



ADVANCED MANUFACTURING

COURSES | CREDENTIALS | CREDITS

SUBJECT CODES: REQUIRED COURSES

CODE	DESCRIPTION	OHE CTAG
175003	Manufacturing Operations	1
176004	Machine Operations	--
176007	CNC Programming and Machining	1
176020	Industrial Maintenance	--
TOTAL CTAGs		2

INDUSTRY- RECOGNIZED CREDENTIALS (IRC) OPPORTUNITIES

CREDENTIAL	VENDOR/PROVIDER	IRC POINTS
Mastercam Lathe Turning CNC	MasterCam	4
Mastercam Axis Milling CNC	MasterCam	4
Haas Basic CNC Lathe Operator	Haas	4
Haas CNC Basic Mill Operator	Haas	4
OSHA 10- HR	CareerSafe	1
CPR First Aid	MCCC	1
Pre-Apprenticeship	Ohio Department of Education & Workforce	12
TOTAL IRC POINTS		30

TRANSCRIPTED IN-STATE TRANSFERABLE CREDIT OPPORTUNITIES

COLLEGE/UNIVERSITY	COURSES	POTENTIAL CREDITS
Cuyahoga Community College	Manufacturing Skills I	3
Cuyahoga Community College	Manufacturing Skills II	2
Cuyahoga Community College	Machine Tool Theory	4
Cuyahoga Community College	Field Experience	2
OHE CTAG	Manufacturing Operations	3
OHE CTAG	CNC Programming and Machining	3

ARTICULATION AGREEMENTS

COLLEGE/UNIVERSITY	DEGREE/COURSES	POTENTIAL CREDITS
University of Akron	Associate of Technical Studies	13
Kent State University	Associate of Applied Science	3

Subject Codes: Required Courses

The Ohio Department of Education and Workforce requires courses to be taught within the career-technical program.

Industry-Recognized Credential (IRC) Opportunities

Each approved Ohio Department of Education and Workforce industry-recognized credential has been assigned a point value based on employer demand and other factors, allowing students to bundle credentials for graduation. Career-technical education credentials primarily reflect education, industry licenses, certificates, and postsecondary degrees.

Transcripted In-State Transferable Credit / CTAGs

Alignment between secondary and postsecondary career-technical education content. Earned college credits are transferable to Ohio public higher education institutions (OHE).

Articulation/Bilateral Agreements and Opportunities

A partnership between institutions (MCCC and colleges/universities) to recognize credits that will be accepted when a student enrolls in a college or university to pursue a specific degree program.



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CTAGs (CAREER TECHNICAL ASSURANCE GUIDES)

CTAG transferable credits are earned through career technical WebXam assessments (See SUBJECT CODES: REQUIRED COURSES on the first page) and are aligned between secondary (high school) and postsecondary (e.g., college) institutions. The postsecondary institution retrieves and verifies data when students check the box on their WebXam(s) to give consent. Support for acquiring CTAGs varies at postsecondary institutions. Students should notify postsecondary institutions of their available CTAG-transferable credits.

STEP 1: Pass MCCC Career Major WebXam(s) and ensure the box at the end of the exam is checked, allowing Ohio institutions to obtain score(s).

STEP 2: Contact the postsecondary counselor and inform them of the CTAG transferable credits in the following areas:

175003 Manufacturing Operations

176007 CNC Programming and Machining

STEP 3: Notify the postsecondary Registrar's office, Tech Prep office, or department chair, as applicable.

ARTICULATION AGREEMENTS

Articulation agreements are partnerships between institutions (MCCC and colleges/universities) that recognize credits accepted when a student enrolls at a college or university to pursue a specific degree program. Articulation agreements are non-transferable.

STEP 1: Complete the articulated credit application (See ARTICULATION AGREEMENTS links on the first page) and submit an application to the MCCC instructor. If a link is unavailable, please contact MCCC instructor or the career services coordinator.

STEP 2: Contact the postsecondary counselor and inform them of the postsecondary credit earned through the articulated agreement.

STEP 3: Notify the postsecondary Registrar's office, Tech Prep office, or department chair, as applicable.