

Level 2 - Interior Design Assistant - Associate in Science Degree

Program Outcome

The outcome of the Associate in Science Degree level is to prepare students for entry-level employment as an interior design assistant to a professional interior designer. In addition, the outcome of this level is for students to progress to Level 3 – Interior Design Professional Level and/or for transfer.

Third Semester

Level I Certificate			(27)
BIM 1 for Architecture	ARCH	A155	(2)
Space Planning	ID	A170	(3)
Interior Illustration	ID	A200	(3)
Fundamentals of Lighting	ID	A210	(3)
Business & Professional Practice	ID	A230	(3)

Fourth Semester

BIM 2 for Architecture	ARCH	A156	(2)
Interior Design Studio 2	ID	A215	(3)
Interior Design Const Documents	ID	A220	(3)
Interior Design Internship	ID	A240	(4)

Subtotal: (53)

Level 3 - Interior Design - Professional Level

Program Outcome

The outcome of this Interior Design certificate of achievement is to prepare students for entry-level employment as a professional interior designer and for industry certifications.

Certificate of Achievement*

Fifth Semester

Level I & II Certificate			(53)
Small Business Ownership	BUS	A240	(3)
Codes and Building Systems	ID	A250	(3)
Digital Visualization	ID	A260	(3)
Interior Design Studio 3	ID	A265	(3)

Sixth Semester

Interior Design Studio 4	ID	A275	(3)
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Subtotal: (15)

Total: (68)

Suggested electives:

Color & Design 2-D	ART	A110	(3)
Color & Design 3-D	ART	A111	(3)
Freehand Drawing	ART	A120	(3)
Perspective	ART	A125	(3)
Exhibition Design (Gallery)	ART	A145	(3)

LEADERSHIP STUDIES

The goal of this program is to enhance individual and organizational effectiveness. Students will develop personal leadership skills, study ethical dimensions of leadership, understand how leadership affects people, organizations, and society, and articulate and apply their own philosophy of leadership in their careers and lives.

Program Outcomes

- Upon successful completion of the certificate of specialization graduates will be able to:
- Function effectively in a leadership role using the skills, principles, and tools they have acquired.
 - Apply the leadership principles they have learned in their personal and/or organizational lives.
 - Distinguish between the qualities of effective and ineffective leaders.

CERTIFICATE OF SPECIALIZATION

Required Courses

Course			Units
Personal Leadership	LEAD	A180	3
Organizational Leadership	LEAD	A200	3
Interpersonal Communication	SPCM	A100	3

Total: (9)

MANUFACTURING TECHNOLOGY

OCC's Manufacturing Technology program is designed to train students for entry-level positions as machine operators. Additionally, both beginning students and working machinists can build on their skill and knowledge by completing the requirements for one of the advanced certificates.

The Manufacturing Technology program is divided into four areas: Machinist, Computer Numerical Control (CNC) Operator, CNC Programmer, and Tool Maker. All four programs follow sequential plans which spin off from the core machinist program. After completing the machinist program in two semesters, the student can take the classes required for one of the more advanced certificates. The student who completes the machinist program also satisfies the major requirements for the Associate in Science degree.

Program Outcomes

- Upon successful completion of the Manufacturing Technology Program students will be able to:
- Machine precision manufactured parts using conventional lathes and milling machines and perform necessary measurements.
 - Set-up and operate CNC Lathes and Milling Machines.
 - Write part machine programs for controlling CNC lathes and milling machines.
 - Manufacture precision tooling for Dies, Molds, and Prototype tooling.
 - Write advanced CAD/CAM programs for CNC LATHE and Milling Machines.

MACHINIST

The Machinist certificate program trains students for positions as entry-level operators, which often are the first manufacturing jobs for industrial employees. This certificate program provides the skill and knowledge necessary for job candidates to become successful wage earners. This program also comprises the core courses for the more advanced certificates.

CERTIFICATE OF ACHIEVEMENT

Required Courses			
Course			Units
Fall			
Intro to Machine Shop	MACH	A100	(3)
Lathe	MACH	A105	(5)
Blueprint Reading	MACH	A120	(3)
Computations for Machinists	MACH	A121	(3)
Spring			
Milling Machine	MACH	A110	(5)
Production Machining Tech	MACH	A115	(4)
Total:			(23)

ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CNC MACHINE OPERATOR

The CNC Machine Operator certificate enhances the skills of students who have earned the Machinist certificate by providing that student with CNC machine operating skills and manual programming skills. The courses required for earning this certificate are designed to make the machine operator capable of setting up and manually programming a CNC machine tool. The CNC Machine Operator Professional Upgrade Certificate is specifically for the returning student with on-the-job machining experience.

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Manufacturing Technology—Machinist Certificate of Achievement

Subtotal: **(23)**

Required Courses			
Course			Units
Fall			
CNC Machine Operation	MACH	A125	(3)
Spring			
CNC Machine Operation 2	MACH	A126	(2)
Intro to CNC & Manual Programming	MACH	A130	(4)
Total:			(9)
Total:			(32)

ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

CONTINUED NEXT PAGE



CNC MACHINE PROGRAMMER

The CNC Machine Programmer certificate includes courses designed to upgrade the skills and knowledge of the machinist or the CNC machine operator to the level of the CNC machine programmer. If you are a machinist and have minimal experience with CNC machines or machine language programming, you will first want to complete the CNC Machine Operator Professional Upgrade Certificate. If you have both machining experience and CNC experience, the software used for the Machine Technology A133 and A134 courses provides excellent experiences in computer-assisted CNC programming. All of our programming courses require the use of a personal-type computer. If you have no computer experience, we strongly suggest you enroll in a basic computer use type course first (Computer & High Technology A100 or Computer Information Systems A100).

CERTIFICATE OF ACHIEVEMENT

Required prerequisite:

Manufacturing Technology—Machinist Certificate of Achievement

Course	Required Courses		Units
	Fall		
CNC Machine Operation	MACH	A125	(3)
	Spring		
CNC Machine Operation 2	MACH	A126	(2)
CNC Programming-Mastercam 1	MACH	A133	(3)
	Summer		
Mastercam Solids	MACH	A142	(2)
	Fall		
CNC Programming-Mastercam 2	MACH	A134	(3)
	Intersession		
Mastercam Lathe	MACH	A141	(1.5)
			(14.5)
			Total: (37.5)

ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

TOOLING

Earning the Tooling certificate upgrades the skills of the machinist to the point required for profitable employment as an entry-level tool maker, a die maker, or a mold maker. As well as other subjects that must be learned by the beginning tool maker, the Tooling certificate program includes courses in metallurgy, tool and cutter grinding, and welding tooling.

CERTIFICATE OF ACHIEVEMENT

Required Courses

Course			Units
Intro to Machine Shop	MACH	A100	(3)
Lathe	MACH	A105	(5)
Milling Machine	MACH	A110	(5)
Production Machining Tech	MACH	A115	(4)
Blueprint Reading	MACH	A120	(3)
Computations for Machinists	MACH	A121	(3)
CNC Machine Operation	MACH	A125	(3)
Intro to CNC & Manual Programming	MACH	A130	(4)
Tool & Cutter Grinding	MACH	A150	(2.5)
Dimensioning & Tolerancing	MACH	A175	(3)
Elementary Metallurgy	MACH	A190	(2)
Tooling	MACH	A200	(2.5)
Arc & Oxy-acetylene Welding	WELD	A100	(3)
			Total: (43)

ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

MACHINE TECHNOLOGY

Professional Upgrade Certificates

CNC Operator

This Professional Upgrade Certificate is designed for students who are already machinists. Before starting on this plan you should be able to set up and operate both conventional lathes and mills. You should be able to read blueprints and use all common machine shop measuring tools. If you have a deficiency in these areas, please refer back to the basic machining courses found in the Machinist certificate.

CERTIFICATE OF SPECIALIZATION

Required Courses

Course			Units
	Fall		
CNC Machine Operation	MACH	A125	(3)
Intro to CNC & Manual Programming	MACH	A130	(4)
	Spring		
CNC Mach Operation 2	MACH	A126	(2)
			Total: (9)

CNC Programmer

This Professional Upgrade Certificate is designed to upgrade the skills and knowledge of the machinist or the CNC machine operator to the level of the CNC machine programmer. If you are a machinist and have minimal experience with CNC machines or machine language programming, you will first want to complete the CNC operator upgrade certificate. If you have both machining experience and CNC experience, the software used for the Machine Technology A133 and A134 courses provide excellent experiences in computer-assisted CNC programming. All of our programming courses require the use of a personal computer. If you have no computer experience, we strongly suggest you enroll in a basic computer use course first (Computer & High Technology A100 or Computer Information Systems A100).

Note: Two unit contract education course requirements must be designed in cooperation with the student and the instructor, or the student, instructor, and employer. This course will require the student to complete a project from beginning to end, to include all necessary paperwork, fixturing, programming, and machining of the final part, or the student may take MachineTechnology A126, Advanced CNC Machine Operation.

CERTIFICATE OF SPECIALIZATION

Course	Required Courses		Units
CNC Mach Operation 2	MACH	A126	(2)
CNC Prog-Mastercam 1	MACH	A133	(3)
CNC Prog-Mastercam 2	MACH	A134	(3)
Mastercam Lathe	MACH	A141	(1.5)
Mastercam Solids	MACH	A142	(2)
Total:			(11.5)

CERTIFICATE OF ACHIEVEMENT

Course	Required Courses		Units
Intro to Business (Or) Honors Intro to Bus Intro to Computer Appl Applied Management Interpersonal Communication	Fall		
	BUS	A100	(3)
	BUS	A100H	(3)
	CIS	A100	(3)
	MGMT	A100	(3)
Business Communication Personal Leadership Human Relations & Supervision	Spring		
	BUS	A139	(3)
	LEAD	A180	(3)
Organizational Leadership Professional Selling (Or) Public Speaking Professional Communication	Fall		
	LEAD	A200	(3)
Business Law Internship Academy	MGMT	A110	(3)
	SPCM	A110	(3)
	MGMT/BUS	A239	(3)
	Spring		
	BUS	A110	(3)
	ITRN	A392	(3)
Subtotal:			(36)

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MANAGEMENT

MANAGEMENT AND LEADERSHIP STUDIES

The Management and Leadership Studies certificate program is designed to build and/or upgrade skills in leading and managing people while enhancing individual and organizational effectiveness within the workplace. Courses emphasize leading, organizing, planning, communicating, training, and controlling.

Program Outcomes

Upon successful completion of the certificate of achievement in management and leadership studies, graduates will be able to:

Function effectively in a leadership or management role using the skills, principles, and tools they have acquired.

Apply the leadership and management principles they have learned in their personal and/or organizational lives.

Distinguish between the qualities of effective and ineffective leaders and managers.

Analyze the ethical dimensions of effective leaders and managers in everyday conduct and decision making.

Demonstrate effective written and/or oral skills.

