electron Microscopy	3-0-0	3
PCMT4412	Materials for Structural Applications	3-0-0	3
(Any One)	***Programme Elective III***	3-0-0	3
PEMT5407/	Solidification and Casting Processes/		
PEMT5408/	Joining of Materials/		
PEMT5409/	Powder Metallurgy		
(Any One)	***Programme Elective IV***	3-0-0	3
PEMT5410/	Corrosion & Degradation of Materials/		
PEMT5411/	Electrometallurgy/		
PEMT5412	Surface Engineering		
(Any One)	**Open Elective IV** Refer List of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNMT0405	Tribology of Materials		
MNMT0405	Advanced Materials and Processes		

Practical/ Sessional

PJMT8402	Minor Project	0-0-6	3
PJMT8403	Seminar and Technical Paper Writing	0-0-3	2
	Total (Practical/ Sessional)	**9**	**5**
	TOTAL	**24**	**20**

TOTAL SEMESTER CREDITS: 20

TOTAL CUMULATIVE CREDITS: 145

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One)	***Programme Elective V***	3-0-0	3
PEMT5413/	Dislocation Theory/		
PEMT5414/	Non-Metallic Materials/		
PEMT5415	Functional Materials		
(Any One)	***Programme Elective VI***	3-0-0	3
PEMT5416/	Alternative Routes of Iron Making/		
PEMT5417/	Ferro-Alloy Technology/		
PEMT5418	Fatigue and Fracture Mechanics		
	Total (Theory)	**6**	**6**

Practical/ Sessional

PJMT8405	Major Project	0-0-12	6
PJMT8406	Comprehensive Viva Voce	0-0-3	1
PJMT8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

Practical/ Sessional

PJMT8407	Internship based Major Project	---	12
PJMT8406	Comprehensive Viva Voce	---	1
PJMT8404	Internship	---	2
	Total (Practical/ Sessional)		**15**
	TOTAL		**15**

TOTAL SEMESTER CREDITS: 15

TOTAL CUMULATIVE CREDITS: 160

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for 4th Year B.Tech PRODUCTION ENGINEERING

(Admission Batch: 2018-19 Onwards)

Seventh Semester

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
	Programme Core Subject		
PCPD4411	Production & Operation Management	3-0-0	3
PCPD4412	Robotics and FMS	3-0-0	3
(Any One)	***Programme Elective III***	3-0-0	3
PEPD5407/	Heat Power Engineering/		
PEPD5408/	Power Plant Engineering/		
PEPD5409/	Automobile Engineering		
(Any One)	***Programme Elective IV***	3-0-0	3
PEPD5410/	Non-Conventional Source of Energy/		
PEPD5411/	Design and Analysis of Experiment/		
PEPD5412	Computer Integrated Manufacturing		
(Any One)	**Open Elective IV** Refer List of Open Electives	3-0-0	3
	Total (Theory)	**15**	**15**
	Honours/ Minor	3-1-0	4
HNPD0405	Design of Automated Material Handling System		
MNPD0405	Quality Engineering		
	Practical/ Sessional		
PJPD8402	Minor Project	0-0-6	3
PJPD8403	Seminar and Technical Paper Writing	0-0-3	2
	Total (Practical/ Sessional)	**09**	**5**
	TOTAL	**24**	**20**

TOTAL SEMESTER CREDITS: 20

TOTAL CUMULATIVE CREDITS: 145

Eighth Semester

(A) *For students who carry out Major Project in the Institute*

Theory

Course Code	Course Name	L-T-P (Periods/ Week)	Credits
(Any One)	***Programme Elective V***	3-0-0	3
PEPD5413/	Additive Manufacturing/		
PEPD5414/	Lean Manufacturing/		
PEPD5415	Supply Chain Management		
(Any One)	***Programme Elective VI***	3-0-0	3
PEPD5416/	Industrial Automation & Mechatronics/		
PEPD5417/	Automated Material Handling System/		
PEPD5418	Diagnostics Techniques		
	Total (Theory)	**6**	**6**
	Practical/ Sessional		
PJPD8405	Major Project	0-0-12	6
PJPD8406	Comprehensive Viva Voce	0-0-3	1
PJPD8404	Internship	0-0-3	2
	Total (Practical/ Sessional)	**18**	**9**
	TOTAL	**24**	**15**

OR

(B) *For students who carry out Internship based Major Project*

	Practical/ Sessional		
PJPD8407	Internship based Major Project	---	12
PJPD8406	Comprehensive Viva Voce	---	1
PJPD8404	Internship	---	2
	Total (Practical/ Sessional)		**15**
	TOTAL		**15**

TOTAL SEMESTER CREDITS: 15

TOTAL CUMULATIVE CREDITS: 160

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: CHEMICAL ENGINEERING

BRANCH: CHEMICAL ENGINEERING (2018-19 Admission Batch)

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
	Open Elective (Any One) Business Analytics Industrial Safety Operations Research Cost Management of Engineering Projects Composite Materials Waste to Energy Internet of Things Soft Computing Project Engineering & Management Start-up & Entrepreneurship Development	3-0-0	3				
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
CHJ301	Dissertation Phase-I	0-0-20	10	CHJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: ENVIRONMENTAL SCIENCE AND ENGINEERING

BRANCH: CIVIL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
ENE301	Environmental Impact Assessment						
ENE302	Environmental Management						
ENE303	Numerical Methods and Modelling						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
ENJ301	Dissertation Phase-I	0-0-20	10	ENJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: GEOTECHNICAL ENGINEERING

BRANCH: CIVIL ENGINEERING (2018-19 Admission Batch)

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
GTE301	Ground Water and Flow through Porous Media						
GTE302	Project Planning and Construction Management						
GTE303	Geo-environmental Engineering						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
GTJ301	Dissertation Phase-I	0-0-20	10	GTJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: STRUCTURAL ENGINEERING

BRANCH: CIVIL ENGINEERING (2018-19 Admission Batch)

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
STE301	Disaster Management and Mitigation						
STE302	Non-conventional Energy						
STE303	Project Planning and Management						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
STJ301	Dissertation Phase-I	0-0-20	10	STJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: TRANSPORTATION ENGINEERING

BRANCH: CIVIL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
TRE301	Intelligent Transportation system						
TRE302	Environmental Impact Assessment						
TRE303	Bridge Engineering						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
TRJ301	Dissertation Phase-I	0-0-20	10	TRJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: COMPUTER SCIENCE & ENGINEERING

BRANCH: COMPUTER SCIENCE & ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
CSE301	Advance Software Engineering						
CSE302	Statistical Natural Language Processing						
CSE303	Image Processing & Pattern Recognition						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering &Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
CSJ301	Dissertation Phase-I	0-0-20	10	CSJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: ENERGY SYSTEM ENGINEERING

BRANCH: ELECTRICAL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
ESE301	Power System Analysis						
ESE302	Power system Transients						
ESE303	Reliability Analysis and Protection						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
ESJ301	Dissertation Phase-I	0-0-20	10	ESJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: INDUSTRIAL POWER CONTROL AND DRIVES

BRANCH: ELECTRICAL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
IPE301	Power System Transients						
IPE302	Reliability Analysis and Protection						
IPE303	High Voltage DC Transmission						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
IPJ301	Dissertation Phase-I	0-0-20	10	IPJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: POWER ELECTRONICS AND DRIVES

BRANCH: ELECTRICAL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
PEE301	SCADA Systems and Applications						
PEE302	FACTS and Custom Power Devices						
PEE303	High Voltage DC Transmission						
PEE304	Advanced Electric Drives						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
PEJ301	Dissertation Phase-I	0-0-20	10	PEJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: POWER SYSTEM ENGINEERING

BRANCH: ELECTRICAL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
PSE301	Power System Transients						
PSE302	FACTS and Custom Power Devices						
PSE303	Industrial Load Modelling and Control						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
PSJ301	Dissertation Phase-I	0-0-20	10	PSJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUSfor *Specialization*: ELECTRONICS AND TELECOMMUNICATION ENGINEERING

BRANCH: ELECTRONICS AND TELECOMMUNICATION ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One) To be chosen from list of Electives	3-0-0	3				
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
ECJ301	Dissertation Phase-I	0-0-20	10	ECJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: WIRELESS COMMUNICATION TECHNOLOGY

BRANCH: ELECTRONICS AND TELECOMMUNICATION ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One) To be chosen from list of Electives	3-0-0	3				
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
WCJ301	Dissertation Phase-I	0-0-20	10	WCJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: MECHANICAL SYSTEM DESIGN

BRANCH: MECHANICAL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
MSE301	Applied Elasticity and Plasticity						
MSE302	Advanced Fluid Mechanics						
MSE303	Computer Integrated Manufacturing						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
MSJ301	Dissertation Phase-I	0-0-20	10	MSJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: PRODUCTION ENGINEERING

BRANCH: MECHANICAL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
PRE301	Rapid Prototyping						
PRE302	Nanotechnology						
PRE303	Concurrent Engineering						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
PRJ301	Dissertation Phase-I	0-0-20	10	PRJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: THERMAL ENGINEERING

BRANCH: MECHANICAL ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
THE301	Steam Engineering						
THE302	Design of solar and wind system						
THE303	Cryogenics						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
THJ301	Dissertation Phase-I	0-0-20	10	THJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: INDUSTRIAL METALLURGY

BRANCH: METALLURGICAL AND MATERIALS ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
IME301	Pollution control and waste management in Iron and Steel Industries						
IME302	Secondary Steel Making						
IME303	Surface Engineering						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
IMJ301	Dissertation Phase-I	0-0-20	10	IMJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: METALLURGICAL AND MATERIALS ENGINEERING

BRANCH: METALLURGICAL AND MATERIALS ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
MME301	Modelling and Computer Application in Metallurgy						
MME302	Physics of Materials						
MME303	Energy conservation and pollution control in Metallurgical Industries						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	Internet of Things						
OEC302	Soft Computing						
OCE303	Project Engineering & Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
MMJ301	Dissertation Phase-I	0-0-20	10	MMJ401	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for M.Sc. in Applied Chemistry

SECOND YEAR

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Core-11	3-0-0	3		**Programme Core-14**	3-0-0	3
ACC301	Inorganic Chemistry-III			ACC401	Analytical Techniques		
	Programme Core-12	3-0-0	3		**Programme Core-15**	3-0-0	3
ACC302	Organic Chemistry-III			ACC402	Supramolecular Chemistry		
	Programme Core-13	3-0-0	3		**Programme Elective-III (Any One)**	3-0-0	3
ACC303	Environmental Chemistry			ACE401	Medicinal Chemistry		
	Programme Elective-I (Any One)	3-0-0	3	ACE402	Chemistry of Nano-Materials		
ACE301	Research Methodology			ACE403	Chemistry of Natural Products		
ACE302	Material Science				**Programme Elective-IV (Any One)**	3-0-0	3
	Programme Elective–II (Any One)	3-0-0	3	ACE404	Polymer Chemistry		
ACE303	Industrial Processes			ACE405	Nuclear Chemistry		
ACE304	Frontiers in Inorganic Chemistry			ACE406	Heterogeneous Catalysis		
	Total (Theory)	**15**	**15**		**Total (Theory)**	**12**	**12**
	Practical/ Sessional				**Practical/ Sessional**		
ACC304	Physical Chemistry–II Laboratory	0-0-6	2	ACJ401	**Project**	0-0-15	10
ACC305	Environmental Chemistry Laboratory	0-0-3	2				
ACJ301	Seminar & Review	0-0-6	3				
Total (Practical/ Sessional)		**15**	**7**	**Total (Practical/ Sessional)**		**15**	**10**
TOTAL		**30**	**22**	**TOTAL**		**27**	**22**
TOTAL SEMESTER CREDITS: 22				TOTAL SEMESTER CREDITS: 22			
TOTAL CUMULATIVE CREDITS: 70				TOTAL CUMULATIVE CREDITS: 92			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for M.Sc. in Applied Mathematics

SECOND YEAR

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Core-12	3-1-0	4		**Programme Core-16**	3-1-0	4
AMC301	Functional Analysis			AMC401	Differential Geometry		
	Programme Core-13	3-1-0	4		**Programme Core-17**	3-0-0	3
AMC302	Probability & Stochastic Process			AMC402	Matrix Computation		
	Programme Core–14	3-0-0	3		**Programme Elective-II (Any One)**	3-1-0	4
AMC303	Optimization Techniques			AME401	Computational Fluid Dynamics		
AMC304	**Programme Core–15** Integral Equations & Calculus of Variations	3-0-0	3	AME402	Theory of Computation		
				AME403	Finite Element Method		
				AME404	Data Structure using C++		
	Programme Elective–I (Any One)	3-1-0	4		**Programme Elective-III (Any One)**	3-0-0	3
AME301	Fluid Dynamics			AME405	Graph Theory		
AME302	Number Theory & Cryptography			AME406	Theory of Relativity & Cosmology		
AME303	Computational Finance			AME407	Artificial Intelligence		
AME304	Relational Data Base Management System			AME408	Design Analysis & Algorithms		
	Total (Theory)	**18**	**18**		**Total (Theory)**	**14**	**14**
	Practical/ Sessional				**Practical/ Sessional**		
AMC305	Introduction to MATLAB (Lab)	0-0-3	2	AMC403	Matrix Computation Lab	0-0-3	2
AMJ301	Seminar-II	0-0-3	2	AMJ401	Dissertation & Project	0-0-12	8
	Total (Practical/ Sessional)	**6**	**4**		**Total (Practical/ Sessional)**	**15**	**10**
	TOTAL	**24**	**22**		**TOTAL**	**29**	**24**
TOTAL SEMESTER CREDITS: 22				TOTAL SEMESTER CREDITS: 24			
TOTAL CUMULATIVE CREDITS: 68				TOTAL CUMULATIVE CREDITS: 92			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure for M.Sc. in Applied Physics

SECOND YEAR

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Core-11	3-1-0	4		**Programme Core-13**	3-1-0	4
APC301	Relativistic Quantum Mechanics & Field Theory			APC401	Atomic and Molecular Physics		
	Programme Core-12	3-1-0	4		**Programme Elective-II (Any One)**	3-1-0	4
APC302	Nuclear and Particle Physics			APE401	Condensed Matter Physics-II		
	Programme Elective– I (Any One)	3-1-0	4	APE402	Nuclear Physics-II		
APE301	Condensed Matter Physics-I			APE403	Particle Physics-II		
APE302	Nuclear Physics-I			APE404	Electronics-II		
APE303	Particle Physics-I				**Open Elective- II (Any One)**	3-1-0	4
APE304	Electronics-I			APO401	Physics of Semiconductor Devices		
	Open Elective-I (Any One)			APO402	Fibre Optics & Optoelectronics Devices		
APO301	Advanced Characterization Techniques	3-1-0	4	APO403	Medical Physics		
APO302	Smart & Intelligent Materials			APO404	Vacuum Science Technology		
APO303	Gravitation, Cosmology and Astrophysics						
APO304	Non Linear Dynamics						
	Total (Theory)	**16**	**16**		**Total (Theory)**	**12**	**12**
	Practical/ Sessional				**Practical/ Sessional**		
APJ301	Technical Document writing & Seminar	0-0-3	2	APJ401	**Dissertation & Project**	0-0-12	8
APC303	Introduction to SciLAB Lab	0-0-3	2		**Programme Elective-II Lab (Any One Corresponding Lab)**	0-0-3	2
	Programme Elective-I Lab (Any One Corresponding Lab)	0-0-3	2	APE405	Condensed Matter Physics-II Lab		
APE305	Condensed Matter Physics-I Lab			APE406	Nuclear Physics-II Lab		
APE306	Nuclear Physics-I Lab			APE407	Particle Physics-II Lab		
APE307	Particle Physics-I Lab			APE408	Electronics-II Lab		
APE308	Electronics-I Lab						

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

Course Structure and Syllabus for MCA

THIRD YEAR

Fifth Semester				Sixth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
CAC501	Computer Graphics	3-0-0	3	CAH601	Entrepreneurship Development	2-0-0	2
CAC502	Artificial Intelligence	3-0-0	3	CAH602	Accounting Information System	3-0-0	3
	Programme Elective-III (Any One)	3-0-0	3				
CAE501	PHP & SQL Programming/						
CAE502	Android Programming/						
CAE503	Advance Java Programming						
	Open Elective-I (Any One)	3-0-0	3				
CAO501	Cloud Computing/						
CAO502	IOT & Big Data/						
CAO503	Wireless Sensor Networks						
	Total (Theory)	**12**	**12**		**Total (Theory)**	**5**	**5**
	Practical/ Sessional				**Practical/ Sessional**		
CAC503	Computer Graphics Lab	0-0-3	3	CAJ601	Project	0-0-20	18
CAH501	Personality & Soft Skill Development Lab	0-0-3	3				
	Programme Elective-III Lab (Any One Corresponding Lab)	0-0-3	3				
CAE504	PHP & SQL Programming Lab/						
CAE505	Android Programming Lab/						
CAE506	Advance Java Programming Lab						
CAJ501	Internship Evaluation	0-0-3	2				
	Total (Practical/ Sessional)	**12**	**11**		**Total (Practical/ Sessional)**	**20**	**18**
	TOTAL	**24**	**23**		**TOTAL**	**25**	**23**
TOTAL SEMESTER CREDITS: 23				TOTAL SEMESTER CREDITS: 23			
TOTAL CUMULATIVE CREDITS: 132				TOTAL CUMULATIVE CREDITS: 155			

INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG

M.TECH SYLLABUS for *Specialization*: COMPUTER SCIENCE INFORMATION SECURITY

BRANCH: COMPUTER SCIENCE & ENGINEERING

Third Semester				Fourth Semester			
Theory				**Theory**			
Course Code	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**	**Course Code**	**Course Name**	**L-T-P (Periods/ Week)**	**Credits**
	Programme Elective-5 (Any One)	3-0-0	3				
ISE310	Cyber Laws and Security Policies						
ISE311	Digital and Cyber Forensics						
ISE312	Ethical Hacking						
	Open Elective (Any One)	3-0-0	3				
OHM301	Business Analytics						
OME301	Industrial Safety						
OMA301	Operations Research						
OCE302	Cost Management of Engineering Projects						
OMT301	Composite Materials						
OCE301	Waste to Energy						
OEC301	**Internet of Things**						
OEC302	Soft Computing						
OCE303	Project Engineering &Management						
OME302	Start-up & Entrepreneurship Development						
	Total (Theory)	**6**	**6**		**Total (Theory)**	**0**	**0**
	Practical/ Sessional				**Practical/ Sessional**		
ISJ304	Dissertation Phase-I	0-0-20	10	ISJ405	Dissertation Phase-II	0-0-32	16
	Total (Practical/ Sessional)	**20**	**10**		**Total (Practical/ Sessional)**	**32**	**16**
	TOTAL	**26**	**16**		**TOTAL**	**32**	**16**
TOTAL SEMESTER CREDITS: 16				TOTAL SEMESTER CREDITS: 16			
TOTAL CUMULATIVE CREDITS: 52				TOTAL CUMULATIVE CREDITS: 68			

STATE COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING, ODISHA

TEACHING AND EVALUATION SCHEME FOR 6th SEMESTER DIPLOMA IN CIVIL ENGINEERING COURSE

Sl No.	Subject Code	SUBJECT	PERIODS			EVALUATION SCHEME					
			L	T	P	SESSIONAL EXAM.			END SEM EXAM	PRACTICAL EXAM	TERM WORK
						TA	CT	TOTAL			
		THEORY									
1	BST-501 Or CET-601	ENVIRONMENTAL STUDIES OR CONSTRUCTION MANGEMENT	5	-	-	10	20	30	70		-
2	CET-602	STRUCTURAL DESIGN-II	4	-	-	10	20	30	70		-
3	CET-603	RAILWAY & BRIDGE ENGINEERING	4	-	-	10	20	30	70		-
4	CET-604	ESTIMATION& COST EVALUATION-II	4	-	-	10	20	30	70		-
5	CET-605	ELECTIVE (any One)	4	-	-	10	20	30	70		-
		TOTAL	21			50	100	150	350		
		PRACTICAL / TERM WORK									
6	CEP-601	STRUCTURAL DETAILING PRACTICE-II	-	-	3					-	50
7	CEP-602	ESTIMATING PRACTICE-II (COMPUTER-AIDED)	-	-	3					-	50
8	CEP-603	SURVEY PRACTICE-II	-	-	6					50	25
9	CEP-604	PROJECT AND SEMINAR & LIBRARY STUDY			6					50	25
		TOTAL			18				-	100	150
		GRAND TOTAL	**21**		**18**	**50**	**100**	**150**	**350**	**100**	**150**

Abbreviations: L- Lecture, T- Tutorial, P- Practical, TA- Teacher's Assessment, CT- Class Test

Minimum Pass Mark in each Theory subject is 35% and in each Practical subject is 50%

ELECTIVE Subjects

(i) DISASTER MANAGEMENT
(ii) ARCHITECTURAL PRACTICES & INTERIOR DESIGN
(iii) ADVANCED CONSTRUCTION TECHNIQUES AND EQUIPMENTS

STATE COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING, ODISHA									
TEACHING AND EVALUATION SCHEME FOR 6th Semester (Electrical)(wef 2020-21)									
Subject Number	Subject Code	Subject	Periods/week			Evaluation Scheme			
			L	T	P	Internal Assessment/ Sessional	End Sem Exams	Exams (Hours)	Total
		Theory							
Th.1		Electrical Installation And Estimating	4	1	-	20	80	3	100
Th.2		Switch Gear And Protective Devices	4	1	-	20	80	3	100
Th.3		Control System Engineering	4	1	-	20	80	3	100
Th.4		Elective (Any one to be opted) (a) Testing And Maintenance of Electrical Machine (b) Renewable Energy (c) Electric vehicle	4	1		20	80	3	100
		Total	*16*	*04*		*80*	*320*	-	*400*
		Practical							
Pr.1		Electrical Workshop	-	-	6	50	100	3	150
Pr.2		Project Phase- II			8	50	100	3	150
Pr.3		Life Skill	-	-	2	50	-	3	50
		Student Centred Activities(SCA)		-	3	-	-	-	-
		Total	*-*	*-*	*19*	*150*	*200*	*-*	*350*
		Grand Total	**16**	**04**	**19**	**205**	**545**	**-**	**750**
Abbreviations: L-Lecturer, T-Tutorial, P-Practical . Each class is of minimum 55 minutes duration									
Minimum Pass Mark in each Theory subject is 35% and in each Practical subject is 50% and in Aggregate is 40%									
SCA shall comprise of Extension Lectures/ Personality Development/ Environmental issues /Quiz /Hobbies/ Field visits/ cultural activities/Library studies/Classes on MOOCS/SWAYAM/Idea Tinkering and Innovation Lab Practice etc. ,Seminar and SCA shall be conducted in a section.									
There shall be 1 Internal Assessment done for each of the Theory Subject. Sessional Marks shall be total of the performance of individual different jobs/ experiments in a subject throughout the semester									

STATE COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING, ODISHA

TEACHING AND EVALUATION SCHEME FOR 6th Semester (Electronics & TeleCommunication)(wef 2020-21)

Subject Number	Subject Code	Subject	Periods/week			Evaluation Scheme			
			L	T	P	Internal Assessment/ Sessional	End Sem Exams	Exams (Hours)	Total
		Theory							
Th.1		ADVANCE COMMUNICATION ENGINEERING	5		-	20	80	3	100
Th.2		CONTROL SYSTEMS & COMPONENT	4		-	20	80	3	100
Th.3		DIGITAL SIGNAL PROCESSING (Common to ETC /AEI)	4		-	20	80	3	100
Th.4		**ELECTIVE(Any one to be opted)** (1) RENEWABLE ENERGY SOURCES (2) Internet Of Things(IoT) (3) ARTIFICIAL INTELLIGENCE & ROBOTICS	4		-	20	80	3	100
		Total	*17*		-	*80*	*320*	-	*400*
		Practical							
Pr.1		ADVANCE COMMUNICATION ENGINEERING LAB.	-	-	3	25	25	3	50
Pr.2		COMPUTER HARDWARE LAB (Common to ETC/AEI)	-	-	3	25	25	3	50
Pr.3		MATLAB & PROCESSING SIMULATION LAB	-	-	3	25	25	3	50
Pr.4		PLC & Automation LAB	-	-	4	25	25		50
Pr.5		PROJECT Phase-II			5	25	100	3	125
Pr.6		Life Skill	-	-	2	25			25
		Student Centred Activities(SCA)	-	-	2	-	-	-	-
		Total	-	-	*22*	*150*	*200*	-	*350*
		Grand Total	**17**		**22**	**230**	**520**	**-**	**750**

Abbreviations: L-Lecturer, T-Tutorial, P-Practical . Each class is of minimum 55 minutes duration

Minimum Pass Mark in each Theory subject is 35% and in each Practical subject is 50% and in Aggregate is 40%

SCA shall comprise of Extension Lectures/ Personality Development/ Environmental issues /Quiz /Hobbies/ Field visits/ cultural activities/Library studies/Classes on MOOCS/SWAYAM/Idea Thinking and innovation Lab Practice etc ,Seminar and SCA shall be conducted in a section.

There shall be 1 Internal Assessment done for each of the Theory Subject.

Sessional Marks shall be total of the performance of individual different jobs/ experiments in a subject throughout the semester

STATE COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING, ODISHA									
TEACHING AND EVALUATION SCHEME FOR 6th Semester (Mechanical Engg.(Ind.Integrated.)) (wef 2020-21)									
Subject Number	Subject Code	Subject	Periods/week			Evaluation Scheme			
			L	T	P	Internal Assessment/ Sessional	End Sem Exams	Exams (Hours)	Total
		Theory							
Th.1		INDUSTRIAL ENGINEERING & MANAGEMENT	4		-	20	80	3	100
Th.2		AUTOMOBILE ENGINEERING AND HYBRID VEHICLES	4		-	20	80	3	100
Th.3		POWER STATION ENGINEERING	4		-	20	80	3	100
Th.4		ELECTIVE (any One)	4			20	80	3	100
Th.4(a)		COMPOSITE MATERIALS							
Th.4(b)		ADVANCE MANUFACTURING PROCESSES							
		Total	**16**			**80**	**320**	**-**	**400**
		Practical							
Pr.1		AUTOMOBILE ENGINEERING LAB	**-**	**-**	4	50	50	3	100
Pr.2		POWER STATION ENGINEERING LAB	**-**	**-**	4	25	50	3	75
Pr.3		PROJECT WORK PHASE -II		**-**	10	50	100	3	150
Pr.4		LIFE SKILL	**-**	**-**	2	25	-	-	25
		STUDENT CENTERED ACTIVITIES (SCA)			3				
		Total	***-***	***-***	***23***	***150***	***200***	***-***	***350***
		Grand Total	**16**	**-**	**23**	**230**	**520**	**-**	**750**
Abbreviations: L-Lecturer, T-Tutorial, P-Practical. Each class is of minimum 55 minutes duration									
Minimum Pass Mark in each Theory subject is 35% and in each Practical subject is 50% and in Aggregate is 40%									
SCA shall comprise of Extension Lectures/ Personality Development/ Environmental issues /Quiz /Hobbies/ Field visits/ cultural activities/Library studies/Classes on MOOCS/SWAYAM /Idea Tinkering and Innovation Lab Practice etc. ,Seminar and SCA shall be conducted in a section.									
There shall be 1 Internal Assessment done for each of the Theory Subject. Sessional Marks shall be total of the performance of individual different jobs/ experiments in a subject throughout the semester									

STATE COUNCIL FOR TECHNICAL EDUCATION AND VOCATIONAL TRAINING, ODISHA									
TEACHING AND EVALUATION SCHEME FOR 6TH Semester (Metallurgy)(wef 2019-20)									
Subject Number	Subject Code	Subject	Periods/week			Evaluation Scheme			
			L	T	P	Internal Assessment/ Sessional:	End Sem Exams	Exams (Hours)	Total
		Theory							
Th.1		Foundry Technology	5		-	20	80	3	100
Th.2		Mechanical Metallurgy	4		-	20	80	3	100
Th.3		Industrial Metallurgy	5		-	20	80	3	100
Th.4		Elective: 1.CorrosionEngg. 2.Metallurgical Thermodynamics	4			20	80	3	100
		Total	18			80	320	-	400
		Practical							
Pr.1		Foundry Lab..	-	-	6	50	50		100
Pr.2		Non Destructive Testing & Pyrometry Lab.	-	-	3	25	50		75
Pr.3		Project Phase II		-	7	50	100		150
Pr.4		Life skills			2	25	-	-	25
		Student Centred Activities(SCA)			3				
		Total	*18*	*-*	*21*	*150*	*200*	*-*	*350*
		Grand Total			**39**	**230**	**520**	**-**	**750**
Abbreviations: L-Lecturer, T-Tutorial, P-Practical. Each class is of minimum 55 minutes duration									
Minimum Pass Mark in each Theory subject is 35% and in each Practical subject is 50% and in Aggregate is 40%									
SCA shall comprise of Extension Lectures/ Personality Development/ Environmental issues /Quiz /Hobbies/ Field visits/ cultural activities/Library studies/Classes on MOOCS/SWAYAM/Idea Tinkering and Innovation Lab Practice etc., Seminar and SCA shall be conducted in a section.									
There shall be 1 Internal Assessment done for each of the Theory Subject. Sessional: Marks shall be total of the performance of individual different jobs/ experiments in a subject throughout the semester									