

**Central Carolina Community College
Program Planning Guide**

**Mechanical Engineering Technology
Credential: Certificate in Computer Aided Manufacturing (C4032002)**

The rapidly developing age of high technology has brought about a need for people in the fields of manufacturing, CNC programming, tool and mold making, and engineering and design to develop skills in interfacing CAD/CAM with CNC equipment.

This certificate is intended for persons with some manufacturing experience who wish to attend class at night. (Enrollment is by approval of advisor.)

Program Length: 2 semesters

Career Pathway Options: Associate in Applied Science in Mechanical Engineering Technology (Higher entrance standards required); Diploma in Mechanical Engineering Technology; Certificate in Computer Aided Drafting, Certificate in Computer Aided Manufacturing

Program Sites: Lee Campus - Evening Program

Suggested Course Schedule:	HOURS			Grade	Semester	Notes
	Class	Lab	Credit			
1st Semester (Fall)						
DFT 151	CAD I	2	3	3		
MEC 110	Introduction to CAD/CAM	1	2	2		
		3	5	5		
2nd Semester (Spring)						
DFT 152	CAD II	2	3	3		
MEC 231	CAM I	1	4	3		
		3	7	6		
3rd Semester (Fall)						
MEC 232	CAM II	1	4	3		

Total Semester Hours Credit: 14

Course Descriptions:

DFT 151 CAD I 2-3-3
Local Prerequisite: DFT 111 or Instructor Approval
This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

DFT 152 CAD II 2-3-3
Local Prerequisite: DFT 151
This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings.

MEC 110 Introduction to CAD/CAM 1-2-2
This course introduces CAD/CAM. Emphasis is placed on transferring part geometry from CAD to CAM for the development of a CNC-ready program. Upon completion, students should be able to use CAD/CAM software to produce a CNC program.

MEC 231 Computer-Aided Manufacturing I 1-4-3
Prerequisite: MEC 110
This course introduces computer-aided design/manufacturing (CAD/CAM) applications and concepts. Topics include software, programming, data transfer and verification, and equipment setup. Upon completion, students should be able to produce parts using CAD/CAM applications.

MEC 232 Computer-Aided Manufacturing II 1-4-3
Prerequisite: MEC 231
This course provides an in-depth study of CAM applications and concepts. Emphasis is placed on the manufacturing of complex parts using computer-aided manufacturing software. Upon completion, students should be able to manufacture complex parts using CAM software.