

COURSE STRUCTURE

B.Tech. and B.Tech.-M.Tech. Dual Degree (Category-A & B) and Double Major (Petroleum Engineering)

| | | GROUP-I | | | | SEMESTER | | | | | | | | | | NINTH | TENTH | | |
|--|--|--------------------|------------------|-------------------|-----------|-------------------|---------|-------------------|---------|-------------------|---------|------------------|---------|------------------|----------------|------------------|---------|--------------------|--------------------|
| | | FIRST (IC) | | SECOND (IC) | | THIRD | | FOURTH | | FIFTH | SIXTH | | SEVENTH | | EIGHTH | | | | |
| C O U R S E | | MCI101 | 3-1-0-11 | MCI102 | 3-1-0-11 | PEC201 (DC1) | 3-0-0-9 | PEC206 (DC4) | 3-0-0-9 | PEC301 (DC8) | 3-0-0-9 | PEC306 (DC11) | 3-0-0-9 | DE1 | 3-0-0-9 | DE3 | 3-0-0-9 | DUAL DEGREE | DUAL DEGREE |
| | | PHI101 | 3-0-0-9 | CYI101 | 3-0-0-9 | PEC202 (DC2) | 3-0-0-9 | PEC207 (DC5) | 3-0-0-9 | PEC302 (DC9) | 3-0-0-9 | PEC307 (DC12) | 3-0-0-9 | DE2 | 3-0-0-9 | DE4 | 3-0-0-9 | | |
| | | PHI102 | 0-0-2-2 | CYI102 | 0-0-2-2 | PEC203 (DC3) | 3-0-0-9 | PEC208 (DC6) | 3-0-0-9 | PEC303 (DC10) | 3-0-0-9 | OE1 | 3-0-0-9 | OE3 | 3-0-0-9 | OE6 | 3-0-0-9 | | |
| | | E EI101 Modular | 3-0-0-9 (9/2) | MCI103 Modular | 2-2-0-5 | GLE201 (E/SO1) | 3-0-0-9 | GLC512 (DC7) | 3-0-0-9 | HSS | 3-0-0-9 | OE2 | 3-0-0-9 | OE4 | 3-0-0-9 | OE7HSS | 3-0-0-9 | | |
| | | E EI102 Modular | 0-0-3-3 (3/2) | CSI101 Modular | 2-1-0-4 | GPE202 (E/SO2) | 3-0-0-9 | E/SO3 Optional | 3-0-0-9 | E/SO4 Optional | 3-0-0-9 | MS | 3-0-0-9 | OE5 | 3-0-0-9 | PEC402 (UGP2) | 0-0-0-6 | | |
| | | E CI101 Modular | 3-0-0-9 (9/2) | CSI102 Modular | 0-0-2-2 | PEC204 (DP1) | 0-0-2-2 | PEC209 (DP3) | 0-0-2-2 | PEC304 (DP5) | 0-0-2-2 | PEC308 (DP7) | 0-0-2-2 | PEC402 (UGP1) | 0-0-0-6 | -- | -- | | |
| | | E CI102 Modular | 0-0-3-3 (3/2) | ESI101 | 1-0-0-3 | PEC205 (DP2) | 0-0-2-2 | PEC 210 (DP4) | 0-0-2-2 | PEC305 (DP6) | 0-0-2-2 | PEC308 (DP8) | 0-0-2-2 | PES401 (DC13) | 0-0-0-0 S/X | -- | -- | | |
| | | E CEI101 | 1-0-3-6 | GLI101 | 1-0-0-3 | GLE202 (DP3) | 0-0-2-2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | E MEI101 | 3-1-0-11 | MEI102 | 2-0-3-9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | E MSI101 | 2-0-0-2 | HSI101 | 1-0-2-5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | E CCS101 | 0-0-0-S/X | CCS102 | 0-0-0-S/X | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | 57 | | 52 | | 49 | | 53 | | 52 | | 49 | | 51 | | 42 | | | |

| DUAL DEGREE (CATEGORY-A) | | | | | | | | | | DUAL DEGREE (CATEGORY-B) | | | | | | | | | | | | | | | | |
|--------------------------|---------|--|---------|----------------|---------|--|---------|-----------------------------------|-----------------------------|--------------------------|----------------|---------|----------------|---------|----------------|---------|--|---------|-----------------------------------|----------------|-----------------------------|--------------------------------|---------|-------|---------|--------------------------------|
| FIFTH | | SIXTH | | SEVENTH | | EIGHTH | | NINTH | | TENTH | | FIFTH | | SIXTH | | SEVENTH | | EIGHTH | | NINTH | | TENTH | | | | |
| PEC504 DCPG | 3-0-0-9 | DEPG1 | 3-0-0-9 | PEC505 DCPG | 3-0-0-9 | OEPG1 | 3-0-0-9 | PEC597 36 Credits Thesis | DEPG2 | 3-0-0-9 | PEC203 DCUG | 3-0-0-9 | PEC206 DCUG | 3-0-0-9 | PEC201 DCUG | 3-0-0-9 | OEPG1 | 3-0-0-9 | PEC597 36 Credits Thesis | DEPG2 | 3-0-0-9 | PEC598 18 Credits Thesis | 3-0-0-9 | | | |
| | | Any one from the basket given in the next page | | | | Any one from the basket given in the next page | | | OEPG2 | 3-0-0-9 | | | | | | | <ul style="list-style-type: none"> • In place of OE-1 will take (PEC203), • In place of OE-2 will take (PEC206), • In place of OE-3 will take (PEC201), • In place of OE-4 will take (PEC202), | | | PEC202 DCUG | 0-0-2-2 | | | DEPG1 | 3-0-0-9 | One course from each basket |
| | | | | | | | | | One course from each basket | | | | | | | | All four DCUG courses are prescribed from the Course Structure of the Undergraduate Program where the student will do the M.Tech. Program under Dual Degree (Category-B) where the student will do the | | | PEC505 DCPG | 3-0-0-9 | | | OEPG2 | 3-0-0-9 | One course from each basket |
| | | | | | | | | | | | | | | | | | | | | 3-0-0-9 | One course from each basket | | | | | PEC598 18 Credits Thesis |

| DOUBLE MAJOR (SECOND MAJOR IN OTHER DEPARTMENT) | | | | | | | | | | | | | | | Department Practical, if any | | | |
|---|----------------|---------|--------------|----------|--------------|---------|--------------|---------|--------------|---------|-----|---------|-----|---------|------------------------------|--------|--|--|
| MONSOON SEMESTER | PEE201* ESO | 3-0-0-9 | PEC201 DC | 3-0-0-9 | PEC202 DC | 3-0-0-9 | PEC203 DC | 3-0-0-9 | PEC303 DC | 3-0-0-9 | DE1 | 3-0-0-9 | DE2 | 3-0-0-9 | PEC204 | PEC205 | | |
| WINTER SEMESTER | PEE202* ESO | 3-0-0-9 | PEC206 DC | 3-1-0-11 | PEC207 DC | 3-0-0-9 | PEC208 DC | 3-0-0-9 | PEC307 DC | 3-0-0-9 | DE3 | 3-0-0-9 | DE4 | 3-0-0-9 | PEC209 | | | |

NOTE: (1) *Two ESOs guided/optional prescribed in the course structure of Double Major program and the same is taken by the students for completion of the course work of the Double Major in the slot of their optional ESO, both the ESOs will fulfil the ESO credit requirement of the Double Major program as well as B.Tech. degree. **(2)** In lieu of Four DCUG (DCPG if the second department does not have any UG program) courses of the Dual Degree (Category-B & C) and Double Major Program will be considered as OE-1, OE-2, OE-3 & OE-4 of the B.Tech. program of Parent Department and the credits of these courses will be counted for fulfilment of the OE credit requirements.

LIST OF COURSES FOR COMPLETION OF MINOR

| MONSOON SEMESTER | | WINTER SEMESTER | |
|------------------|---------------------------------------|-----------------|---|
| PEE201 (ESO) | Introduction to Petroleum Engineering | PEC206 | Elements of Petroleum Production Engineering. |
| PEC302 | Petroleum Production Operations | | |

TITLE OF THE MINOR: **Minor in Petroleum Production Operations**

DETAILS OF THE MINIMUM CREDIT REQUIREMENTS FOR COMPLETION OF B.TECH. PROGRAM AND LIST OF ESO, DE AND OE COURSES

Minimum Credit requirements for Graduation:

- Institute Core (IC) : 109 Credits
- Department Compulsory : 108
- Department Elective : 36
- Department Practical : 18
- Engineering/Science Option : 36
- Open Elective : 63
- HSS+MS ; 18 (9+9)
- UGP-1 & UGP-2 12 (6+6)

Total : **402**

| LIST OF E/SO | |
|--------------|---------|
| Guided | Offered |
| GLE201 | *PEE201 |
| GPE202 | *PEE202 |

* Not mandatory for PE Students

| LIST OF DEPARTMENTAL ELECTIVES (DE) | |
|-------------------------------------|--------|
| PED401 | PED405 |
| PED402 | PED405 |
| PED403 | PED407 |
| PED404 | |

| LIST OF OPEN ELECTIVES (OE) | |
|-----------------------------|--------|
| PEO502 | PEO402 |
| PEO301 | PEO403 |
| PEO505 | PEO404 |
| PEO302 | PEO405 |
| PEO303 | PEO506 |
| PEO401 | |

Minimum Credit requirements for completion of Additional Academic Program

| Dual Degree (Category-A) | | Dual Degree (Category-B) | | Double Major | |
|---|---|--|--|---|--|
| <ul style="list-style-type: none"> • Departmental Core (DCPG) • DEPG/OEPH • Thesis | 18 Credits 36 Credits 54 Credits Total: 108 Credits | <ul style="list-style-type: none"> • Departmental Core (4 DCUG) of Second Department (Extra credits to be counted in B.Tech part as OE credits) • 2 DCPG & 4 DEPG/OEPG or 1 DCPG & 5 DEPG/OEPG • Thesis | 36 Credits (Not to be counted in M.Tech. Part) 54 Credits 54 Credits Total: 108 Credits | <ul style="list-style-type: none"> • Two ESO courses • Departmental Core (8 DCUG) of Second Major Department • 4 DE of Second Department | 18 Credits (Not to be counted in the Second Major) 72 Credits 54 Credits Total: 108 Credits |