## ECET 4820: Communications Networks and the Internet

***3 Credit Hours***

*Prerequisite: ECET 3400*

This course covers the fundamental concepts, operational characteristics, and design principles of digital networks. The course focuses on local-area and wide-area network topologies and protocols that are used in the Internet. Topics include: TCP/ IP protocol, Internet standards, routing and switching devices, Internet organization, Ethernet and virtual LANS, MPLS, and an overview of aspects of computer network operating systems related to networking.

## ENGT 2000: Applied Engineering Math

***3 Credit Hours***

*Prerequisite: MATH 2202*

This course focuses on the practical application of the essential mathematical skills required by practicing engineers. All the basic math skills needed to manage contemporary technology problems are addressed. Topics include algebra, geometry, trigonometry, complex arithmetic, differential and integral calculus, simultaneous algebraic equations, differential equations, Fourier series and Fourier transform, Laplace transform, Mathematics of vectors, and Probability and Statistics.

## ENGT 4400: Directed Study for Engineering Technology

***1-6 Credit Hours***

*Prerequisite: Consent of the Department Chair*

Independent study on topics of mutual interest to faculty and students. Assignments depend upon the specific background of the student, equipment availability, software availability, etc. Projects require a proposal presentation, scheduling, implementation and both written and oral presentations of study results.

## ENGT 4901: Engineering Technology Senior Design I

***1 Credit Hours***

*Prerequisite: MET 4501 for MET Majors, or ECET 3710 (concurrently) for EET Majors*

Part 1 of a two-course senior design capstone project for Engineering Technology. Students will form teams, define design projects, and write a proposal.