



Master of Science in Construction Technology

PROGRAM DESCRIPTION:

The Master of Science degree in Construction Technology at prepares students for the supervisory level of handling residential construction projects. Students will focus on the basics of construction technology including project scheduling, estimating and control; the legal and developmental aspects of the design process; and addressing issues of quality in residential projects.

Course Number	Course Title	Course Description	Credits
TECH 500	Principles of Construction Technology	An overview of the construction industry and its practices in national and regional perspectives. Emphasis will be given to urban planning and city residential requirements. ACCE 5.2	3
TECH 510	Project Management and Controls	The course will look at the control systems encountered for a successful construction project. Cost estimating, scheduling, and management of the project to control and minimize external factors will be reviewed. ACCE 4.35, 4.37, 5.1, 5.2, 5.21, 5.31, 5.6	3
TECH 520	Project Scheduling	The course will cover the applications for project scheduling and maintenance. Techniques will be discussed regarding industry standards and utilization in specific situations. ACCE 4.33, 4.39, 5.17, 5.2, 5.21, 5.26, 5.6	3
TECH 525	Project Estimating	The course will cover the procedures for estimating and bidding projects in the construction industry. Theories and practical application regarding preparing, analyzing, and submitting estimate of costs will also be addressed. ACCE 4.37, 5.1, 5.15, 5.16, 5.21, 5.31, 5.33, 5.6	3
TECH 530	Computer Applications for Construction	The course will cover computer applications used in the construction industry. Students will review office and project planning software; construction scheduling and management software; and accounting application software. ACCE 3.2, 4.36, 5.17, 5.2, 5.21, 5.26, 5.3, 5.6, 5.67	3
TECH 540	Design-Build Projects	The course will review the roles of the designer, the builder, and the owner. Development of the cost estimating, proposal writing, and risk allocation will be reviewed. Review of the original contract structure will be assessed on its impact to the overall project. ACCE 4.1, 4.2, 4.37, 4.4, 4.52, 5.1, 5.21, 5.31, 5.6	3
CON 635	Green Design Principles	Course will cover lot design, preparation, and construction using resource and energy efficient concepts. Discussions will also include site planning	3

		and land development, water efficiency, and educating homeowners regarding environmental quality issues and their new home. Course will follow NAHB guidelines. ACCE 2.1, 4.1, 4.2, 4.52, 5.2, 5.21, 5.66	
CONT 605	Design and Construction Law	The course will focus on the legal issues involved with the design aspects of construction services. Topics will include the relationship between the designer/owner, selection of a contractor, the process and legal guidelines for construction projects. ACCE 3.4, 4.1, 4.2, 5.21, 5.4, 5.44, 5.6	3
CONT 620	Residential Project Development	The course will provide an overview of the residential project development. Topics will cover environmental regulations, land development, regional and city requirements, and the scope of developing a large residential project as a construction firm. ACCE 4.52, 5.21, 5.42, 5.6	3
CONT 630	Construction Contracts and Finance	The course will look at the legal issues in construction administration. Topics will include the ability to analyze and project current and future economic issues within the contracts of the project and the legal and financial aspects of changes and cancellations. ACCE 5.21, 5.25, 5.3, 5.41	3
CONT 640	Facility Acquisition Planning	The course will focus on the owner and the purchase of building and designing services. It will look at the difference in perspective, common questions and problems, and the challenges associated with balancing owner requests with original project plan. ACCE 4.1, 4.2, 5.2, 5.21, 5.6	3
CONT 645	Temporary Structures	The course will review the various types of temporary and permanent structures used in construction projects. Topics will include materials, methods, and the impact of the location to the structural selection. ACCE 4.1, 4.24, 4.3	3

Total Credits: 36