### REQUIREMENTS FOR THE BACHELOR OF SCIENCE/MASTER OF BUSINESS ADMINISTRATION MEWBOURNE COLLEGE OF EARTH AND ENERGY THE UNIVERSITY OF OKLAHOMA

| Academic Year                      | General Requirements                               | Program                    |
|------------------------------------|--|----------------------------|
|                                    | Minimum Total Credit Hours 168                     | Petroleum Engineering      |
| For Students Entering the Oklahoma | Minimum Retention/Graduation Grade Point Averages: | A765/E140 Q513             |
| State System for Higher Education  | Overall - Combined and OU 3.00                     | A705/1140 Q515             |
| Summer 2023 through Spring 2024    | Major - Combined and OU 3.00                       | Bachelor of Science/Master |
|                                    | Curriculum - Combined and OU 3.00                  | of Business Administration |

OU encourages students to complete at least 34 hours of applicable coursework each year to have the opportunity to graduate in 5 years.

#### Minimum Total Credit Hours: 168 Overall GPA - Combined and OU: 3.00 Major GPA - Combined and OU: 3.00 Curriculum GPA - Combined and OU: 3.00

Program Code: A765/F140 Q513

# **General Education and College Requirements**

Courses for fulfillment of General Education and college requirements must be from the approved General Education course list at http://www.ou.edu/content/gened/courses.html. **Courses graded P/NP will not apply** 

#### UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS) AND COLLEGE REQUIREMENTS

At least three hours of Upper-Division General Education coursework must be completed **outside the major**.

| Code | Title | Credit |
|------|-------|--------|
|      |       | Hours  |

| Core Area | I: S | vmbolic | and Oral | l Commur | nication |
|-----------|------|---------|----------|----------|----------|

| Core Area I. Symb   | one and Oral Communication   |     |
|---|--|-----|
| English Composition   | n (6 hours)  |     |
| ENGL 1113   | Principles of English Composition  | 3   |
| ENGL 1213   | Principles of English Composition  | 3   |
| or EXPO 1213  | Expository Writing   |     |
| Language (0-10 hou  | urs)   |     |
| (0-10 hours in the s<br>two years of the sam<br>two college courses | ame language) Students who have not completed<br>ne language in high school are required to take<br>in the same language |     |
| Beginning Course  |  | 0-5 |
| Beginning Course,   | continued  | 0-5 |
| Mathematics (minin  | mum 3 hours)   |     |
| MATH 1914   | Differential and Integral Calculus I $^1$  | 3-4 |
| or MATH 1823  | Calculus and Analytic Geometry I   |     |
| Core Area II: Natu  | ral Science (minimum 7 hours, 2 courses)   |     |
| CHEM 1315   | General Chemistry (Science with Lab) $^1$  | 5   |
| or CHEM 1335  | General Chemistry I: Signature Course  |     |
| PHYS 2514   | General Physics for Engineering and Science Majors <sup>1</sup>  | 4   |
| Core Area III: Soci   | al Science (6 hours)   |     |
| P SC 1113   | American Federal Government  | 3   |
| Choose one course   | from the General Education Social Science list   | 3   |
| Core Area IV: Arts  | and Humanities   |     |
| Artistic Forms (3 ho  | purs)  |     |
| Choose one course   | from the General Education Artistic Forms list.  | 3   |
| Western Culture (6  | hours)   |     |
|   |  |     |

| Total Credit Hour                       | S   | 39-50 |
|---|---|-------|
| Choose one course                       |   | 3     |
| Core Area V: First                      | Year Experience (3 hours)   |       |
| Choose one course                       | from the General Education World Culture list                         | 3     |
| World Culture (3 h                      | ours)   |       |
| Choose one course<br>(Excluding HIST 14 | from the General Education Western Culture list<br>483 and HIST 1493) | 3     |
| or HIST 1493                            | United States, 1865 to the Present                                    |       |
| HIST 1483                               | United States to 1865   | 3     |
|   |   |       |

<sup>1</sup>Mewbourne College of Earth and Energy Sciences requirements that also satisfy University General Education requirements.

# ADDITIONAL MEWBOURNE COLLEGE OF EARTH & ENERGY REQUIREMENT

| Code           | Title                                       | Credit<br>Hours |
|----------------|---|-----------------|
| PHYS 2524      | General Physics for Engineering and Science | 4               |
| Total Credit H | ours  | 4               |

# **Free Electives**

Electives to bring total applicable hours to 172 including 40 upper-division hours.

## **Undergraduate Major Requirements**

Bachelor of Science in Petroleum Engineering accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Petroleum and Similarly Named Engineering Programs Program Criteria.

#### A minimum grade of C is required for each course in the curriculum.

Students may enter the accelerated program based on the undergraduate degree pattern offered in the year they first enrolled in the Oklahoma State System of Higher Education or later. **Students must maintain a 3.0 GPA from the time of entering the accelerated program until graduation.** 

Students must take the GMAT and apply for the MBA program during the third year; minimum PE major GPA, OU GPA and combined GPA of 3.0 is required. Students should submit an application to the School of Petroleum Engineering for the accelerated program during the fall semester of the junior year. Students must also apply to the Price College of Business during the spring semester of the junior year to be admitted by that college to the MBA program.

| Code | Title | Credit |
|------|-------|--------|
|      |       | Hours  |

#### Petroleum Engineering Major Work

| Total Credit H | Iours  | 59 |
|----------------|--|----|
| P E 5553       | Integrated Reservoir Management <sup>1</sup> | 3  |
| P E 4711       | Petroleum Project Evaluation                 | 1  |
| P E 4532       | Reservoir Engineering II                     | 2  |
| P E 4521       | Reservoir Fluid Mechanics Laboratory         | 1  |
| P E 4463       | Data Analytics <sup>1</sup>                  | 3  |
| P E 4423       | Production Engineering II                    | 3  |
| P E 4331       | Drilling Engineering Laboratory              | 1  |
| P E 4323       | Drilling II                                  | 3  |
| P E 4033       | Oil, Gas and Environmental Law $^1$          | 3  |
| P E 3813       | Formation Evaluation with Well Logs          | 3  |
|                | Computation                                  |    |
| P E 3723       | Numerical Methods for Engineering            | 3  |
| P E 3712       | Petroleum Economics                          | 2  |
| P E 3513       | Reservoir Engineering I                      | 3  |
| P E 3413       | Production Engineering I                     | 3  |
| P E 3313       | Drilling I                                   | 3  |
| P E 3223       | Fluid Mechanics                              | 3  |
| P E 3221       | Rock Properties Laboratory                   | 1  |
| P E 3220       | Petroleum Engineering Internship             | 0  |
| P E 3213       | Reservoir Rock Properties                    | 3  |
| P E 3123       | Petroleum Reservoir Fluids                   | 3  |
| P E 3022       | Technical Communications                     | 2  |
| P E 2213       | Thermodynamics                               | 3  |
| P E 2153       | Mechanics of Materials                       | 3  |
| P E 2113       | Statics and Dynamics                         | 3  |
| P E 2011       | Introduction to Petroleum Engineering        | 1  |

<sup>1</sup>Shared Hours: 9 hours may be applied to both the B.S. in Petroleum Engineering and the MBA degrees.

# **Major Support Requirements**

| Code               | Title  | Credit<br>Hours |
|--------------------|--|-----------------|
| Math, Chemistry, O | Geology, and Geophysics Support Work                           |                 |
| MATH 2924          | Differential and Integral Calculus II $^1$                     | 4               |
| MATH 2934          | Differential and Integral Calculus III <sup>1</sup>            | 4               |
| MATH 3113          | Introduction to Ordinary Differential Equations                | 3               |
| CHEM 1415          | General Chemistry (Continued)                                  | 5               |
| or CHEM 1435       | General Chemistry II: Signature Course                         |                 |
| GEOL 1114          | Physical Geology for Science and Engineering<br>Majors         | 4               |
| GEOL 3003          | Structural Geology and Stratigraphy for<br>Petroleum Engineers | 3               |
| GPHY 3423          | Introductory Petroleum Geology and Geophysics                  | 3               |
| Total Credit Hours | 5  | 26              |

<sup>1</sup>The MATH 1823, MATH 2423, MATH 2433, and MATH 2443 sequence can be substituted for MATH 1914, MATH 2924, and MATH 2934.

### **Graduate Requirements**

Title

Code

A student who actively and satisfactorily participates in all Prelude activities will receive a grade of 'S' for B AD 5010. A student who does not satisfactorily participate in 75% of Prelude Week will be required to participate in a make-up session within the first two weeks of the semester. Failure to complete a make-up session will result in a grade of 'U' for B AD 5010, resulting in cancellation of the student's enrollment in the MBA program.

Credit

|                   |   | Hours |
|-------------------|---|-------|
| Graduate Business | s Coursework                                    |       |
| B AD 5010         | Foundations of MBA Success                      | 0     |
| B AD 5101         | MBA - Professional Development                  | 1     |
| B AD 5102         | Managerial Economics                            | 2     |
| B AD 5201         | MBA - Professional Development II               | 1     |
| B AD 5812         | Global Business Experience                      | 2     |
| B AD 5822         | Business Consulting Practicum                   | 2     |
| B AD 5832         | Applied Field Project                           | 2     |
| B AD 5902         | Strategic Management                            | 2     |
| ACCT 5202         | Financial Accounting                            | 2     |
| FIN 5102          | Financial Management                            | 2     |
| FIN 5112          | Investments                                     | 2     |
| FIN 5322          | Financial Derivatives <sup>1</sup>              | 2     |
| ENGB 5162         | Energy Corporate Finance <sup>1</sup>           | 2     |
| ENGB 5152         | Energy Accounting and Regulations <sup>1</sup>  | 2     |
| ENGB 5172         | Energy Assets and Commodities: Financial        | 2     |
|                   | Instruments, Pricing and Trading <sup>1</sup>   |       |
| ENGB 5182         | Enterprise Valuation, Mergers and Acquisitions, | 2     |
|                   | and Corporate Restructuring <sup>1</sup>        |       |
| L S 5802          | Business Ethics/Legal                           | 2     |
| MGT 5702          | Organizational Behavior                         | 2     |
| MIT 5602          | Management Information Systems                  | 2     |
| MKT 5402          | Marketing Management                            | 2     |

| Total Credit Hour          | s                             | 39 |
|----------------------------|-------------------------------|----|
| ENT 5102                   | Entrepreneurship & Innovation |    |
| B AD 5182                  | Quantitative Analysis II      |    |
| ACCT 5212                  | Managerial Accounting         |    |
| Choose one of the          | following:                    | 2  |
| Graduate Business Elective |                               |    |

**Total Credit Hours** 

<sup>1</sup>Counts toward fulfillment of the MBA Energy Specialization (10 hours: ENGB 5152, ENGB 5162, ENGB 5172, ENGB 5182; FIN 5322).

More information in the catalog: (http://ou-public.courseleaf.com/ mewbourne-earth-energy/mewbourne-petroleum-geological-engineering/ petroleum-engineering-bachelor-science-master-business-administration/).

### **Suggested Semester Plan of Study**

Bachelor of Science in Petroleum Engineering accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Petroleum and Similarly Named Engineering Programs Program Criteria.

# In order to progress in your curriculum, and as a specific graduation requirement, a grade of C or better is required in each course in the curriculum. Students must successfully complete prerequisite courses (with a minimum C grade) before proceeding to the next course.

Students must take the GMAT and apply for the MBA program during the third year; minimum PE major GPA, OU GPA and combined GPA of 3.0 is required. Students should submit an application to the School of Petroleum Engineering for the accelerated program during the fall semester of the junior year. Students must also apply to the Price College of Business during the spring semester of the junior year to be admitted by that college to the MBA program.

| Year        |                           | FIRST SEMESTER  | Hours |                           | SECOND SEMESTER  | Hours |
|-------------|---------------------------|---|-------|---------------------------|--|-------|
|             | ENGL 1113                 | Principles of English Composition ( Core I )  | 3     | ENGL 1213 or<br>EXPO 1213 | Principles of English Composition ( Core I ) or Expository Writing | 3     |
| z           | CHEM 1315                 | General Chemistry ( Core II )   | 5     | CHEM 1415                 | General Chemistry (Continued)                                      | 5     |
| MA          | MATH 1914                 | Differential and Integral Calculus I ( Core I ) $^{ m 1}$                                   | 4     | MATH 2924                 | Differential and Integral Calculus II <sup>1</sup>                 | 4     |
| RESH        | HIST 1483 or<br>HIST 1493 | United States to 1865 ( Core IV ) or United States, 1865 to the Present                     | 3     | PHYS 2514                 | General Physics for Engineering and Science Majors<br>( Core II )  | 4     |
| H           |                           | First Year Experience (Core V)  | 3     | P E 2011                  | Introduction to Petroleum Engineering                              | 1     |
|             |                           | CREDIT HOURS  | 18    |                           | CREDIT HOURS   | 17    |
|             | MATH 2934                 | Differential and Integral Calculus III <sup>1</sup>   | 4     | P E 2213                  | Thermodynamics   | 3     |
|             | PHYS 2524                 | General Physics for Engineering and Science Majors  | 4     | P E 3022                  | Technical Communications   | 2     |
|             | GEOL 1114                 | Physical Geology for Science and Engineering Majors   | 4     | P E 3213                  | Reservoir Rock Properties  | 3     |
|             | P E 2113                  | Statics and Dynamics  | 3     | P E 3221                  | Rock Properties Laboratory   | 1     |
| E           |                           | Approved Elective: Western Culture (Core IV) <sup>2</sup>                                   | 3     | MATH 3113                 | Introduction to Ordinary Differential Equations                    | 3     |
| 40I         |                           | A A   |       | P SC 1113                 | American Federal Government ( Core III )                           | 3     |
| NOF OF      |                           |   |       |                           | Approved Elective: Artistic Forms (Core IV) <sup>2</sup>           | 3     |
| HOS         |                           | CREDIT HOURS  | 18    |                           | CREDIT HOURS   | 18    |
|             |                           | SUMMER  |       |                           |  |       |
|             | P E 3220                  | Petroleum Engineering Internship  | 0     |                           |  |       |
|             |                           | CREDIT HOURS  | 0     |                           |  |       |
|             | P E 3123                  | Petroleum Reservoir Fluids  | 3     | P E 2153                  | Mechanics of Materials   | 3     |
|             | P E 3223                  | Fluid Mechanics   | 3     | P E 3413                  | Production Engineering I   | 3     |
|             | P E 3313                  | Drilling I  | 3     | P E 3513                  | Reservoir Engineering I  | 3     |
| ~           | P E 3712                  | Petroleum Economics   | 2     | P E 3813                  | Formation Evaluation with Well Logs                                | 3     |
| OI          | P E 3723                  | Numerical Methods for Engineering Computation   | 3     | P E 4331                  | Drilling Engineering Laboratory                                    | 1     |
| ND ND       | GEOL 3003                 | Structural Geology and Stratigraphy for Petroleum   | 3     | GPHY 3423                 | Introductory Petroleum Geology and Geophysics                      | 3     |
|             |                           | Engineers   |       |                           | Approved Elective: Social Science (Core III) $^2$                  | 3     |
|             |                           | CREDIT HOURS  | 17    |                           | CREDIT HOURS   | 19    |
| -           | ACCT 5202                 | Financial Accounting  | 2     | B AD 5201                 | MBA - Professional Development II                                  | 1     |
|             | B AD 5010                 | Foundations of MBA Success  | - 0   | B AD 5812                 | Global Business Experience   | 2     |
|             | B AD 5101                 | MBA - Professional Development  | 1     | ENGB 5162                 | Energy Corporate Finance <sup>4</sup>                              | 2     |
|             | FIN 5102                  | Financial Management  | 2     | EIN 5112                  | Investments  | 2     |
|             | P E 4323                  | Drilling II   | 3     | FIN 5322                  | Financial Derivatives <sup>4</sup>                                 | 2     |
| IOR         | P E 4423                  | Production Engineering II   | 3     | P E 4033                  | Oil, Gas and Environmental Law <sup>3</sup>                        | 3     |
| EN          | P E 4521                  | Reservoir Fluid Mechanics Laboratory  | 1     | P E 4463                  | Data Analytics <sup>3</sup>  | 3     |
| So.         | P E 4532                  | Reservoir Engineering II  | 2     | P E 5553                  | Integrated Reservoir Management <sup>3</sup>                       | 3     |
|             | P E 4711                  | Petroleum Project Evaluation  | 1     |                           | 0  |       |
|             |                           | Approved Elective: World Culture (Core IV) <sup>2</sup>                                     | 3     |                           |  |       |
|             |                           | CREDIT HOURS  | 18    |                           | CREDIT HOURS   | 18    |
|             | B AD 5102                 | Managerial Economics  | 2     | B AD 5822                 | Business Consulting Practicum                                      | 2     |
|             | B AD 5832                 | Applied Field Project   | 2     | B AD 5902                 | Strategic Management   | 2     |
|             | ENGB 5152                 | Energy Accounting and Regulations <sup>4</sup>  | 2     | L S 5802                  | Business Ethics/Legal  | 2     |
|             | ENGB 5172                 | Energy Assets and Commodities: Financial Instruments,<br>Pricing and Trading <sup>4</sup>   | 2     | MKT 5402                  | Marketing Management   | 2     |
| IFTH<br>EAR | ENGB 5182                 | Enterprise Valuation, Mergers and Acquisitions, and<br>Corporate Restructuring <sup>4</sup> | 2     |                           | Graduate Business Elective   | 1     |
| E           | MGT 5702                  | Organizational Behavior   | 2     |                           | Choose one of the following:                                       | 2     |
|             | MIT 5602                  | Management Information Systems  | 2     | ACCT 5212                 | Managerial Accounting  |       |
|             |                           |   |       | B AD 5182                 | Quantitative Analysis II   |       |
|             |                           |   |       | ENT 5102                  | Entrepreneurship & Innovation                                      |       |
|             |                           | CREDIT HOURS  | 14    |                           | CREDIT HOURS   | 11    |

<sup>1</sup> The MATH 1823, MATH 2423, MATH 2433, and MATH 2443 sequence can be substituted for MATH 1914, MATH 2924, and MATH 2934.

<sup>2</sup> To be chosen from the University-Wide General Education Approved Course List. Three of these nine hours must be upper-division (3000-4000). See list in the Class Schedule.

<sup>3</sup> Shared Hours: 9 hours may be applied to both the B.S. in Petroleum Engineering and the MBA degrees.

<sup>4</sup> Counts toward fulfillment of the MBA Energy Specialization (10 hours: ENGB 5152, ENGB 5162, ENGB 5172, ENGB 5182; FIN 5322).

Courses designated as Core I, II, III, IV, or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved lists.

• Two college-level courses in a single language are required; this may be satisfied by successful completion of 2 years in a single language in high school. Students who must take language at the University will have an additional 6-10 hours of coursework.