

Introduction to CNC Manufacturing Concentration (ETCI)

Certificate in Engineering Systems Technology (CERT_ETST)

Knight Campus, Warwick only

Companies are integrating computers into engineering and manufacturing environments at a rapid pace. At the heart of advanced manufacturing is CNC machining and the computer applications that support the design and manufacturing process. This program builds the basic skills and knowledge for employment opportunities in the CNC manufacturing environment. The certificate covers areas of science and mathematics as they apply to machining practices and CNC programming. Emphasis is placed on both theoretical and practical phases of the design, cost and production of machine parts.

The certificate can be completed in a summer and fall semester, or in a summer, fall and spring semester. The certificate courses are offered in the day and evening. The accelerated summer-fall version will require attending classes four days a week. Certificate completion prepares students to enroll in a second, more advanced CNC-centered certificate – CNC Manufacturing and 3D-Modeling (ETCA). The combination of the two certificates, ETCI and ETCA, can be applied toward the Engineering Systems Technology A.S. degree (ETCT) and the Advanced Manufacturing Technology (ETMA) without a loss of credit.

Note: Many courses require prerequisites, corequisites and/or testing. [See course descriptions for details.](#)

RECOMMENDED COURSE SEQUENCE (accelerated version)

- Summer semester: ENGR 1030
- Fall semester: ENGT 2090; ETME 1020; ETCN 1100, 1200, 1300

Certificate Requirements

COURSE NO.	COURSE TITLE	COURSE NOTES	CREDITS
ENGR 1030	Engineering Graphics		3
ETME 1020	Introduction to Manufacturing Processes		3
ETCN 1100	Blueprint Reading and the Machinery's Handbook	Seven-and-a-half week course	3
ETCN 1200	Precision Measurement and Geometric Dimensioning and Tolerance	Seven-and-a-half week course	3
ENGT 2090	Advanced Solid Modeling		3
ETCN 1300	CNC Machining I		3
Total Certificate Requirements Credits			18
Total Program Credits			18