#### DEPARTMENT-WISE LIST OF ESOs REQUIRED FOR COMPLETION OF THE ACADEMIC PROGRAM

	DEPARTMENT-WISE LIST OF ESOs REQUIRED FOR COMPLETION OF THE ACADEMIC PROGRAM												
			A	PPLIED	GEOL	OGY (GL)							
		(Prescrib	ed for the students of its own Department)	ı		(Offered by the Department and Guided for other Department's students)							
Sl. No	No. of ESO	Course Code	Course Name	Status	Sem.	Course Code	Course Name	Sem.	Guided for the Department				
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>								
2.	ESO-2	MNE201	Introduction to Mining	Guided	3 <sup>rd</sup>	GLE201	Geology for Engineering and Science	Monsoon	GP, MN, PE				
3.	ESO-3		Student's Choice	Open	4 <sup>th</sup>	GLE202	Resource Geology	Winter					
4.	ESO-4	GPE202	<b>Geophysical Prospecting</b>	Guided	5 <sup>th</sup>								
	APPLIED GEOPHYSICS (GP)												
		(Prescrib	ed for the students of its own Department)	1		(Offered	by the Department and Guided for oth	er Departme	nt's students)				
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the				
No	ESO	Code				Code			Department				
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>	GPE202	Geophysical Prospecting	Monsoon	PE				
2.	ESO-2	GLE201	Geology for Engineering and Science	Guided	3 <sup>rd</sup>								
3.	ESO-3		Student's Choice	Open	4 <sup>th</sup>	GPE201*	Earth and Planetary System	Winter					
4.	ESO-4	GPE202	Geophysical Prospecting	Guided	5 <sup>th</sup>	GPE202*	Geophysical Prospecting	Monsoon	GL, GP				
			СНЕ	MICAL I	ENGIN	EERING (	CH)						
		(Prescrib	ed for the students of its own Department)			(Offered	by the Department and Guided for oth	er Departme	nt's students)				
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the				
No	ESO	Code			,	Code			Department				
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>								
2.	ESO-2	CHE201	<b>Engineering Thermodynamics</b>	Guided	3 <sup>rd</sup>	CHE201*	Engineering Thermodynamics	Monsoon	MM				
3.	ESO-3	CHE202	Transport Phenomena	Guided	4 <sup>th</sup>	CHE202*	Transport Phenomena	Winter	СН				
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>								
			C	IVIL EN	GINEE	RING (CE)							
		(Prescrib	ed for the students of its own Department)			(Offered	by the Department and Guided for oth	er Departme	nt's students)				
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the				
No	ESO	Code				Code			Department				

3<sup>rd</sup>

3<sup>rd</sup>

4<sup>th</sup>

CEE201\*

CEE202\*

Solid Mechanics

Fluid Mechanics and Machines

ME

CE, ES

Monsoon

Winter

Open

Guided

Guided

Open

Student's Choice

**Solid Mechanics** 

Student's Choice

Fluid Mechanics and Machines

ESO-1 ESO-2

ESO-3

ESO-4

**CEE201** 

CEE202

	COMPUTER SCIENCE & ENGINEERING (CS)											
	(Prescribed for the students of its own Department)						l by the Department and Guided for oth	er Departme	nt's students)			
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the			
No	ESO	Code				Code			Department			
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>	CSE201	Data Structures and Algorithms	Monsoon	EE, MC			
2.	ESO-2	MCC505	Probability & Statistics	Guided	3 <sup>rd</sup>							
3.	ESO-3	CSE202	Object Oriented Programming	Guided	4 <sup>th</sup>	CSE202*	Object Oriented Programming	Winter	CS			
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>							
				OFFICA I	ENIGE	NIEED IN 10						

#### **ELECTRICAL ENGINEERING (EE)**

		(Prescrib	oed for the students of its own Department	(Offered by the Department and Guided for other Department's students)					
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the
No	ESO	Code				Code			Department
1.	ESO-1	CSE201	<b>Data Structures and Algorithms</b>	Guided	3 <sup>rd</sup>	EEE202	Utilization of Electrical Energy	Monsoon	
2.	ESO-2	MCC505	<b>Probability &amp; Statistics</b>	Guided	3 <sup>rd</sup>				
3.	ESO-3	:	Student's Choice	Open	4 <sup>th</sup>	EEE201	Applied Electrical Engineering	Winter	
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>				

### **ELECTRONICS ENGINEERING (EC)**

		(Prescrib	oed for the students of its own Department	(Offered by the Department and Guided for other Department's students)					
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the
No	ESO	Code				Code			Department
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>	ECE301	Analog Interface Electronics	Monsoon	
2.	ESO-2	MCC505	Probability & Statistics	Guided	3 <sup>rd</sup>				
3.	ESO-3	<b>ECE201</b>	Measurements and Instrumentations	Guided	4 <sup>th</sup>	ECE201*	Measurements and Instrumentations	Winter	EC
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>				

### **ENVIRONMENTAL SCIENCE & ENGINEERING (ES)**

		(Prescrib	ed for the students of its own Department	(Offered by the Department and Guided for other Department's students)					
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the
No	ESO	Code				Code			Department
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>	ESE201	Pollution Control and Management	Monsoon	
2.	ESO-2	MCC505	Probability & Statistics	Guided	3 <sup>rd</sup>				
3.	ESO-3	CEE202	Fluid Mechanics and Machines	Guided	4 <sup>th</sup>	ESE202*	Atmospheric Science and Climate	Winter	
							Change		
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>				

			FUEL, MINERALS A	ND MET	'ALLU	RGICAL EN	GINEERING (FM)					
		(Prescrib	ed for the students of its own Department)	)		(Offered b	y the Department and Guided for other	er Departme	nt's students)			
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the			
No	ESO	Code				Code			Department			
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>							
2.	ESO-2	<b>FME221</b>	Particle Technology	Guided	3 <sup>rd</sup>	FME221*	Particle Technology	Monsoon				
3.	ESO-3	<b>FME222</b>	Introduction to Fuel Technology	Guided	4 <sup>th</sup>	FME222*	Introduction to Fuel Technology	Winter	FM			
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>							
	MATHEMATICS AND COMPUTING (MC)											
		(Prescrib	ed for the students of its own Department	)		(Offered b	y the Department and Guided for other	er Departme	ent's students)			
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the			
No	ESO	Code				Code			Department			
1.	ESO-1	CSE201	Data Structures and Algorithms	Guided	3 <sup>rd</sup>							
2.	ESO-2	MCC505	Probability & Statistics	Guided	3 <sup>rd</sup>	MCC505*	Probability & Statistics	Monsoon	CS, ES, EE,			
									EC			
3.	ESO-3		Student's Choice	Open	4 <sup>th</sup>	MCE301*	Operation Research	Winter				
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>							
			MECH	HANICAI	ENGI	NEERING (	ME)					
EOD	D TECH											
FOR	B.TECH		al Engineering)			(Off 1 l.	41 - D 4 1 C 1 - 1 f 41	D4	42414\			
Sl.	No. of	Course	ed for the students of its own Department  Course Name		Sem.	Course	y the Department and Guided for othe Course Name		Guided for the			
No	ESO	Code	Course Name	Status	Sem.	Course	Course Name	Sem.	Department			
1.	ESO-1	MEE201	Engineering Materials	Guided	3 <sup>rd</sup>	MEE201*	Engineering Materials	Monsoon	Вериннен			
2.	ESO-1	CEE201	Solid Mechanics	Guided	3 <sup>rd</sup>	WIEE201	Engineering Waterials	MOIISOOII				
3.	ESO-3		Student's Choice	Open	4 <sup>th</sup>	MEE202*	Computer Aided Engineering Design	Winter				
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>	WILL202	Computer Aided Engineering Design	vv inter				
			achinery Engineering)	Open	3							
FOR	D.TECH	` 0	ed for the students of its own Department)	1		(Offered b	y the Department and Guided for other	n Danartma	nt'e etudente)			
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the			
No	ESO	Code	Course Maine	status	Jeiii.	Code	Course Manie	Jeiii.	Department			
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>	MME202	Mining Machinery	Monsoon	MN			
2.	ESO-2	CHE201	Engineering Thermodynamics	Guided	3 <sup>rd</sup>	111111111111111111111111111111111111111	Triming triucininery	1101150011	1411 4			
3.	ESO-3	MME201	IC Engines	Guided	4 <sup>th</sup>	MME201*	IC Engines	Winter	MM			
	E50-3	14114117701	10 Englito	Guided	<b>→</b>	WIIVIE/201	10 Engines	** IIICI	141141			

5<sup>th</sup>

Open

ESO-4

Student's Choice

	MINING ENGINEERING (MN)											
	(Prescribed for the students of its own Department)						(Offered by the Department and Guided for other Department's students)					
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the			
No	ESO	Code				Code			Department			
1.	ESO-1	<b>MME202</b>	Mining Machinery	Guided	3 <sup>rd</sup>							
2.	ESO-2	GLE201	Geology for Engineering and Science	Guided	3 <sup>rd</sup>	MNE201	Introduction to Mining	Monsoon	GL			
3.	ESO-3		Student's Choice	Open	4 <sup>th</sup>	MNE202*	Introductory Rock Mechanics	Winter				
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>							

## PETROLEUM ENGINEERING (PE)

		(Prescrib	ed for the students of its own Department		(Offered by the Department and Guided for other Department's students)				
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the
No	ESO	Code				Code			Department
1.	ESO-1	GPE202	<b>Geophysical Prospecting</b>	Guided	3 <sup>rd</sup>	PEE201	Introduction to Petroleum Engineering	Monsoon	
2.	ESO-2	GLE201	Geology for Engineering and Science	Guided	3 <sup>rd</sup>				
3.	ESO-3		Student's Choice	Open	4 <sup>th</sup>	PEE202	Petroleum Environmental	Winter	
							Management		
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>				

# PHYSICS (PH)

		(Prescrib	oed for the students of its own Department	(Offered by the Department and Guided for other Department's students)					
Sl.	No. of	Course	Course Name	Status	Sem.	Course	Course Name	Sem.	Guided for the
No	ESO	Code				Code			Department
1.	ESO-1		Student's Choice	Open	3 <sup>rd</sup>				
2.	ESO-2	PHE200	Biomedical Engineering	Guided	3 <sup>rd</sup>	PHE200*	Biomedical Engineering	Monsoon	
3.	ESO-3	PHE202	Material Science and Engineering	Guided	4 <sup>th</sup>	PHE202*	Material Science and Engineering	Winter	PH
4.	ESO-4		Student's Choice	Open	5 <sup>th</sup>				

<sup>\* -</sup> Students of the offering department are eligible to opt the course under ESO.