

**Harold Vance Department of Petroleum Engineering (Texas A&M)  
Master of Engineering (M.Eng.) Degree Requirements**

***IFP (Petroleum Engineering)/Texas A&M Reservoir Geoscience Degree Program***

This is a joint degree program offered by the Institut Francais du Pétrole (IFP) and Texas A&M University. This program is rigid in its coursework components and will include a research thesis (and one additional semester) if a student elects to pursue a M.S. degree. Admission to this degree program requires that the student be admitted (independently) by both IFP and Texas A&M University. Please note that an application must be submitted to each institution, and note that admission decisions are made separately. Most importantly, admission to one institution does not guarantee admission to the other institution.

**COURSE REQUIREMENTS HOURS**

**Semester 1 (Fall): Texas A&M University ..... 12 min**

- TAMU-PETE 620 ..... Fluid Flow in Petroleum Reservoirs ..... (IFP Transfer)
- TAMU-PETE<sup>a,b</sup> ..... See PETE options list ..... (IFP Transfer)
- TAMU-PETE 612 ..... Unconventional Oil and Gas ..... (IFP Transfer)
- TAMU-GEOL 624 ..... Carbonate Reservoirs ..... (IFP Transfer)

**Session 2 (Spring): IFP (Paris) (January—April) ..... 12 min**

- IFP-DEG 601 ..... Well Testing and Interpretation ..... (TAMU transfer)
- IFP-EXP 601 ..... Well Logging ..... (TAMU transfer)
- IFP-DEG 602 ..... Production Mechanisms ..... (TAMU transfer)
- IFP-EXP 604 or EXP 606 ..... XXXXXXXXX

**Session 3 (Summer): IFP (Paris) (April—July) ..... 12 min**

- IFP-DEG 603 ..... Reservoir Simulation ..... (TAMU transfer)

Options

- IFP-EXP 605 ..... Reservoir Characterization Field Case
- IFP-EXP 602 ..... Clastic Reservoirs and Management of Heterogeneities
- IFP-DEG 604 ..... Well Design and Well Performances
- IFP-EXP 603 ..... Fractured Reservoirs
- IFP-DEG 606 ..... Advanced Reservoir Simulation

**Semester 4 (Fall): Texas A&M University ..... 12 min**

- TAMU-PETE<sup>d</sup> ..... Petroleum Economics/Production Evaluation
- TAMU-PETE<sup>b</sup> ..... See PETE options list
- TAMU-PETE<sup>b</sup> ..... See PETE options list
- TAMU-GEPL Elective<sup>b</sup> ..... See GEPL options list (can also select PETE Elective)

**Seminar**

PETE 681 (Seminar) ..... No Credit  
On-campus (College Station) students are required to take seminar each semester that it is offered.

**Total hours required for Master of Engineering degree (IFP-G option) ..... 36 min**

**Total hours required for Master of Science degree (IFP-G option) ..... 32 min**

(The M.S. in Petroleum Engineering requires an acceptable research thesis, where this work is supervised by an advisory committee. The M.S. option for this program will likely require at least one additional semester to complete the research thesis.)

- a. PETE 665 (Petroleum Reservoir Engineering) is required for students without a bachelor's degree in Petroleum Engineering.
- b. Optional courses selected with guidance from the TAMU/PETE Graduate Advisor.
- c. The course combination of Reservoir Simulation (DEG 603) and Reservoir Characterization Field Case (EXP 605) is required for students in the IFP/Texas A&M Reservoir Geoscience Degree Program.
- d. A course that includes Petroleum Economics/Property Evaluation is required.

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**NOTES**

1. The Memorandum of Agreement (MOA) between IFP and Texas A&M University permits a maximum of 12 hours of transfer courses from IFP, where these courses are specified in the IFP sequence given above. An official transcript from IFP is required prior to returning for the second fall semester, and this document must be sent directly from IFP to the International Admissions office at Texas A&M University.
2. The Memorandum of Agreement (MOA) between IFP and Texas A&M University requires that the Texas A&M degree be the first degree awarded.
3. All M.Eng. students in Petroleum Engineering at Texas A&M University are required to:
  - a. Prepare a summary report on a technical topic that has been approved by the student's advisory committee. This report is typically the topic of the student's final examination.
  - b. Successfully complete a final examination that usually consists of a technical presentation made to the student's advisory committee.
4. All M.S. students in Petroleum Engineering at Texas A&M University are required to:
  - a. Prepare an appropriate research thesis, where this thesis is supervised by the student's advisory committee.
  - b. Successfully complete a final examination/defense on the student's research thesis.
5. These degree requirements are a supplement to the *Texas A&M University Graduate Catalog*.

**FALL SEMESTER COURSE OPTIONS (Petroleum Engineering/Texas A&M University)**

- TAMU-PETE 602 ..... Well Stimulation
- TAMU-PETE 606 ..... EOR Methods—Thermal
- TAMU-PETE 609 ..... Enhanced Oil Recovery Processes
- TAMU-PETE 617 ..... Petroleum Reservoir Management
- TAMU-PETE 618 ..... Modern Petroleum Production
- TAMU-PETE 621 ..... Petroleum Development Strategy
- TAMU-PETE 622 ..... Exploration and Production Evaluation
- TAMU-PETE 623 ..... Waterflooding
- TAMU-PETE 630 ..... Geostatistics
- TAMU-PETE 631 ..... Petroleum Reservoir Description
- TAMU-PETE 632 ..... Data Integration for Petroleum Reservoirs
- TAMU-PETE 661 ..... Drilling Engineering
- TAMU-PETE 662 ..... Production Engineering
- TAMU-PETE 663 ..... Formation Evaluation and the Analysis of Reservoir Performance
- TAMU-PETE 664 ..... Petroleum Project Evaluation and Management
- TAMU-PETE 665 ..... Petroleum Reservoir Engineering
- TAMU-PETE 666 ..... Conservation Theory and Applications in Petroleum Engineering
- TAMU-PETE 685 ..... Problems (3 hrs maximum)

These are courses that are typically offered in the Fall semester. Students will be permitted to take other PETE courses (if available), as well as PETE 689 (Special Topics in...). All full-time students are also required to register for PETE 681 (Seminar—1 hour/week) each semester. These hours are not credited to the degree.

**FALL SEMESTER COURSE OPTIONS (Geology and Geophysics\*/Texas A&M University)**

- TAMU-GEOL 624..... Carbonate Reservoirs
- TAMU-GEOP 421 ..... Petroleum Seismology I (Undergraduate course)
- TAMU-GEOP 611 ..... Geomechanics
- TAMU-GEOL 628..... Basin Architecture

- \* Graduate courses offered by the Department of Geology and Geophysics vary considerably from year to year. Other courses may be available at the graduate and undergraduate levels. Two upper division undergraduate courses (3XX or 4XX) in Geology or Geophysics are permitted for graduate credit.