# Petroleum Engineering Program

## AY1: Freshman Year

### Semester 1 - 19

- Calculus 1 (3) - MAT11301
- Introduction to Oil and Gas Industry (2) - PET21201
- General Physics 1 (2) - PHY21201
- General Physics Lab 1 (1) - PHY21101LAB
- Foundations in Engineering 1 (+Lab) (2) - ELE31201
- General Chemistry 1 (3) - CHE11301
- General Chemistry Lab 1 (1) - CHE11101LAB
- Physical Education 1 (1*) (0) - PED11101
- English preparation (120 hrs.*) (0) - ENG41000
- Philosophy of Marxism and Leninism (3) - SOC01301
- Political economics of Marxism and Leninism (2) - SOC01202

### Semester 2 - 19

- Calculus 2 (3) - MAT11302
- Scientific socialism (2) - SOC02203
- General Physics 2 (2) - PHY21202
- General Physics Lab 2 (1) - PHY21102LAB
- Foundations in Engineering 2 (+ Lab) (3) - INC31301
- History of Vietnamese communist party (2) - SOC02205
- Military Education (165 hrs*) (0) - MIE01101
- Physical Education 2 (1*) (0) - PED11102
- English 1 (3) - ENG41301
- Ho Chi Minh's Ideology (2) - SOC01204
- Career Orientation Field Trip (1) - PET11105

## AY2: Sophomore Year

### Semester 3 - 22

- Calculus 3 (2) - MAT12203
- Theoretical mechanics (3) - MEC32303
- Thermodynamics (3) - MEC32301
- Physical Geology (3) – GEO12302
- Physical Education 3 (1*) (0) - PED12103
- Petroleum Drilling Systems (+Lab) (4) - PET12443
- English 2 (3) - ENG42302
- Professional Skills for Engineers (2) - SOC02206
- Measurement Engineering – Elective 1 (2) – MEC33206

### Semester 4 - 21

- Differential Equations (3) - MAT12305
- Reservoir Petrophysics (+Lab) (4) - PET12404
- Transport Processes in Petroleum Production Systems (3) - PET12306
- Electronics - Electricity (+Lab) (2) - ELE32202
- Strength of Materials (+Lab) (3) - MEC32304
- General Geophysics – Elective 1 (2) – GEO12235
- English 3 (3) - ENG42303
- Summer Internship 1 (1) - PET12107

## AY3: Junior Year

### Semester 5 - 24

- Petroleum Geology (3) - GEO13311
- Petroleum Engineering Numerical Methods (3) - PET13308
- Reservoir Fluids (3) - PET13309
- Petroleum Production Systems (+Lab) (4) - PET13411
- Geomechanics (3) - PET13310
- Drilling Engineering (3) - PET13312
- Drilling Fluids (+Lab) - Elective 2 (2) - PET13226
- English 4 (3) - ENG43304

### Semester 6 - 19

- Production Engineering (3) - PET14320
- Reservoir Engineering (+Lab) (4) - PET13414
- Well Testing (3) - PET13315
- Health Safety and Environment (2) - PSE13201
- Senior Project 1 (1) - PET13116
- Petroleum Economics (3) - ECO13301
- Geostatistic (2) - PET12242
- Summer Internship 2 (1) - PET13117

## AY4: Senior year

### Semester 7 - 20

- Reservoir Simulation (3) - PET14318
- Enhanced Oil Recovery (2) - PET14222
- Formation Evaluation (3) - PET13313
- Integrated Reservoir Modeling (3) - PET14319
- Senior Project 2 (1) - PET14123
- Integrated Field Development Project (3) - PET14321
- Energy and Sustainability - Elective 4 (3) - PET14333
- Field Decommissioning - Elective 5 (1) - PET14141
- Natural Gas Production and Processing Engineering - Elective 6 (1) – PET14139

### Semester 8 - 10

- Graduation internship (2) - PET14224
- Graduation thesis (8) - PET14825

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