Chemical Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	CH1201	Professional Core-1: Fuels and Combustion	3-0-0	3
3	CH1202	Professional Core-2: Fluid Mechanics	3-0-0	3
4	CH1203	Professional Core-3: Chemical Process Technology	3-0-0	3
5	CS1205	Advanced Competency Course-1: Programming in Python (PC-4)	3-0-0	2
6	HS1202	Organizational Behaviour	3-0-0	2
Subject (Sessional)				
7	CH1281	Fluid Mechanics Laboratory	0-0-3	1.5
8	CH1282	Fuel Technology–I Laboratory	0-0-3	1.5
9	CH1283	Process Technology Laboratory	0-0-3	1.5
10	CS1285	Machine Learning Using Python Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1202	Professional Core-5: Numerical Methods in Engineering	3-0-0	3
2	CH1204	Professional Core-6 : Mechanical Operations	3-0-0	3
3	CH1205	Professional Core-7 : Chemical Engineering Thermodynamics	3-0-0	3
4	CH1206	Professional Core-8 : Chemical Process Calculation	3-0-0	3
5	CS1209	Advanced Competency Course-2: Artificial Intelligence and Machine Learning (PC-9)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	CH1284	Fuel Technology - II Laboratory	0-0-3	1.5
8	CH1285	Chemical Engineering Thermodynamics Laboratory	0-0-3	1.5
9	CH1286	Mechanical Operation Laboratory	0-0-3	1.5
10	CH1287	Environmental Engineering Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Civil Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	CE1201	Professional Core-1: Mechanics of Material	3-0-0	3
3	CE1202	Professional Core-2: Geotechnical Engineering-I	3-0-0	3
4	CE1203	Professional Core-3: Fluid Mechanics	3-0-0	3
5	CS1205	Advanced Competency Course-1: Programming in Python (PC-4)	3-0-0	2
6	HS1202	Organizational Behaviour	3-0-0	2
Subject (Sessional)				
7	CE1281	Concrete Laboratory	0-0-3	1.5
8	CE1282	Geotechnical Engineering Laboratory	0-0-3	1.5
9	CE1283	Fluid Mechanics Laboratory	0-0-3	1.5
10	CS1285	Machine Learning Using Python Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	CE1204	Professional Core-5: Surveying and Geomatics	3-0-0	3
2	CE1205	Professional Core-6: Structural Analysis	3-0-0	3
3	CE1206	Professional Core-7: Geotechnical Engineering-II	3-0-0	3
4	CE1207	Professional Core-8: Transportation Engineering-I	3-0-0	3
5	CS1209	Advanced Competency Course-2: Artificial Intelligence and Machine Learning (PC-9)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	CE1284	Survey Practice	0-0-3	1.5
8	CE1285	Structural Engineering Laboratory	0-0-3	1.5
9	CE1286	Building Drawing	0-0-3	1.5
10	CE1287	Transportation Engineering Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Computer Science and Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	CS1201	Professional Core-1: Digital Logic Design	3-0-0	3
3	CS1202	Professional Core-2: Data Structures	3-0-0	3
4	CS1203	Professional Core-3: Database Engineering	3-0-0	3
5	CS1205	Advanced Competency Course-1: Object Oriented Programming (PC-4)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	CS1281	Digital Logic Design Laboratory	0-0-3	1.5
8	CS1282	Data Structures Laboratory	0-0-3	1.5
9	CS1283	Database Engineering Laboratory	0-0-3	1.5
10	CS1284	Object Oriented Programming Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1204	Professional Core-5: Discrete Mathematics	3-0-0	3
2	CS1206	Professional Core-6: Computer Organization & Architecture	3-0-0	3
3	CS1207	Professional Core-7: Design and Analysis of Algorithms	3-0-0	3
4	CS1208	Professional Core-8: Computer Networks	3-0-0	3
5	CS1205	Advanced Competency Course-2: Programming in Python (PC-9)	3-0-0	2
6	HS1202	Organizational Behavior	3-0-0	2
Subject (Sessional)				
7	CS1286	Computer Organization and Architecture Laboratory	0-0-3	1.5
8	CS1287	Design and Analysis of Algorithms Laboratory	0-0-3	1.5
9	CS1288	Computer Networks Laboratory	0-0-3	1.5
10	CS1289	Programming in Python Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Electrical Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	EE1201	Professional Core-1: Electrical Machines – I	3-0-0	3
3	EE1202	Professional Core-2: Network Theory	3-0-0	3
4	EC1203	Professional Core-3: Analog and Digital Electronic Circuits	3-0-0	3
5	EE1203	Advanced Competency Course-1: Optimization and Soft Computing (PC-4)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	EE1281	Electrical Machines Laboratory – I	0-0-3	1.5
8	EE1282	Network Laboratory	0-0-3	1.5
9	EC1283	Analog and Digital Electronic Circuits Laboratory	0-0-3	1.5
10	EE1283	Optimization and Soft Computing Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	EE1204	Professional Core-5 : Measurement and Instrumentation	3-0-0	3
2	EE1205	Professional Core-6 : Electrical Machines-II	3-0-0	3
3	EE1206	Professional Core-7 : Power Electronics	3-0-0	3
4	EE1207	Professional Core-8: Power Generation Transmission and Distribution	3-0-0	3
5	CS1204	Advanced Competency Course-2 : Programming in Python (PC-9)	3-0-0	2
6	HS1202	Organizational Behavior	3-0-0	2
Subject (Sessional)				
7	EE1284	Electrical Machines Laboratory-II	0-0-6	3
8	EE1285	Power Electronics Laboratory	0-0-3	1.5
9	CS1289	Programming in Python Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Electrical and Electronics Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	EE1201	Professional Core-1: Electrical Machines – I	3-0-0	3
3	EE1202	Professional Core-2: Network Theory	3-0-0	3
4	EC1201	Professional Core-3: Analog Electronic Circuits	3-0-0	3
5	EE1203	Advanced Competency Course-1: Optimization and Soft Computing (PC-4)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	EE1281	Electrical Machines Laboratory – I	0-0-3	1.5
8	EE1282	Network Laboratory	0-0-3	1.5
9	EC1281	Analog Electronic Circuits Laboratory	0-0-3	1.5
10	EE1283	Optimization and Soft Computing Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	EC1204	Professional Core-5: Digital System Design	3-0-0	3
2	EE1204	Professional Core-6: Measurement and Instrumentation	3-0-0	3
3	EE1205	Professional Core-7: Electrical Machines – II	3-0-0	3
4	EE1208	Professional Core-8: Signals and Systems	3-0-0	3
5	CS1205	Advanced Competency Course-2 : Programming in Python (PC-9)	3-0-0	2
6	HS1202	Organizational Behavior	3-0-0	2
Subject (Sessional)				
7	EE1286	Measurement and Instrumentation Laboratory	0-0-3	1.5
8	EC1284	Digital System Design Laboratory	0-0-3	1.5
9	EE1284	Electrical Machines Laboratory – II	0-0-3	1.5
10	CS1289	Programming in Python Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Electronics and Telecommunication Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	EC1201	Professional Core-1 : Analog Electronic Circuits	3-0-0	3
3	EC1202	Professional Core-2 : Basic Communication Engineering	3-0-0	3
4	EE1202	Professional Core-3 : Network Theory	3-0-0	3
5	EE1203	Advanced Competency Course-1: Optimization and Soft Computing (PC-4)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	EC1281	Analog Electronic Circuits Laboratory	0-0-3	1.5
8	EC1282	Basic Communication Engineering Laboratory	0-0-3	1.5
9	EE1282	Network Laboratory	0-0-3	1.5
10	EE1283	Optimization & Soft Computing Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	EC1204	Professional Core-5 : Digital System Design	3-0-0	3
2	EC1205	Professional Core-6 : Advanced Communication Engineering	3-0-0	3
3	EC1206	Professional Core-7 : Electromagnetics	3-0-0	3
4	EC1207	Professional Core-8: Electronics Instrumentation	3-0-0	3
5	CS1205	Advanced Competency Course-2: Programming in Python(PC-9)	3-0-0	2
6	HS1202	Organizational Behavior	3-0-0	2
Subject (Sessional)				
7	EC1284	Digital System Design Laboratory	0-0-3	1.5
8	EC1285	Advanced Communication Engineering Laboratory	0-0-3	1.5
9	EC1286	Electronics Instrumentation Laboratory	0-0-3	1.5
10	CS1289	Programming in Python Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Mechanical Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	ME1201	Professional Core-1: Mechanics of Deformable Solids (MOS)	3-0-0	3
3	ME1202	Professional Core-2: Basic Thermodynamics (BT)	3-0-0	3
4	ME1203	Professional Core-3 : Engineering Materials and Metallurgy	3-0-0	3
5	CS1205	Advanced Competency Course-1: Programming in Python (PC-4)	3-0-0	2
6	HS1202	Organizational Behaviour	3-0-0	2
Subject (Sessional)				
7	ME1281	Thermal Engineering, Material Testing and Foundry Laboratory	0-0-3	1.5
8	ME1282	Machine Drawing	0-0-3	1.5
9	ME1283	Workshop Practice-II	0-0-3	1.5
10	CS1285	Machine Learning Using Python Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1203	Professional Core-5 : Numerical Methods in Engineering	3-0-0	3
2	ME1204	Professional Core-6 : Fluid Mechanics	3-0-0	3
3	ME1205	Professional Core-7 : Machine Element & System Design	3-0-0	3
4	ME1206	Professional Core-8 : Kinematics and Dynamics of Machines (MD-I)	3-0-0	3
5	CS1209	Advanced Competency Course-2: Artificial Intelligence and Machine Learning (PC-9)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	ME1284	Dynamics and Metrology Laboratory	0-0-3	1.5
8	ME1285	Machine Design Laboratory – I	0-0-3	1.5
9	ME1286	Workshop Practice– III	0-0-3	1.5
10	ME1287	Fluid Mechanics Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Metallurgical & Materials Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	MT1201	Professional Core-1: Metallurgical Thermodynamics & Kinetics	3-0-0	3
3	MT1202	Professional Core-2: Introduction to Physical Metallurgy	3-0-0	3
4	MT1203	Professional Core-3: Transport Phenomena	3-0-0	3
5	CS1205	Advanced Competency Course-1: Programming in Python (PC-4)	3-0-0	2
6	HS1202	Organizational Behaviour	3-0-0	2
Subject (Sessional)				
7	MT1281	Metallurgical Thermodynamics & Kinetics Laboratory	0-0-3	1.5
8	MT1282	Introduction to Physical Metallurgy Laboratory	0-0-3	1.5
9	MT1283	Transport Phenomena Laboratory	0-0-3	1.5
10	CS1285	Machine Learning Using Python Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MT1204	Professional Core-5: Phase Transformation	3-0-0	3
2	MT1205	Professional Core-6: Mineral Processing	3-0-0	3
3	MT1206	Professional Core-7: Unit Process and Principle of Extraction	3-0-0	3
4	MT1207	Professional Core-8: Deformation Behavior of Materials	3-0-0	3
5	CS1209	Advanced Competency Course- 2: Artificial Intelligence and Machine Learning (PC-9)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	MT1284	Mineral Processing Laboratory	0-0-3	1.5
8	MT1285	Process Metallurgy Laboratory	0-0-3	1.5
9	MT1286	Phase Transformation Laboratory	0-0-3	1.5
10	MT1287	Fuel Testing Laboratory	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**

Production Engineering

Second Year (Third Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	MA1201	Mathematics–III	3-0-0	3
2	PE1201	Professional Core-1: Thermal and Fluids Engineering	3-0-0	3
3	PE1202	Professional Core-2: Materials Engineering & Metallurgy	3-0-0	3
4	PE1203	Professional Core-3: Mechanics of Materials	3-0-0	3
5	CS1205	Advanced Competency Course-1: Programming in Python (PC-4)	3-0-0	2
6	HS1202	Organizational Behaviour	3-0-0	2
Subject (Sessional)				
7	PE1281	Thermal and Fluid Engineering Laboratory	0-0-3	1.5
8	PE1282	Material Testing Laboratory	0-0-3	1.5
9	PE1283	Computer Aided Machine Drawing	0-0-3	1.5
10	CS1285	Machine Learning Using Python Laboratory	0-0-3	1.5
		Total	**18-0-12**	**22**

Second Year (Fourth Semester)				
Sl. No.	**Course Code**	**Subject (Theory)**	**Contact Hrs. L-T-P**	**Credit**
1	PE1204	Professional Core-5: Theory of Metal Cutting	3-0-0	3
2	PE1205	Professional Core-6: Theory of Machine	3-0-0	3
3	PE1206	Professional Core-7: Inspection & Metrology	3-0-0	3
4	PE1207	Professional Core-8: Manufacturing Technology-I	3-0-0	3
5	CS1209	Advanced Competency Course-2: Artificial Intelligence and Machine Learning (PC-9)	3-0-0	2
6	HS1201	Engineering Economics	3-0-0	2
Subject (Sessional)				
7	PE1284	Metal Cutting Laboratory	0-0-3	1.5
8	PE1285	Machine Dynamics Laboratory	0-0-3	1.5
9	PE1286	Metrology Laboratory	0-0-3	1.5
10	PE1287	Production Practice Laboratory-I (casing, welding etc.)	0-0-3	1.5
	Summer Internship and Research Experience (SIRE- I) *			
		Total	**18-0-12**	**22**