

APPLIED TECHNOLOGY | BACHELOR OF SCIENCE IN TECHNOLOGY STUDIES (ENGINEERING DESIGN)

Program Summary

Code	Title	Hours
General Education Courses		34
Industrial Technology Core Courses		26
Concentration Core Courses		27
Management Requirements		6
Directed Electives		9
Cognates		18
Total Hours		120

¹ Open electives are the credit hours required to reach a minimum of 120 total hours and 45 upper-level hours. The number listed assumes all courses are completed at FHSU as listed. This number may vary if students transfer courses, or have individual substitutions allowed.

Students should speak with their advisor if either situation applies to determine if the number will vary, and to ensure they enroll in a minimum of 45 upper-level hours.

Students entering within 1 year of high school graduation will take UNIV 101 Freshman Seminar and may apply that hour in the open elective category.

Program Requirements

General Education

All undergraduate degrees require completion of the Kansas Systemwide General Education (<https://catalog.fhsu.edu/general-education/>).

Courses identified with ^{GE} on this page may satisfy a general education requirement in addition to the identified degree requirement. Students who apply a degree requirement to satisfy a general education requirement will typically add an equal number of hours to the the university elective category. This flexibility may allow you to complete a minor or certificate within the 120 hour degree. Transfer students and students majoring in programs with approved exceptions (<https://www.fhsu.edu/general-education/documents/fhsu-gen-ed-transfer-exceptions-explainer1.pdf>) are especially encouraged to select these courses in completing General Education requirements to maximize the likelihood of completing the degree with 120 credit hours.

Code	Title	Hours
General Education		34-35

Code	Title	Hours
TECS Core Requirements		
TECS 120	Power, Energy, and Transportation ¹	3
TECS 130	STEM in Technology Systems ¹	3
TECS 200	Engineering Graphics ¹	3
TECS 312	Graphic Communication Techniques ¹	3
TECS 318	Introduction to ComputerAided Drafting ¹	3

TECS 480	Industrial Management ²	3
TECS 490	Occupational Safety, Health, and Liability ³	2
TECS 495	Training and Instructional Systems ⁴	3
or TECS 460	Teaching Technology & Engineering Education	
Select one course from the following:		3
TECS 406	Problems in Technology Studies	
TECS 499	Internship ^{1,5}	
TECS 606	Technology Issues	

Concentration Core Courses		
TECS 180	Materials, Processes, and Production ⁴	3
TECS 310	Manufacturing Graphics ²	3
TECS 355	Computer-Aided Drafting ⁴	3
TECS 375	Robotics: Engineering Problem Solving ²	3
TECS 385	Construction Planning and Design ²	3
TECS 415	Construction Graphics ⁴	3
TECS 445	Civil Drafting ²	3
TECS 475	Mechanical and Electrical Systems ⁴	3
TECS 610	Advanced Computer-Aided Drafting	3

Management Requirements		
MGT 101	Introduction to Business ¹	3
MGT 301	Management Principles ¹	3

Directed Electives		
Select nine credit hours from TECS electives		9

Cognates		
MATH 101	Contemporary Mathematics ^{GE}	3
or MATH 110	College Algebra	
MATH 250	Elements of Statistics ^{GE}	3-5
or MATH 234	Analytic Geometry and Calculus I	
GSCI 100	Exploring Earth ^{GE}	3
IDS 390	Technology in Society	3
PHYS 102	Physical Science ^{GE}	3
PHYS 103	Physical Science Laboratory ^{GE}	1
or GSCI 102	Exploring Earth Laboratory	

Total Hours		84-86
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¹ Classes offered **both** Fall and Spring.

² Class offered in the Spring.

³ Class offered Intersession (between Fall and Spring semesters) / Spring.

⁴ Class offered in the Fall.

⁵ TECS 499 Internship—Internship Students: plan ahead for internship. Start gathering details the semester **before** you want to do internship. 9 credit hours of internship can be broken up into segments (before your senior year). Get an internship manual from the Applied Tech office (AT 121 or dat@fhsu.edu). Make appointment with Mr. Stewart: Department Chair (AT 121) before you are ready to enroll. Note: **all** students (grade level and major) are encouraged to attend & participate in the Career Fair held each fall. This will give you personal contacts with many companies to set up internship, summer work, or full-time employment upon graduation. **All** Technology Studies students plan to attend the **Career Fair!**

Degree Requirements

Code	Title	Hours
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All bachelor degrees require:

GPA of 2.0 on FHSU courses & 2.0 on all coursework (Higher program requirements prevail over the 2.0 when set)

A minimum of 30 hours earned from FHSU with a grade of D, C, B, or A

Successful completion of an upper division Writing and Information Literacy course (Most majors contain a course designated)

A minimum of 45 hours of recognized upper division credit

A minimum of 120 hours of recognized college credit

Degree Maps

Academic Degree Maps are term-by-term sample course plans that specify milestones, courses, and special requirements that are necessary for facilitating on-time completion. Degree Maps are *examples* and are not prescriptive. Individualized choices such as concentration options, transfer credits, optional minors, advisory programs (certificates), etc. can alter the recommended coursework. Course offerings are subject to change. Students should consult with their academic advisors for additional guidance on course planning.

To determine courses to take in the directed choices (often listed as Program Elective Course) and directed elective course blocks see the overview tab for courses. To locate approved courses in General Education areas (Undergraduate Programs) see the general education section (<https://catalog.fhsu.edu/general-education/>) of the catalog.

The undergraduate course maps typically advise the most efficient route for students to complete the general education requirements. Courses that are required in the major may be listed as fulfilling relevant general education requirements. This will result in more open elective course hours in some maps than is listed on the degree overview page.