

Pre-Engineering

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The Lee College Pre-Engineering program helps students focus on developing a fundamental knowledge of physics, chemistry, and mathematics, and provides an introduction to the study of engineering and engineering design.

In addition, students complete other general education classes in English, communication, the social sciences, and humanities in order to fulfill the core curriculum requirements. Lee College's Pre-Engineering program is specifically designed for those looking to transfer into a four-year engineering bachelor's degree program after completing their general education and preliminary math and science courses at Lee College.

What will I learn?

Students develop a fundamental understanding of physics, chemistry, and mathematics, and will receive a basic introduction to engineering as an academic and professional path, to the engineering design process, to engineering ethics and computation.

What can I do with this course of study?

With a Lee College Associate of Science Degree in Pre-Engineering, students can begin their pathway to a four-year engineering degree and a career in one of the nations leading industries.

- Petroleum Engineering
- Electrical Engineering
- Mechanical Engineering
- Industrial Engineering
- Aerospace Engineering
- Civil Engineering
- Biomedical Engineering

Degrees and Certificates

Associate of Science Degree in Pre-Engineering

Engineering Lamar Transfer Plan

Please note that MATH 1314 & MATH 2412 are pre-requisites for MATH 2413. This plan includes course options for transferring into an ENGINEERING BS program at Lamar University. The plan includes less than the 60 hours required for an Associate of Science. Students need to complete additional associate degree requirements or use reverse transfer to complete their Associate of Science.

Foundations: These are the courses students need in order to progress in their career/college pathway, as they either provide a certificate or lay the groundwork for moving to the next set of courses.

| Lee College | | Lamar University |
|-----------------------|---|-------------------------|
| Course | Course Title | Counts Toward |
| EDUC 1200 | Learning Frameworks | ELECTIVE AT LAMAR |
| ENGL 1301 | English Composition 1 | ENGL 1301 |
| MATH 2413 | Calculus 1 | MATH 2413 |
| CHEM 1411 | General Chemistry 1; Lecture and lab | CHEM 1111/1311 |
| PHIL 1301 | Introduction to Philosophy | PHIL 1370 |
| ART 1301 or MUSI 1306 | Art Appreciation or Music Appreciation | ART 1301 or MUSI 1306 |

Knowledge Building: These courses further the students' knowledge in the area of study and increase their preparation for the degree completion.

| Lee College | | Lamar University |
|--------------------|--|-------------------------|
| Course | Course Title | Counts Toward |
| MATH 2414 | Calculus 2 | MATH 2414 |
| PHYS 2425 | University Physics 1; Lecture and lab | PHYS 2425 |
| SPCH 1315 | Principles of Public Speaking | COMM 1315 |
| HIST 1301 | History of the United States to 1877 | HIST 1301 |
| GOVT 2305 | Federal Government | POLS 2301 |
| MATH 2318 | Linear Algebra | MATH 2318 OR 3328 |
| ENGL 1302 | English Composition II | ENGL 1302 |

Completion: These are the courses the student needs in order to complete the degree plan and prepare to enter the workforce.

| Lee College | | Lamar University |
|------------------------|---|-------------------------|
| Course | Course Title | Counts Toward |
| PHYS 2426 | University Physics 2; Lecture and lab | PHYS 2426 |
| MATH 2415 | Calculus 3 | MATH 2415 OR 3435 |
| HIST 1302 | History of the United States since 1877 | HIST 1302 |
| GOVT 2306 | Texas Government | POLS 2302 |
| PSYC 2301 or SOCI 1301 | Introduction to Psychology or Introductory Sociology | PSYC 2301 or SOCI 1301 |

Engineering Texas A&M University Transfer Plan

Please note that MATH 1314 & MATH 2412 are pre-requisites for MATH 2413. This plan includes course options for transferring into an ENGINEERING BS program at Texas A&M University. The plan includes more than the 60 hours required for an Associate of Science and allows students to complete additional bachelor's degree requirements before transfer.

Foundations: These are the courses students need in order to progress in their career/college pathway, as they either provide a certificate or lay the groundwork for moving to the next set of courses.

| Lee College | | TAMU |
|------------------------|--|--------------------------|
| Course | Course Title | Counts Toward |
| EDUC 1200 | Learning Frameworks | NO EQUIVALENT AT TAMU |
| ENGL 1301 | English Composition 1 | ENGL 103 |
| MATH 2413 | Calculus 1 | MATH 151 |
| CHEM 1411 | General Chemistry 1; Lecture and lab | CHEM 107/117 or CHEM 119 |
| ECON 2301 or ECON 2302 | Principles of Economics: Macroeconomics Principles of Economics: Microeconomics | ECON 203 or ECON 202 |
| HIST 1301 | History of the United States to 1877 | HIST 105 |
| SPCH 1315 | Principles of Public Speaking | COMM 203 |

Knowledge Building: These courses further the students' knowledge in the area of study and increase their preparation for the degree completion.

| Lee College | | TAMU |
|-----------------|---|-----------------|
| Course | Course Title | Counts Toward |
| MATH 2414 | Calculus 2 | MATH 152 |
| PHYS 2425 | University Physics 1; Lecture and lab | PHYS 206 |
| CHEM 1412 | General Chemistry 2; Lecture and lab | CHEM 120 |
| HIST 1302 | History of the United States since 1877 | HIST 106 |
| GOVT 2305 | Federal Government | POLS 206 |
| ARTS 1303 or 04 | Art History 1 or Art History 2 | ARTS 149 or 150 |
| ENGL 2311 | Technical Writing | ENGL 210 |

Completion: These are the courses the student needs in order to complete the degree plan and prepare to enter the workforce.

Lee College TAMU

| Course | Course Title | Counts Toward |
|-----------|--|---------------|
| MATH 2415 | Calculus 3 | MATH 253 |
| PHYS 2426 | University Physics 2; Lecture and lab | PHYS 207 |
| MATH 2320 | Differential Equations | MATH 308 |
| GOVT 2306 | Texas Government | POLS 207 |

Engineering University of Houston Transfer Plan

Please note that MATH 1314 & MATH 2412 are pre-requisites for MATH 2413. This plan includes course options for transferring into an ENGINEERING BS program at the University of Houston. The plan includes more than the 60 hours required for an Associate of Science and allows students to complete additional bachelor's degree requirements before transfer.

There are many options in the field of engineering at the University of Houston. Students should discuss further course options with their advisor based on specific engineering programs.

Foundations: These are the courses students need in order to progress in their career/college pathway, as they either provide a certificate or lay the groundwork for moving to the next set of courses.

| Lee College | | UH Main Campus |
|-------------|--|--------------------------|
| Course | Course Title | Counts Toward |
| EDUC 1200 | Learning Frameworks | NO EQUIVALENT AT UH MAIN |
| ENGL 1301 | English Composition 1 | ENGL 1301 |
| ENGR 1201 | Introduction to Engineering | ENGR 1201 |
| CHEM 1411 | General Chemistry 1; Lecture and lab | CHEM 1111/1311 |
| MATH 2413 | Calculus 1 | MATH 1431 |
| ECON 2302 | Principles of Economics: Microeconomics | ECON 2302 |
| SPCH 1318 | Interpersonal Communication | COMM 1333 |

Knowledge Building: These courses further the students' knowledge in the area of study and increase their preparation for the degree completion.

| Lee College | | UH Main Campus |
|-------------|--|----------------|
| Course | Course Title | Counts Toward |
| MATH 2414 | Calculus 2 | MATH 1432 |
| PHYS 2425 | University Physics 1; Lecture and lab | PHYS 1121/1321 |
| ENGL 1302 | English Composition 2 | ENGL 1302 |
| CHEM 1412 | General Chemistry 2; Lecture and lab | CHEM 1112/1312 |
| ARTS 1304 | Art History 2 | ARTS 1304 |

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|-----------|--------------------------------------|-----------|
| HIST 1301 | History of the United States to 1877 | HIST 1377 |
| GOVT 2305 | Federal Government | GOVT 2305 |

Completion: These are the courses the student needs in order to complete the degree plan and prepare to enter the workforce.

| Lee College | | UH Main Campus |
|-------------|---|----------------|
| Course | Course Title | Counts Toward |
| MATH 2415 | Calculus 3 | MATH 2415 |
| PHYS 2426 | University Physics 2; Lecture and lab | PHYS 1122/1322 |
| HIST 1302 | History of the United States since 1877 | HIST 1378 |
| GOVT 2306 | Texas Government | GOVT 2306 |
| PHIL 1301 | Introduction to Philosophy | PHIL 1301 |

Engineering UHCL Transfer Plan

Please note that MATH 1314 & MATH 2412 are pre-requisites for MATH 2413. The remainder of the plan includes course options for transferring into an ENGINEERING BS program at the University of Houston-Clear Lake. The plan includes more than the 60 hours required for an Associate of Science and allows students to complete additional bachelor's degree requirements before transfer.

Foundations: These are the courses students need in order to progress in their career/college pathway, as they either provide a certificate or lay the groundwork for moving to the next set of courses.

| Lee College | | UHCL |
|-------------|--------------------------------------|----------------|
| Course | Course Title | Counts Toward |
| EDUC 1200 | Learning Frameworks | PSYC 1100 |
| ENGL 1301 | English Composition 1 | WRIT 1301 |
| MATH 2413 | Calculus 1 | MATH 2413 |
| ENGR 1201 | Introduction to Engineering | ENGR 1201 |
| CHEM 1411 | General Chemistry 1; Lecture and lab | CHEM 1111/1311 |
| SPCH 1315 | Principles of Public Speaking | COMM 1315 |

Knowledge Building: These courses further the students' knowledge in the area of study and increase their preparation for the degree completion.

| Lee College | | UHCL |
|-------------|---------------------------------------|----------------|
| Course | Course Title | Counts Toward |
| PHYS 2425 | University Physics 1; Lecture and lab | PHYS 2125/2325 |
| MATH 2414 | Calculus 2 | MATH 2414 |
| ENGL 1302 | English Composition 2 | WRIT 1302 |

| | | |
|-----------|---|-----------|
| HIST 1301 | History of the United States to 1877 | HIST 1301 |
| GOVT 2305 | Federal Government | POLS 2305 |
| ECON 2301 | Principles of Economics: Macroeconomics | ECON 2301 |
| HUMA 1301 | Introduction to Humanities | HUMN 1301 |

Completion: These are the courses the student needs in order to complete the degree plan and prepare to enter the workforce.

| Lee College | | UHCL |
|--------------------|---|----------------------|
| Course | Course Title | Counts Toward |
| PHYS 2426 | University Physics 2; Lecture and lab | PHYS 2126/2326 |
| MATH 2415 | Calculus 3 | MATH 2415 |
| MATH 2318 | Linear Algebra | MATH 2318 |
| HIST 1302 | History of the United States since 1877 | HIST 1302 |
| GOVT 2306 | Texas Government | POLS 2306 |
| ARTS 1303 or 04 | Art History 1 OR Art History 2 | ARTS 1303 or 1304 |
| MATH 2320 | Differential Equations | MATH 2320 |

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