Transfer Credit Ohio

Ohio Guaranteed Transfer Pathways

WRIGHT STATE UNIVERSITY

Electrical Engineering

Bachelor of Science

EFFECTIVE BEGINNING ACADEMIC YEAR 2024-25

LAST REVISED: April 30, 2025

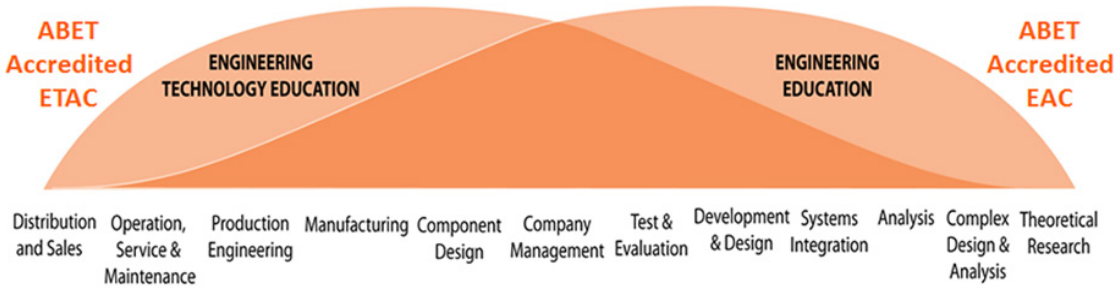
"Engineering and engineering technology are separate but closely related professional areas that differ in:

• Curricular Focus – Engineering programs often focus on theory and conceptual design, while engineering technology programs usually focus on application and implementation. Engineering programs typically require additional, higher-level mathematics, including multiple semesters of calculus and calculus-based theoretical science courses, while engineering technology programs typically focus on algebra, trigonometry, applied calculus, and other courses that are more practical than theoretical in nature.
• Career Paths – Graduates from engineering programs are called engineers and often pursue entry-level work involving conceptual design or research and development. Many continue on to graduate-level work in engineering. Graduates of four-year engineering technology programs are called technologists, while graduates of two-year engineering technology programs are called technicians. These professionals are most likely to enter positions in sectors such as construction, manufacturing, product design, testing, or technical services and sales. Those who pursue further study often consider engineering, facilities management, or business administration.

There is much overlap between the fields. Engineers may pursue MBAs and open their own consulting firms, while technologists may spend their entire careers in design capacities."

This pathway includes a combination of Associate of Science (AS) and Associate of Applied Science (AAS) coursework. It should result in students earning an AS degree. Some bachelor-degree granting programs may be competitive and admission into the program is not guaranteed. Students should check with individual institutions for their program admission requirements.

Some bachelor-degree granting institutions require additional general education courses outside of the Ohio Transfer 36 and students may be required to take these courses in their junior or senior year. Additionally, students should be aware that certain Engineering programs require more than four semesters full-time to complete due to special requirements such as co-op for both transfer and non-transfer students.



Sources: Definition comes from the Accreditation Board for Engineering and Technology (ABET) (http://www.abet.org/accreditation/new-to-accreditation/engineering-vs-engineering-technology/), and the graphic comes from the American Society of Mechanical Engineers (ASME)

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The following table outlines how transfer credits will be applied to the **Bachelor of Science in Electrical Engineering** at Wright State University for students who completed an Associate of Science via the Ohio Guaranteed Computer/Electrical Engineering Transfer Pathway. The OGTP designation guarantees the transfer and applicability of credits, but does not guarantee admission to a program. Some bachelor-degree granting programs may be competitive, and students should check with the individual institutions for their program admission requirements.

COURSE EQUIVALENCIES FROM THE ASSOCIATE DEGREE	COURSE NUMBER	CREDIT HOURS
GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER 36		
Any Ohio Transfer 36 approved First Writing (TME001)	ENG 1100	3
Calculus I (TMM005)[1]	MTH 2300	4
Any Ohio Transfer 36 approved Arts and Humanities course	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Arts and Humanities course	Ohio Transfer 36 Elective*	3
Microeconomics (OSS004)	EC 2040	3
Introduction to Psychology (OSS015)	PSY 1010	4
Calculus-based Physics I (OSC016)	PHY 2400 & PHY 2400L	5
Calculus-based Physics II (OSC017)	PHY 2410 & PHY 2410L	5
Calculus II (TMM006)	MTH 2310	4
Public Speaking (OCM013), Oral Communication (TMOC), or Second Writing (TME002) course	COM 1010 or ENG 2100	3
General Chemistry I (OSC008)	CHM 1210 & CHM 1210L	5
PRE-MAJOR/BEGINNING MAJOR		
Digital Electronics (OET002)	EE 2000 & EE 2000L	4
Programmable Logic Controllers (OET022)	Elective*	4
Engineering Statistics (OES004)	ISE 2211	3
OTHER RECOMMENDATIONS		
Calculus III (OMT018)	MTH 2320	4
Elementary Linear Algebra (OMT019)	MTH 2530	3
Elementary Differential Equations (OMT020)	MTH 2330	3
Electives (as needed)[2]	Varies*	0-4
TOTAL HOURS FROM ASSOCIATE DEGREE:		**60-65**

Advising Notes:

(*) Indicates that coursework will be evaluated for applicable equivalency upon transfer at the university. If a Transfer Assurance Guide (TAG) course is taken, the approved course equivalency will be awarded.

[1] A prerequisite such as College Algebra (TMM001) may be needed for a student to reach Calculus I (TMM005).

[2] Students following this program of study at Wright State University would benefit from taking any of the following guaranteed transfer course: Computer Science (OCS001)

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The following additional coursework will be required to complete the **Bachelor of Science in Electrical Engineering** at Wright State University after a student has completed an Associate of Science Ohio Guaranteed Computer/Electrical Engineering Transfer Pathway degree. Some bachelor-degree granting programs may be competitive and admission into the program is not guaranteed. Students should check with the individual institutions for their program admissions requirements.

REMAINING COURSEWORK TO COMPLETE BACHELOR'S DEGREE		COURSE NUMBER	CREDIT HOURS
General Education Requirement:	Technical Communications for Engineers and Computer Scientists OR Research, Technical Writing, and Presentation for Scientists and Engineers	EGR 3350 or ENG 2140	3
Pre-Major Requirement:	Analog Circuit Theory and Lab (if not completed during the associate degree program)[1]	EE 2010 & EE 2010L	4
Pre-Major Requirement:	Introduction to C Programming for Scientists and Engineers OR Introduction to Computer Programming OR Computer Science I	CEG 2170 or CS 1160 or CS 1180	4
Major Requirement:	Continuous Linear Systems	EE 3210	3
Major Requirement:	Random Signals and Noise	EE 3260	3
Major Requirement:	Electronic Devices and Circuits and Lab	EE 3310 & EE 3310L	4
Major Requirement:	Introduction to Electromagnetics and Lab	EE 3450 & EE 3450L	4
Major Requirement:	Discrete Linear Systems	EE 4000	3
Major Requirement:	Continuous Control Systems and Lab	EE 4130 & EE 4130L	4
Major Requirement:	Digital Integrated Circuit Design with PLDs and FPGAs and Lab	EE 4620 & EE 4620L	4
Major Requirement:	Electrical Engineering Electives 4000-level	Varies	11-12
Major Requirement:	Electrical Engineering Senior Design Project I	EE 4910	3
Major Requirement:	Electrical Engineering Senior Design Project II	EE 4920	3
Major Requirement:	Technical Elective	Varies	4-8
REMAINING COURSEWORK TO COMPLETE BACHELOR'S DEGREE TOTAL:[2]			**57-62**

Advising Notes:
[1] Students should complete EE 2010/2010L equivalent courses (Analog Circuit Theory with a Lab) when possible in order to be able to complete the bachelor's degree in four semesters after transfer. Consult with your academic advisor and your receiving institution to determine an appropriate course equivalency.
[2] Wright State University requires a total of 120 credit hours for degree completion. The total number of hours in the third and fourth years represent a range of hours that may be needed depending on the individual course selections made during the first two years.

COMPLETE BACHELOR'S DEGREE	TOTAL CREDIT HOURS
BACHELOR'S DEGREE TOTAL:	**120**

SPECIAL NOTES

For more information, please contact:
College of Engineering and Computer Science
cecs-advisors@wright.edu
937-7765-5272
https://engineering-computer-science.wright.edu/

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SAMPLE DEGREE MAP

THIRD YEAR

SEMESTER 5

COURSE NAME & NUMBER	CREDIT HOURS
CEG 2170 Introduction to C Programming for Scientists and Engineers or CS 1160 Introduction to Computer Programming or CS 1180 Computer Science I	4
EE 2010 Analog Circuit Theory	3
EE 2010L Analog Circuit Theory Lab	1
Technical Elective	0-4
Technical Elective	4
Total *SEMESTER 5* Credit Hours	12-16

SEMESTER 6

COURSE NAME & NUMBER	CREDIT HOURS
EE 3210 Continuous Linear Systems	3
EE 3310 Electronic Devices and Circuits	3
EE 3310L Electronic Devices and Circuit Lab	1
EE 4000 Discrete Linear Systems	3
EGR 3350 Technical Communications for Engineers and Computer Scientists or ENG 2140 Research, Technical Writing and Presentation for Scientists and Engineers	3
Total *SEMESTER 6* Credit Hours	13

FOURTH YEAR

SEMESTER 7

COURSE NAME & NUMBER	CREDIT HOURS
EE 3260 Random Signals and Noise	3
EE 3450 Introduction to Electromagnetics	3
EE 3450L Electromagnetics Lab	1
EE 4130 Continuous Control Systems	3
EE 4130L Continuous Control SystemsLab	1
4000-level EE Elective	4
Total *SEMESTER 7* Credit Hours	15

SEMESTER 8

COURSE NAME & NUMBER	CREDIT HOURS
EE 4620 Digital Integrated Circuit Design with PLDs and FPGAs	3
EE 4620L Digital Integrated Circuit Design with PLDs and FPGAs Lab	1
EE 4910 Electrical Engineering Senior Design Project I	3
4000-level EE Electives	7
Total *SEMESTER 8* Credit Hours	14

FIFTH YEAR

SEMESTER 9

COURSE NAME & NUMBER	CREDIT HOURS
EE 4920 Electrical Engineering Senior Design Project II	3
Total Semester 9 Credit Hours	3