# 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** |

[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 |
|---|---|---|
| **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 | | |