

ENERGY BUSINESS AND FINANCE, B.S.

Begin Campus: Any Penn State Campus

End Campus: University Park

Program Description

The major in Energy Business and Finance, offered by the College of Earth and Mineral Sciences, combines training in business, economics, finance, and the physical sciences with a core of courses focusing on energy and related industries. The EBF major opens the door to becoming involved in the opportunities and challenges of the energy sector, both in corporations and in policymaking positions. The innovative multi-disciplinary courses of study prepare students for careers in the energy industry, as well as financial institutions, nonprofit groups, and international organizations dealing with energy issues. The curriculum also provides a strong base for further study in business, economics, law, and social sciences.

What is Energy Business and Finance?

The solutions to society's existing and emerging energy challenges require interdisciplinary approaches integrating economics and business with the technical knowledge of energy systems and implications for our environment. That's where Energy Business and Finance experts come in. Our graduates use their knowledge of energy commodity markets, statistics and risk analysis, and project finance related to energy systems and environmental issues to shape the future of energy production. The major was designed to help students build critical analytical skills in preparation for careers with energy companies, public agencies, and the financial institutions that are investing globally in emerging energy technologies.

You Might Like This Program If...

- You want to work in the energy sector.
- You enjoy analytical thinking and complex problem solving.
- You are passionate about paving the way for a sustainable energy future.

Entrance to Major

To be eligible for entrance into the Energy Business and Finance major, a degree candidate must satisfy requirements for entrance to major. Specific entrance requirements include:

1. The degree candidate must have completed more than 29.1 credits of course work.
2. The degree candidate must have a cumulative grade point average of at least 2.0.
3. Complete the following entrance to major requirements with a grade of C or better: ECON 102, MATH 140.

Degree Requirements

For the Bachelor of Science degree in Energy Business and Finance, a minimum of 120 credits is required:

Requirement	Credits
General Education	45
Electives	11-19
Requirements for the Major	84-85

21-28 of the 45 credits of General Education are included in the Requirements for the Major. This includes: 0-7 credits of GN courses, 6 credits of GQ courses, and 6 credits of GS courses, 9 credits of GWS courses.

Requirements for the Major

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/>).

Code	Title	Credits
Prescribed Courses		
ACCTG 211	Financial and Managerial Accounting for Decision Making	4
EBF 473	Risk Management in Energy Industries	3
ECON 104	Introductory Macroeconomic Analysis and Policy	3
<i>Prescribed Courses: Require a grade of C or better</i>		
EBF 200	Introduction to Energy and Earth Sciences Economics	3
EBF 301	Global Finance for the Earth, Energy, and Materials Industries	3
EBF 401	Strategic Corporate Finance for the Earth, Energy, and Materials Industries	3
EBF 483	Introduction to Electricity Markets	3
EBF 484	Energy Economics	3
ECON 102	Introductory Microeconomic Analysis and Policy	3
ECON 302	Intermediate Microeconomic Analysis	3
EME 460	Geo-resource Evaluation and Investment Analysis	3
EMSC 100S	Earth and Mineral Sciences First-Year Seminar ¹	3
MATH 140	Calculus With Analytic Geometry I	4
MATH 141	Calculus with Analytic Geometry II	4
RM 302	Risk and Insurance	3
Additional Courses		
EGEE 120 or IB 303	Oil: International Evolution International Business Operations	3
Select 3 credits from the following:		3
CMPSC 101	Introduction to Programming	
CMPSC 200	Programming for Engineers with MATLAB	
CMPSC 201	Programming for Engineers with C++	
Select 3 credits from the following:		3
BA 243	Social, Legal, and Ethical Environment of Business	
BLAW 243	Legal Environment of Business	
ERM 411	Legal Aspects of Resource Management	
Select 6 credits from the following:		6
EGEE 401	Energy in a Changing World	
EME 444	Global Energy Enterprise	
METEO 469	From Meteorology to Mitigation: Understanding Global Warming	

Additional Courses: Require a grade of C or better

EBF 304W	Management for the Energy and Resource Industries	3
or EBF 404W	The Great Energy Transition: Law, Economics, and New Frontiers	
EME 210	Data Analytics for Energy Systems	3
or STAT 401	Experimental Methods	
ENGL 202C	Effective Writing: Technical Writing	3
or ENGL 202D	Effective Writing: Business Writing	
Select 3 credits from the following:		3
ENGL 15	Rhetoric and Composition	
ENGL 30H	Honors Rhetoric and Composition	
ENGL 137H	Rhetoric and Civic Life I	
ESL 15	ESL Composition for American Academic Communication II	

Supporting Courses and Related Areas

Select 6-7 credits of Introductory Electives from an approved list in consultation with an adviser. Students who complete Basic ROTC may substitute 6 credits of ROTC for 3 credits of GHW courses and 3 credits of Introductory Electives.

Select 3 credits of Advanced Electives from an approved list in consultation with an adviser.

¹ The following substitutions are allowed for students attending campuses where the indicated course is not offered: CAS 100 (<https://bulletins.psu.edu/search/?P=CAS%20100>) can be substituted for EMSC 100S (<https://bulletins.psu.edu/search/?P=EMSC%20100S>).

General Education

Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (<https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/>) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

Foundations (grade of C or better is required and Inter-Domain courses do not meet this requirement.)

- **Quantification (GQ):** 6 credits
- **Writing and Speaking (GWS):** 9 credits

Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)

- **Arts (GA):** 3 credits
- **Health and Wellness (GHW):** 3 credits
- **Humanities (GH):** 3 credits
- **Social and Behavioral Sciences (GS):** 3 credits
- **Natural Sciences (GN):** 3 credits

Integrative Studies

- **Inter-Domain Courses (Inter-Domain):** 6 credits

Exploration

- **GN**, may be completed with Inter-Domain courses: 3 credits
- **GA, GH, GN, GS, Inter-Domain courses.** This may include 3 credits of World Language course work beyond the 12th credit level or the requirements for the student's degree program, whichever is higher: 6 credits

University Degree Requirements**First Year Engagement**

All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

Cultures Requirement

6 credits are required and may satisfy other requirements

- United States Cultures: 3 credits
- International Cultures: 3 credits

Writing Across the Curriculum

3 credits required from the college of graduation and likely prescribed as part of major requirements.

Total Minimum Credits

A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

Quality of Work

Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

Limitations on Source and Time for Credit Acquisition

The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/>)). For more information, check the Suggested Academic Plan for your intended program.

Integrated B.S. in Energy Business and Finance and M.S. in Energy and Mineral Engineering

Undergraduate degree available at the following campuses: University Park

Graduate degree available at the following campuses: University Park

Requirements for the Integrated B.S. in Energy Business and Finance and M.S. in Energy and Mineral Engineering can be found in the Graduate Bulletin (<https://bulletins.psu.edu/graduate/programs/majors/energy-mineral-engineering/#integratedundergradgradprogramstext>).

Program Learning Objectives

- Demonstrate knowledge of how markets for energy operate.
 - Articulate the factors that drive the supply of energy.
 - Articulate the factors that drive the demand for energy.
 - Explain how markets and government policies may fail.
- Demonstrate knowledge of the process of price formation in markets for energy commodities, specifically:
 - Crude Oil
 - Natural Gas
 - Electric Energy
- Demonstrate financial skills for the energy industries.
 - Demonstrate a basic understanding of accounting and business law.
 - Calculate the profitability of investment projects.
 - Describe how capital is raised for energy companies.
 - Describe how commodity markets operate, and how they hedge risk.
 - Demonstrate strategies to hedge risk in financial and insurance markets.
- Acquire problem solving ability.
 - Solve numerical problems common in energy commodity trading or analysis.
 - Create investment plans for energy projects.
 - Create strategies for business decisions in the face of market or regulatory uncertainty.
- Acquire the ability to communicate effectively with diverse groups through listening, speaking, and writing.
 - Communicate clearly through problem solving exercises.
 - Present solutions to business problems.
 - Speak with potential employers.
 - Use software programs to make presentations to potential employers.

Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/students/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

University Park

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Suggested Academic Plan

The suggested academic plan(s) listed on this page are the plan(s) that are in effect during the 2025-26 academic year. To access previous years' suggested academic plans, please visit the archive (<https://bulletins.psu.edu/undergraduate/archive/>) to view the appropriate Undergraduate Bulletin edition.

Energy Business and Finance, B.S. at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
ECON 102 (GS) ^{*#†}	3 EBF 200 [*]	3
EMSC 100S, CAS 100A, CAS 100B, or CAS 100C (GWS) ^{††1}	3 ENGL 15, 30H, or ESL 15 (GWS) ^{††}	3
MATH 140 or 140G (GQ) ^{*†#†}	4 MATH 141 or 141G (GQ) ^{*††}	4
Introductory Level Elective ²	3 Introductory Level Elective ²	3-4
General Education	3	
Integrative Studies		
	16	13-14

Second Year

Fall	Credits Spring	Credits
CMPSC 101, 200, or 201	3 ACCTG 211	4
EBF 301 [*]	3 EME 210 or STAT 401 [*]	3
ECON 104 (GS) [†]	3 General Education Knowledge Domain	3
ECON 302 [*]	3 General Education Integrative Studies	3
General Education	3 Elective	3
Knowledge Domain		
	15	16

Third Year

Fall	Credits Spring	Credits
BLAW 243, ERM 411, or BA 243	3-4 EGEE 401, EME 444, or METEO 469	3

IB 303 or EGEE 120 (IL)	3 EME 460*	3
RM 302*	3 ENGL 202C or 202D (GWS) ^{††}	3
General Education Knowledge Domain	3 Advanced Level Elective ³	3
General Education Health and Wellness (GHW)	1.5 Elective	3
13.5-14.5		15
Fourth Year		
Fall	Credits Spring	Credits
EBF 473 (FALL ONLY)	3 EBF 304W (or EBF 404W in the Fall)*	3
EBF 484 (FALL ONLY)*	3 EBF 401 (SPRING ONLY)*	3
Elective	3 EBF 483 (SPRING ONLY)*	3
Elective	3 EGEE 401, EME 444, or METEO 469	3
Elective	3 General Education Health and Wellness (GHW)	1.5
	Elective	3
15		16.5

Total Credits 120-122

- * Course requires a grade of C or better for the major
 ‡ Course requires a grade of C or better for General Education
 # Course is an Entrance to Major requirement
 † Course satisfies General Education and degree requirement

¹ Students who begin their studies at non-UP locations and/or join the college after their first year should substitute CAS 100A, CAS 100B, or CAS 100C (GWS) for EMSC 100S (GWS). EMSC 100S Earth and Mineral Sciences First year Seminar (3) is a required course only for students who begin their studies at UP in the College of Earth and Mineral Sciences.

² Introductory Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).

³ Advanced Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain

attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

Advising Notes:

- Courses required for the major may be offered fall semester only, spring semester only, or both fall and spring semesters. Consult with your adviser and department to discuss your academic progress and course sequencing.

Energy Business and Finance, B.S. with Semester Study Abroad at University Park Campus

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
ECON 102 (GS) ^{*#†}	3 EBF 200 [*]	3
EMSC 100S, CAS 100A, CAS 100B, or CAS 100C (GWS) ^{††1}	3 ENGL 15, 30H, or ESL 15 (GWS) ^{††}	3
MATH 140 or 140G (GQ) ^{*†#†}	4 MATH 141 or 141G (GQ) ^{*††}	4
Introductory Level Elective ²	3 Introductory Level Elective ²	3-4
General Education	3 General Education	3
Integrative Studies	Knowledge Domain	
	16	16-17

Second Year

Fall	Credits Spring	Credits
CMPSC 101, 200, or 201	3 ACCTG 211	4
EBF 301 [*]	3 EME 210 or STAT 401 [*]	3
ECON 104 (GS) [†]	3 General Education	3
	Integrative Studies	
ECON 302 [*]	3 Elective	3
General Education	3 Elective	3
Knowledge Domain		
	15	16

Third Year

Fall	Credits Spring	Credits
BLAW 243, ERM 411, or BA 243	3-4 Approved Study Abroad Program ⁴	12
EME 460 [*]	3	
ENGL 202C or 202D (GWS) ^{††}	3	
IB 303 or EGEE 120 (IL)	3	
RM 302 [*]	3	
	15-16	12

Fourth Year

Fall	Credits Spring	Credits
EBF 473 (FALL ONLY)	3 EBF 304W (or EBF 404W in the Fall) [*]	3
EBF 484 (FALL ONLY) [*]	3 EBF 401 (SPRING ONLY) [*]	3
EGEE 401, EME 444, or METEO 469	3 EBF 483 (SPRING ONLY) [*]	3
Advanced Level Elective ³	3 EGEE 401, EME 444, or METEO 469	3
General Education Health and Wellness (GHW)	1.5 General Education	3
	Knowledge Domain	
	General Education Health and Wellness (GHW)	1.5
	13.5	16.5

Total Credits 120-122

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- ‡ Course requires a grade of C or better for General Education
- # Course is an Entrance to Major requirement
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- ¹ Students who begin their studies at non-UP locations and/or join the college after their first year should substitute CAS 100A, CAS 100B, or CAS 100C (GWS) for EMSC 100S (GWS). EMSC 100S Earth and Mineral Sciences First year Seminar (3) is a required course only for students who begin their studies at UP in the College of Earth and Mineral Sciences.
- ² Introductory Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).
- ³ Advanced Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).
- ⁴ Students can study abroad in any semester. For a study abroad to be approved for EBF, students need to follow the course plan in the EBF Study Abroad Guide (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/>) and get pre-approval for their study abroad course selections from the EBF program chair.

University Requirements and General Education Notes:

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W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

All incoming Schreyer Honors College first-year students at University Park will take ENGL 137H/CAS 137H in the fall semester and ENGL 138T/CAS 138T in the spring semester. These courses carry the GWS designation and satisfy a portion of that General Education requirement. If the student's program prescribes GWS these courses will replace both ENGL 15/ENGL 30H and CAS 100A/CAS 100B/CAS 100C. Each course is 3 credits.

Advising Notes:

- Courses required for the major may be offered fall semester only, spring semester only, or both fall and spring semesters. Consult with your adviser and department to discuss your academic progress and course sequencing.

Energy Business and Finance, B.S. at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
ECON 102 (GS) ^{*#†}	3 CAS 100A, 100B, or 100C (GWS) ^{††1}	3
ENGL 15, 30H, or ESL 15 (GWS) ^{††}	3 MATH 141 (GQ) ^{*††}	4
MATH 140 (GQ) ^{*†††}	4 Introductory Level Elective ²	3-4
Introductory Level Elective ²	3 Elective	3
General Education	3	
Integrative Studies		
	16	13-14

Second Year

Fall	Credits Spring	Credits
CMPSC 101, 200, or 201	3 ACCTG 211	4
ECON 104 (GS) [†]	3 BLAW 243, ERM 411, or BA 243	3-4
ECON 302 [*]	3 ENGL 202C or 202D (GWS) ^{††}	3
General Education Knowledge Domain	3 General Education Integrative Studies	3
Elective	3 Elective	3
	15	16-17

Third Year

Fall	Credits Spring	Credits
EBF 200 [*]	3 EGEE 401, EME 444, or METEO 469	3
EBF 301 [*]	3 EME 460 [*]	3
EME 210 or STAT 401 [*]	3 Advanced Level Elective ³	3
RM 302 [*]	3 General Education Knowledge Domain	3
Elective	3 General Education Health and Wellness (GHW)	1.5
	Elective	3
	15	16.5

Fourth Year

Fall	Credits Spring	Credits
EBF 473 (FALL ONLY)	3 EBF 304W (or EBF 404W in the Fall) [*]	3
EBF 484 (FALL ONLY) [*]	3 EBF 401 (SPRING ONLY) [*]	3
IB 303 or EGEE 120 (IL)	3 EBF 483 (SPRING ONLY) [*]	3
Elective	3 EGEE 401, EME 444, or METEO 469	3

Elective	3 General Education Health and Wellness (GHW)	1.5
	15	13.5

Total Credits 120-122

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² Introductory Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).

³ Advanced Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).

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Advising Notes:

- Courses required for the major may be offered fall semester only, spring semester only, or both fall and spring semesters. Consult with your adviser and department to discuss your academic progress and course sequencing.

Energy Business and Finance, B.S. with Semester Study Abroad at Commonwealth Campuses

The course series listed below provides **only one** of the many possible ways to move through this curriculum. The University may make changes in policies, procedures, educational offerings, and requirements at any time. This plan should be used in conjunction with your degree audit (accessible in LionPATH as either an **Academic Requirements** or **What If** report). Please consult with a Penn State academic adviser on a regular basis to develop and refine an academic plan that is appropriate for you.

First Year

Fall	Credits Spring	Credits
MATH 140 (GQ) ^{*†#†}	4 MATH 141 (GQ) ^{*††}	4
ECON 102 (GS) ^{*#††}	3 CAS 100A, 100B, or 100C (GWS) ^{††1}	3
ENGL 15, 30H, or ESL 15 (GWS) ^{††}	3 Introductory Level Elective ²	3-4
General Education Integrative Studies	3 General Education Integrative Studies	3
Introductory Level Elective ²	3 General Education Knowledge Domain	3
	16	16-17

Second Year

Fall	Credits Spring	Credits
ECON 104 (GS) [†]	3 ACCTG 211	4
ECON 302 [*]	3 ENGL 202C or 202D (GWS) ^{††}	3
CMPSC 101, 200, or 201	3 BLAW 243, ERM 411, or BA 243	3-4
General Education Knowledge Domain	3 General Education Knowledge Domain	3
Elective	3 Elective	3
	15	16-17

Third Year

Fall	Credits Spring	Credits
EBF 200 [*]	3 Approved Study Abroad ⁴	12
EBF 301 [*]	3	
RM 302 [*]	3	
EME 210 or STAT 401 [*]	3	
EME 460 [*]	3	
	15	12

Fourth Year

Fall	Credits Spring	Credits
EBF 473 (FALL ONLY)	3 EBF 304W (or EBF 404W in the Fall) [*]	3
EBF 484 (FALL ONLY) [*]	3 EBF 401 (SPRING ONLY) [*]	3
EGEE 401, EME 444, or METEO 469	3 EBF 483 (SPRING ONLY) [*]	3
IB 303 or EGEE 120 (IL)	3 EGEE 401, EME 444, or METEO 469	3
Advanced Level Elective ³	3 General Education Health and Wellness (GHW)	1.5

General Education Health and Wellness (GHW)	1.5
	16.5
	13.5

Total Credits 120-122

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² Introductory Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).

³ Advanced Level Elective: select from list in consultation with adviser. See: <https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and> (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/ebf-introductory-and/>).

⁴ Students can study abroad in any semester. For a study abroad to be approved for EBF, students need to follow the course plan in the EBF Study Abroad Guide (<https://bulletins.psu.edu/undergraduate/colleges/earth-mineral-sciences/energy-business-finance-bs/>) and get pre-approval for their study abroad course selections from the EBF program chair.

University Requirements and General Education Notes:

US and IL are abbreviations used to designate courses that satisfy Cultural Diversity Requirements (United States and International Cultures).

W, M, X, and Y are the suffixes at the end of a course number used to designate courses that satisfy University Writing Across the Curriculum requirement.

General Education includes Foundations (GWS and GQ), Knowledge Domains (GHW, GN, GA, GH, GS) and Integrative Studies (Inter-domain) requirements. N or Q (Honors) is the suffix at the end of a course number used to help identify an Inter-domain course, but the inter-domain attribute is used to fill audit requirements. Foundations courses (GWS and GQ) require a grade of 'C' or better.

Advising Notes:

- Courses required for the major may be offered fall semester only, spring semester only, or both fall and spring semesters. Consult with your adviser and department to discuss your academic progress and course sequencing.

Career Paths

Energy Business and Finance provides equally good preparation for a career or for further graduate study. EBF graduates pursue a wide variety of career options, most of which are in the energy or environmental sector. Many also pursue graduate study, especially when the EBF major is paired with a quantitative minor or concurrent major at Penn State.

Careers

There are hundreds of EBF alumni now working for oil and gas firms; electric utilities or power generation companies; consulting firms, banks, and insurance companies; or in the public and nonprofit sector. Common career roles for Energy Business and Finance majors include analyst positions, commodities trading and marketing, energy delivery scheduling, and project finance analysts. Energy Business and Finance students are also competitive for rotational programs with major energy firms.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES OF THE ENERGY BUSINESS AND FINANCE PROGRAM (<https://www.eme.psu.edu/undergraduate/academics/undergraduate-programs/energy-business-and-finance/career-options-ebf/>)

Opportunities for Graduate Studies

Graduates from the Energy Business and Finance program are well positioned for professional graduate study in economics, business, finance, and law. Students with strong research interests should consider the M.S. or Ph.D. programs in Energy and Mineral Engineering or Energy, Environmental and Food Economics.

MORE INFORMATION ABOUT OPPORTUNITIES FOR GRADUATE STUDIES (<https://www.eme.psu.edu/graduate/>)

Professional Resources

- Society for Energy Business and Finance (<https://www.eme.psu.edu/undergraduate/undergraduate-resources/student-organizations/>)
- Penn State Energy Marketing Association (<https://orgcentral.psu.edu/organization/energy-marketing-association/>)
- Positive Energy (<https://sites.psu.edu/spepennstate/positive-energy/>)

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