GET 1100. Introduction to Engineering and Technology. 3 Hours.
Analyzes the diversity, need, and applicability of engineering as the
profession that solves technical problems and drives technological
innovation. Discusses essential requirements to succeed academically
in engineering and introduces useful tools to optimize academic
performance, such as the use of computers to perform calculations
and mathematics to communicate engineering ideas. Reviews simple
concepts of science and mathematics in historical and quantitative
context, and uses small projects and in-class demonstrations to acquaint
students with engineering concepts behind common technologic
innovations. Discusses basic ideas for management of projects;
techniques to formulate solutions to technical problems; and general
structure for engineering design, manufacturing, and testing of products.

GET 1150. Foundations of Engineering Graphics and Design. 3 Hours.
Offers students an opportunity to obtain basic engineering drafting and
introductory design skills needed to function in a computer-aided drafting
(CAD) environment. Covers the history of engineering hand drafting
and the differences/similarities with respect to CAD tools used today.
Discusses the basic steps of the engineering design process and how to
apply these steps in small design projects where pictorial sketching and
descriptive geometry (isometric and oblique drawings and projections)
are used to communicate graphical solutions to proposed problems.
Covers basic understanding of mechanical, electrical, and architectural
layouts, and introduces basic dimensioning and tolerancing terms.
Introduces the general features, capabilities, similarities, and differences
among common engineering CAD software—such as SolidWorks,
Autodesk AutoCAD, and PTC Creo—through introductory lab sessions.

GET 1990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions.
May be repeated without limit.

GET 2100. Computer Engineering Programming and Analysis. 3 Hours.
Introduces the C++ programming language. Covers basic programming
constructs and manipulation of data types including arrays, strings,
and pointers. Offers students an opportunity to learn to isolate and
fix common errors in C++ programs, to properly allocate/de-allocate
memory for objects and class libraries. Introduces object-oriented
approaches to software problems in C++.

GET 2200. Engineering Economy. 3 Hours.
Studies the financial and economic concepts that are required to analyze
engineering project financial performance, from the conceptual stage
through the engineering and design stages. Examines time value of
money, the tax consequences accruing relating to the project, as well as
the advantages of utilizing financial leverage provided by various
methods of raising required capital. Covers topics such as inflation,
cost estimation, taxes and depreciation, decision trees, and risk and
simulation. Stressing problem solving through case studies in order to
enforce concepts and guidelines behind sound economic and financial
decisions in engineering projects and enterprises.

GET 2990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions.
May be repeated without limit.

GET 3100. Computer Control of Manufacturing Processes. 3 Hours.
Presents and discusses computer control of manufacturing processes.
Offers students an opportunity to learn the fundamentals of
manufacturing processes and automation and control technologies.
Reviews hardware components such as sensors, actuators, analog-
to-digital converters, and I/O devices. Demonstrates computer
numeric control, industrial robotics, discrete and programmable logic
controllers, and analyzes their functions, applications, advantages, and
limitations. Also analyzes a variety of manufacturing systems, including
automation production lines, assembly systems, and cellular and flexible
manufacturing. Topics include quality control system integration and
lean production.

GET 3990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions.
May be repeated without limit.

GET 4840. Engineering Technology Capstone Project Preparation and
Proposal. 2 Hours.
Offers students an opportunity to apply the steps of the engineering
design process and develop a comprehensive written engineering project
proposal. Includes a review of the engineering design process from
problem statement to prototype fabrication and testing. Working closely
with the instructor, students are asked to identify a technological need of
actual interest for local companies, communities, or students’ workplace
and to follow the engineering design process. Students document
the marketing, patent, and literature search for prior art, customer/
engineering specifications, brainstorming process to generate feasible
solutions, most viable solution selection process, and detailed labor
and materials budget for actual execution of the solution to be completed in
GET 4850.

GET 4850. Engineering Technology Capstone Project Execution. 4 Hours.
Continues the design process initiated in GET 4840. Students implement
the solution to the identified need/problem that they previously
identified. This course is the culmination of the engineering technology
academic curriculum, where students are expected to apply the
knowledge and practice needed from a variety of domains in order to
execute their plan of action and timeline of activities. The results of
their work should culminate in the creation of an actual engineering
system prototype along with a comprehensive final written report and
oral presentation by team members.

GET 4950. Seminar. 1-4 Hours.
Offers an in-depth study of selected topics.

GET 4955. Project. 1-4 Hours.
Focuses on in-depth project in which a student conducts research or
produces a product related to the student’s major field. May be repeated
without limit.

GET 4983. Topics. 1-4 Hours.
Covers special topics in general engineering technology. May be repeated
without limit.

GET 4990. Elective. 1-4 Hours.
Offers elective credit for courses taken at other academic institutions.
May be repeated without limit.

GET 4991. Research. 1-4 Hours.
Offers students an opportunity to conduct research under faculty
supervision.
GET 4992. Directed Study. 1-4 Hours.
Offers independent work under the direction of members of the department on a chosen topic.

GET 4993. Independent Study. 1-4 Hours.
Offers independent work under the direction of members of the department on a chosen topic.

GET 4994. Internship. 1-4 Hours.
Provides students with an opportunity for internship work.

GET 4995. Practicum. 1-4 Hours.
Provides eligible students with an opportunity for practical experience.

GET 4996. Experiential Education Directed Study. 1-4 Hours.
Draws upon the student's approved experiential activity and integrates it with study in the academic major.