

# ENGINEERING UNDERGRADUATE PATHWAY

Saint Louis University's engineering undergraduate pathway program prepares students to enter the next semester of a bachelor's degree program in engineering at SLU. The undergraduate engineering pathway leads into one of the following degrees: biomedical engineering, civil engineering, computer engineering, electrical engineering, engineering physics, mechanical engineering or physics.

## Curriculum Overview

The International Year One curriculum consists of English, mathematics and general elective courses. Other courses require permission.

## Program Entry Requirements

### One-Semester (Accelerated) Pathway

- Secondary/high school degree or equivalent
- 2.50 minimum GPA on 4.0 scale
- Language requirement:
  - TOEFL iBT 75 or
  - IELTS 6.0 or
  - PTEA 50 or
  - Duolingo 100 or
  - Completion of Two-Semester (Standard) Pathway

### Two-Semester (Standard) Pathway

- Secondary/high school degree or equivalent
- 2.50 minimum GPA on 4.0 scale
- Language requirement:
  - TOEFL iBT 60 or
  - IELTS 5.5 or
  - PTEA 44 or
  - Duolingo 90 or
  - Completion of Academic English Level 4 or
  - Completion of Three-Semester (Comprehensive) Pathway

### Three-Semester (Comprehensive) Pathway

- Secondary/high school degree or equivalent
- 2.50 minimum GPA on 4.0 scale
- Language requirement:
  - TOEFL iBT 50 or
  - IELTS 5.0 or
  - PTEA 38 or
  - Duolingo 75 or
  - Completion of Academic English Level 3

## Learning Outcomes

1. Students will be able to execute a variety of verbal tasks in academic settings using English that can be understood by those unaccustomed to non-native speakers.
2. Students will be able to execute a variety of written tasks in academic settings using English that can be understood by those unaccustomed to non-native writers.

3. Students will be able to apply a process-driven approach to completing verbal and written academic assignments in multiple disciplines and modes.
4. Students will be able to deploy reflective and self-regulated learning strategies.

## Requirements

### One-Semester (Accelerated) Pathway

Code	Title	Credits
<b>Academic English Requirement</b>		
EAP 1200	Academic Writing and Editing Skills II	3
EAP 1220	Academic Reading and Study Skills II	3
EAP 1010	Pathway Recitation Lab I	1
Mathematics Requirements (1 course) (p. 2)		<b>3-4</b>
<i>Students are placed in the appropriate mathematics class based on an online placement test. MATH 1520 is recommended.</i>		
General Elective Requirement (1 course) (p. 2)		<b>3</b>
UNIV 1010	Enhancing First-Year Success	1
Discipline Specific Introductory Requirement (1 course) (p. 2)		<b>1</b>
<b>Total Credits</b>		<b>15-16</b>

### Two-Semester (Standard) Pathway

Code	Title	Credits
<b>Academic English Requirement</b>		
EAP 1000	Academic Writing and Editing Skills I	3
EAP 1010	Pathway Recitation Lab I	1
EAP 1020	Academic Reading and Study Skills I	3
EAP 1030	Academic Presentations and Speaking Skills	1
EAP 1200	Academic Writing and Editing Skills II	3
EAP 1220	Academic Reading and Study Skills II	3
Mathematics Requirements (2 courses) (p. 2)		<b>6-8</b>
<i>Students are placed in the appropriate mathematics class based on an online placement test. The recommended mathematics sequence is MATH 1510 and MATH 1520.</i>		
General Elective Requirement (2 courses) (p. 2)		<b>6</b>
UNIV 1010	Enhancing First-Year Success	1
Discipline Specific Introductory Requirement (1 course) (p. 2)		<b>1</b>
<b>Total Credits</b>		<b>28-30</b>

### Three-Semester (Comprehensive) Pathway

For the comprehensive pathway, students are required to take the courses below followed by the standard two-semester pathway.

Code	Title	Credits
<b>Academic English Requirement</b>		
AEP 0400	Writing and Grammar Level 4: High Intermediate	4
AEP 0410	Contemporary Issues Level 4: High Intermediate	3
AEP 0420	Reading and Vocabulary Level 4: High Intermediate	3
AEP 0430	Listening & Speaking Level 4: High Intermediate	4
EAP 1210	Pathway Recitation Lab II	1
Mathematics Requirements (1 course) (p. 2)		<b>3</b>

Students are placed in the appropriate mathematics class based on an online placement test. MATH 1200 is recommended.

**Total Credits** 18

## Mathematics Requirements

Code	Title	Credits
MATH 0260	Intermediate Algebra <sup>1</sup>	3
MATH 1200	College Algebra	3
MATH 1320	Survey of Calculus	3
MATH 1400	Pre-Calculus	3
MATH 1510	Calculus I	4
MATH 1520	Calculus II	4

<sup>1</sup> This course does not count towards the degree.

## General Elective Requirements

Code	Title	Credits
ASTD 1000	Investigating America: An Introduction to American Studies	3
FPA 1000	Intro to the Arts	3
POLS 1000	Introduction to Politics	3
POLS 1600	Introduction to International Politics	3
THEO 1000	Theological Foundations	3
WGST 1900	Introduction to Women's and Gender Studies	3

## Discipline Specific Introductory Requirement

Code	Title	Credits
BME 1000	Introduction to Biomedical Engineering I	1
CVNG 1010	Freshman Engineering I	1
ECE 1001	Introduction to Electrical and Computer Engineering I	1
MENG 1001	Introduction to Aerospace & Mechanical Engineering	1

## Continuation Standards

Earn a 2.70 overall grade point average (GPA) with no grades below a "C."

## Progression Requirements

- Minimum 2.70 cumulative grade point average (GPA).
- Grade of B or better in all classes counting toward major
- No C-/D/F/W/I/P/NP/S/U grades
- Writing portfolio

## Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

## 1-semester (Accelerated) Pathway

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
EAP 1200	Academic Writing and Editing Skills II	3
EAP 1220	Academic Reading and Study Skills II	3
MATH 1510	Calculus I (or higher)	4
General Elective		3
Discipline Specific Introductory Requirement (p. 2)		1
EAP 1010	Pathway Recitation Lab I	1
UNIV 1010	Enhancing First-Year Success	1
<b>Credits</b>		<b>16</b>
<b>Total Credits</b>		<b>16</b>

## 2-semester (Standard) Pathway

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
EAP 1000	Academic Writing and Editing Skills I	3
EAP 1020	Academic Reading and Study Skills I	3
EAP 1030	Academic Presentations and Speaking Skills	1
MATH 1510	Calculus I (or higher)	4
Select one of the following:		3
FPA 1000	Intro to the Arts	
POLS 1000	Introduction to Politics	
THEO 1000	Theological Foundations	
EAP 1010	Pathway Recitation Lab I	1
UNIV 1010	Enhancing First-Year Success	1
<b>Credits</b>		<b>16</b>
<b>Spring</b>		
EAP 1200	Academic Writing and Editing Skills II	3
EAP 1220	Academic Reading and Study Skills II	3
MATH 1520	Calculus II (or higher)	4
Discipline Specific Introductory Requirement (p. 2)		1
Select one of the following:		3
POLS 1600	Introduction to International Politics	
WGST 1900	Introduction to Women's and Gender Studies	
EAP 1010	Pathway Recitation Lab I	1
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>31</b>

## Three-Semester (Comprehensive) Pathway

For the comprehensive pathway, students take the following semester followed by the standard two-semester pathway.

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
AEP 0400	Writing and Grammar Level 4: High Intermediate	4

AEP 0410	Contemporary Issues Level 4: High Intermediate	3
AEP 0420	Reading and Vocabulary Level 4: High Intermediate	3
AEP 0430	Listening & Speaking Level 4: High Intermediate	4
EAP 1210	Pathway Recitation Lab II	1
MATH 1200	College Algebra	3
	<b>Credits</b>	<b>18</b>
	<b>Total Credits</b>	<b>18</b>

### Discipline Specific Introductory Requirement

Code	Title	Credits
BME 1000	Introduction to Biomedical Engineering I	1
CVNG 1010	Freshman Engineering I	1
ECE 1001	Introduction to Electrical and Computer Engineering I	1
MENG 1001	Introduction to Aerospace & Mechanical Engineering	1