WASHINGTON STATE COLLEGE OF OHIO

Washington State College of Ohio – Ohio University Plan

Industrial and Systems Engineering Pathway

The Industrial and Systems Engineering (ISE) degree provides a broad technical background with special attention to productivity, costs, quality, and human factors in production and other systems. To prepare graduates for their job responsibilities, the primary objective of the Industrial and Systems Engineering program is to produce engineers who are able to apply ISE tools and knowledge to support, improve, manage, develop, design, or implement a project, process, or system that has a positive impact on relevant key-performance indicators, such as financial results, productivity, quality or safety. We want graduates to actively seek to be leaders among their peers by demonstrating a professional attitude; a commitment to integrity and ethical behavior; effective communication across stakeholders; and engagement in life-long learning.

Admission Requirements

- Freshmen applicants should complete a college-preparatory curriculum and have above-average grades in math and science classes. Four years of college preparatory math and one year of either chemistry or physics are required, and one year of an additional science (physics, chemistry, or biology) is strongly recommended.
- Transfer applicants must have a cumulative grade-point average of 2.5 or higher from all institutions previously attended and completed the equivalent of MATH 1200 (or higher) and CHEM 1210, CHEM 1500, CHEM 1510 or PHYS 2051 to be considered for admission. If you have completed fewer than 20 semester hours of 30 quarter hours of university of college coursework, you must also submit your high school transcript for evaluation.
- Official transcripts sent directly to Ohio University from all colleges and universities you have attended.

Application Information
Apply online https://admissions.ohio.edu/apply/
Students can complete this program through OHIO regional campus

Submit all college-level transcripts to:
Undergraduate Admissions
Ohio University
Chubb Hall 120
1 Ohio University Drive
Athens, OH 45701

Ohio University Contact Information

Undergraduate Admissions
740.593.4100
E-mail general questions to
transfer@ohio.edu
For more information visit www.ohio.edu/wscc

Graduation Pathway: Washington State College of Ohio Associate of Science in Engineering Technology to Ohio University Bachelor of Science, Industrial and Systems Engineering Major

Washington State College of Ohio Courses

Courses that may satisfy Ohio University BRICKS General Education requirements are inside brackets [].
Taking electives outside those suggested in this guide may impact time to degree completion.

Semester 1 Washington State College of Ohio	Semester Hours	OHIO University Equivalent Course
[CHEM 1510] Fundamentals of Chemistry I and [CHEM 151L] Fundamentals of Chemistry I Lab	4.0	[CHEM 1510]
[ENGL 1510] Composition I	3.0	[ENGL 1510]
ENGR 1010 Fundamentals of Engineering	3.0	ET 1XXL
[MATH 2130] College Algebra	4.0	[MATH 1200]
ENGR 1100 Engineering Materials	4.0	ET 2300
Total	**18.0**	

Semester 2 Washington State College of Ohio	Semester Hours	OHIO University Equivalent Course
AMIT 2530 Solid Modeling with Additive Manufacturing	3.0	ET 1100
[MATH 2150] Pre-Calculus	5.0	[MATH 1300]
Art & Humanities Elective OT36 *(suggested course: ARTS 1000, ARTS 2010,; MUSC 1200)*	3.0	[AH 2110], [ART 1100], or [MUS 1250]
Social & Behavioral Sciences Elective OT36 *(suggested course: PSYC 1010)*	3.0	[PSY 1010]
Total	**14.0**	

Semester 3 Washington State College of Ohio	Semester Hours	OHIO University Equivalent Course
[MATH 2263] Calculus I	4.0	[MATH 2301]
[PHYS 2510] General Physics I and [PHYS 251L] General Physics I Lab	5.0	[PHYS 2054 and PHYS 2055]
[SPCH 1510] Speech	3.0	[COMS 1030]
ENGR 2210 Statics	4.0	ET 2200
Total	**16.0**	

Semester 4 Washington State College of Ohio	Semester Hours	OHIO University Equivalent Course
[MATH 2264] Calculus II	4.0	[MATH 2302]
ENGL Elective OT36	3.0	
Social & Behavioral Sciences Elective OT36 *(suggested course: ECON 2130)*	3.0	[ECON 1030]
ENGR 2220 Strength of Materials	3.0	ET 2220
Art & Humanities Elective OT36 *(suggested course: HUMN 1300, LITR 2100, LITR 2110, LITR 2200, LITR 2210; PHIL 1010, PHIL 1300)*	3.0	[CARS 2310], [ENG 2510], [ENG 2520], [ENG 2530], [ENG 2540], [PHIL 1010], or [PHIL 1300]
Total	**16.0**	

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Ohio University BRICKS General Education Requirements

BRICKS is Ohio University's general education program, and requirements must be fulfilled by all baccalaureate degree students. BRICKS includes a minimum of 38 credit hours across five categories: Foundations, Pillars, Arches, Bridges, and Capstone. Courses used to satisfy BRICKS requirements may be completed through Washington State College of Ohio or OHIO Online. General Education equivalency guide lists Washington State courses that have direct course equivalencies at OHIO University which meet BRICKS general education requirements.

General Education Courses

Courses completed through Washington State College of Ohio or OHIO.

OHIO BRICKS Requirement	OHIO Semester Hours	Options to meet requirements with courses taken at Washington State
Foundations: Advanced Writing	3.0	ENGL 1515, ENGL 1520, ENGL 1530
Foundations: Intercultural Explorations	3.0	ANTH 1510; HIST 1330
Pillars: Humanities Texts and Contexts	3.0	HUMN 1200, HUMN 1300, LITR 2100, LITR 2110, LITR 2200, LITR 2210; PHIL 1010, PHIL 1300)
Pillars: Humanities Arts	3.0	ARTS 1000, ARTS 2010, ARTS 2020; MUSC 1200
Pillars: Social or Behavioral Sciences	3.0	ECON 2120, ECON 2130; HIST 1020, HIST 2110, HIST 2120; POLS 1020, POLS 2050; PSYC 1010; SOCI 1010
Arches: Natural World	4.0-5.0	BIOL 2320 and BIOL 232L; CHEM 1520 and 152L; PHYS 1100 and PHYS 110L, PHYS 1210 and PHYS 121L, PHYS 2530 and 253L
Arches: Connected World	3.0	ANTH 1510; BIOL 2110 and BIOL 211L; CRJU 1010; EDUC 1020; PSYC 2100, PSYC 2320, PSYC 2700; SOCI 2010, SOCI 2200

BRICKS and the Ohio Transfer 36

Students who complete the minimum requirements of the Ohio Transfer 36 (OT36, formerly the Ohio Transfer Module) at another college or university prior to enrollment in a degree-seeking program at Ohio University will receive transfer credit equivalent to fulfilling Ohio University's BRICKS general education requirements in Foundations (excluding the Advanced Writing component, which requires completion of TME 002 Second Writing), Pillars, and Arches. If you have not completed the OT36, your courses will be evaluated on a course-by-course basis and will apply toward general education requirements as appropriate.

Industrial and Systems Engineering Degree Requirements

To qualify for the Industrial and Systems Engineering major, a student must complete all Ohio University graduation requirements: general education, College, major, and residency. Students must earn a minimum of 30 semester hours of Ohio University credit, complete a minimum of 50% of the major course requirements at Ohio University, and complete a minimum of 125.5 total semester hours for graduation (elective hours may be required) with a 2.0 GPA. Students are responsible for tracking their degree completion on their DARS, and are encouraged to work with an Ohio University academic advisor in their degree planning.

Industrial and Systems Engineering Major Courses

Required combined 2.0 GPA for business minor.

Courses completed through Washington State College of Ohio or OHIO.

OHIO Course Name	OHIO Course Number	Washington State Course Number
Engineering and Technology: Career Orientation	ET 1500	
Software Tools for Industrial and Systems Engineering	ISE 1200	
Engineering Probability	ISE 3210	

WASHINGTON STATE COLLEGE OF OHIO

Industrial and Systems Engineering Major Courses (continued)

OHIO Course Name	OHIO Course Number	Washington State Course Number
Work Design	ISE 3341	
Inventory and Manufacturing Control 1	ISE 4120	
Industrial Computer Simulation	ISE 4130	
Introduction to Operations Research	ISE 4140	
Information Systems Engineering	ISE 4151	
Principles of Six Sigma	ISE 4160	
Lean Manufacturing and Service Systems	ISE 4170	
Senior Capstone	ISE 4192	
Applied Systems Engineering	ISE 4311	
Human Factors Engineering	ISE 4380	
Project Management	ISE 4490	
Industrial and Systems Engineering Electives (minimum of 7 hours)	Work with academic advisor for appropriate course selection.	
History of Technology in Society	HIST 2905 or ET 2905	
Discrete Mathematics	MATH 3050	
Applied Linear Algebra	MATH 3200	
Engineering Graphics Fundamentals	ET 1100	AMIT 2170 or AMIT 2530
Engineering Programming	ET 2100	
Engineering Statistics	ET 2450	
Basic Electrical Engineering 1	ET 3132	
Engineering Economy	ET 3300	
Principles of Microeconomics	ECON 1030	ECON 2130
General Psychology	PSY 1010	PSYC 1010
Business Electives (complete 2 course)*	ACCT 1005 or ACCT 1010, BUSL 2000, ECON 1040, MGT 2000, MGT 3550, MKT 2020	ACCT 1550, BUSM 1660, ECON 2120
Math/Science Elective (complete at least 6 hours)	BIOS 1030, CHEM 1220, CHEM 1520, MATH 3300, MATH 3320, MATH 3400, MATH 4630, PHYS 2052 or PHYS 2056 and PHYS 2057	CHEM 1520 and CHEM 152L, PHYS 2530 and PHYS 253L

*Business Elective:

Students are required to complete two courses as part of OHIO's Business Elective requirement. Washington State College of Ohio's ENGR 1010 Fundamentals of Engineering will be applied towards one of OHIO's Business Elective course requirements. Students who have not completed ENGR 1010 must complete two Business Elective courses.

Disclaimer:

The information on this guide is based on the catalog requirements posted in the 2024-2025 Ohio University catalog and related Washington State College of Ohio equivalents as of the Last Updated date. All information is subject to change without notice. Students must complete a minimum of 125.5 total semester hours, are responsible for tracking their degree completion on their DARS, and are encouraged to work with an Ohio University academic advisor in their degree planning. Courses are subject to availability at each institution. It is suggested that students meet with an advisor to discuss course selection based on offered options.

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