

INDUSTRIAL & SYSTEMS ENGINEERING

Bachelor of Science (BS)

This is a guide based on the 2026-2027 Undergraduate Catalog and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

CURRICULUM CHECKLIST

Accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>

94 hour major – No minor required

Math Core – 33 hours

- ___ MA140 Analytic Geometry and Calculus I (5)
- ___ MA145 Analytic Geometry and Calculus II (4)
- ___ MA223 Elementary Probability & Statistics (3)
- ___ MA244 Analytic Geometry and Calculus III (3)
- ___ MA345 Linear Algebra (3)
- ___ CH184 General Chemistry I Lab (1)
- ___ CH185 General Chemistry I (3)
- ___ PH230/030 General Physics I (5)
- ___ PH231/031 General Physics II (5)

Engineering Core – 18 hours

- ___ EP240 Circuit Analysis I (3)
- ___ EP261 Engineering Mechanics Statics (3)
- ___ IM300 Technical Communication (3)
- ___ MN120 Fundamentals of Engineering Design Processes (3)
- ___ MN170 Engineering Materials & Testing (3)
- ___ MN203 Industrial Materials & Processes I (3)

Industrial & Systems – 43 hours

- ___ EG201 Systems Engineering (1)
- ___ EG301 Industrial Ergonomics (3)
- ___ EG310 Spreadsheet Modeling (3)
- ___ EG350 Intro to Operations Research (3)
- ___ EG412 Advanced Manufacturing Systems (3)
- ___ ET304 Fundamentals of Programmable Logic Controllers (3)
- ___ IM301 Industrial Safety & Supervision (3)
- ___ IM311 Statistical Process Control (3)
- ___ IM313 Facilities Planning (3)
- ___ IM417 Manufacturing Resource Analysis (3)
- ___ IM506 Projects in Industrial & Engineering Technology (3)
- ___ IM550 Decision Models (3)
- ___ MN220 Engineering Economic Analysis (3)
- ___ SW207 Understanding Cultural & Social Diversity (3)

Choose one course:

- ___ EG410 Lean Supply Chain (3)
- ___ EG492 Modeling and Simulation (3)
- ___ EG506 Operations Research (3)
- ___ IM570 Project Economic Analysis (3)

General Education Requirements – some requirements may be fulfilled by coursework in major program.

- Social and Behavioral Sciences – 6 hours
- Constitution Requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)
- Civics examination

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	1	CH184/CH185	4
	EN100	3	EG201	1
	MA140	5	IM301	3
	MN120	3	MA145	4
			General Education	3
	Total	12	Total	15
SECOND YEAR	MA223	3	IM300	3
	MA244	3	MN170	3
	PH230/030	5	PH231/031	5
	SW207	3	General Education	3
	Free Elective	3	General Education	3
	Total	17	Total	17
THIRD YEAR	EP261	3	EG310	3
	IM550	3	IM311	3
	MA345	3	EP240	3
	MN203	3	MN220	3
	General Education	3	General Education	3
	Total	15	Total	15
FOURTH YEAR	EG301	3	EG412	3
	EG350	3	ET304	3
	IM313	3	IM417	3
	IM506	3	Major Elective	3
	General Education	3	Free Elective	2
	Total	15	Total	14

*Many major courses are on a set rotation and thus dependent on when prerequisite courses are completed. The actual semester a course is taken may vary based on the rotation.

Degree requirements for all students: a minimum of 120 credit hours, completion of the General Education program, and completion of 39 senior division hours (300-599). Refer to the Undergraduate Catalog or Degree Works for additional graduation requirements for your program.

A minimum 2.0 GPA in the major and overall are required to graduate with a BS degree.



Engineering
Accreditation
Commission



SOUTHEAST MISSOURI
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Revised
9/22/2026

DEGREE MAP
2026-2027

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Office of Admissions | (573) 651-2590 | admissions@semo.edu