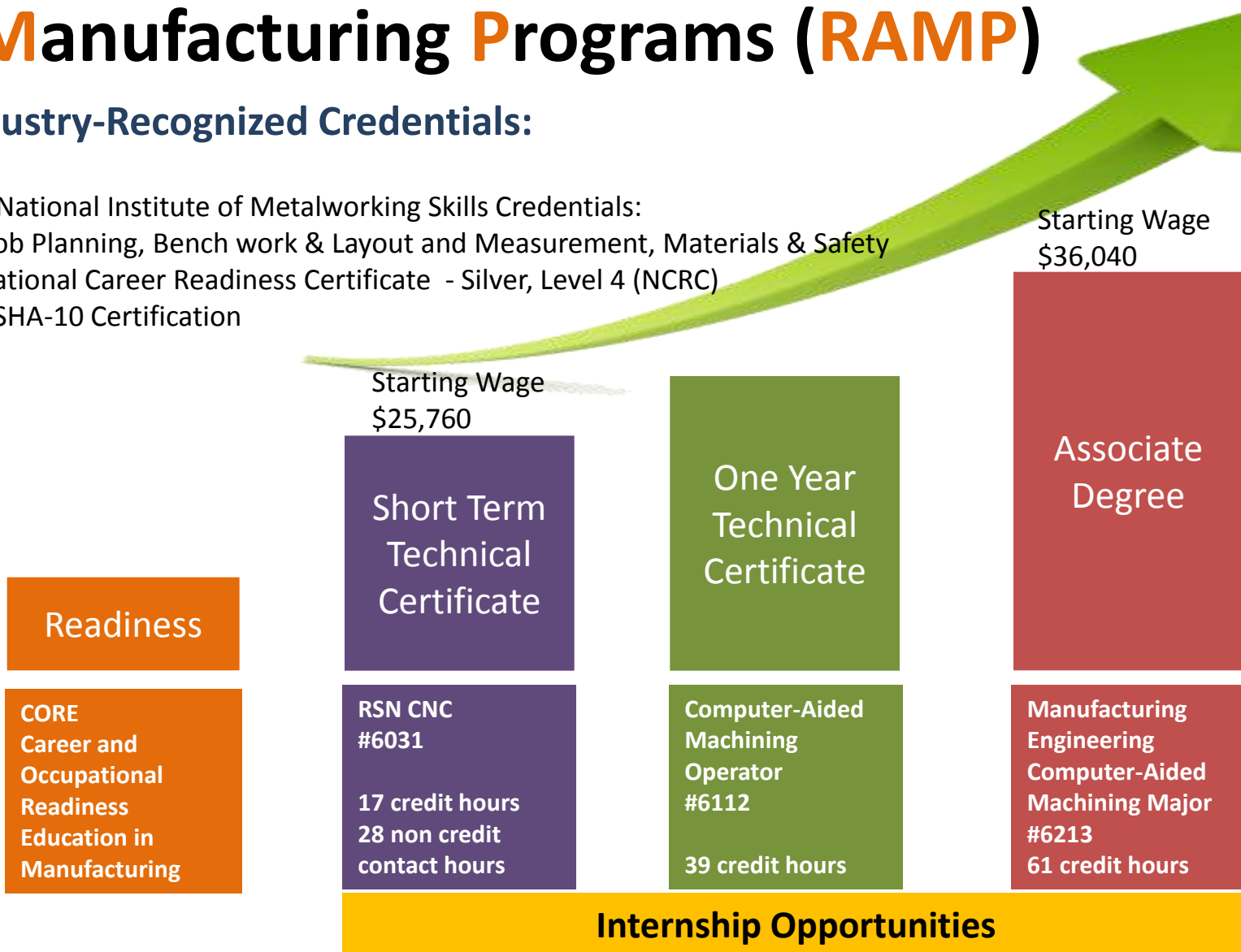


Retooling Adults for Manufacturing Programs (RAMP)

Industry-Recognized Credentials:

- ✓ 2 National Institute of Metalworking Skills Credentials:
Job Planning, Bench work & Layout and Measurement, Materials & Safety
- ✓ National Career Readiness Certificate - Silver, Level 4 (NCRC)
- ✓ OSHA-10 Certification



Program Overview:

The Right Skills Now CNC Fast-Track Training Program is focused on the knowledge and skills necessary for employment as a CNC mill or lathe operator. The 16-week classroom training is followed by an 8-week paid internship and is designed for students to obtain high-quality manufacturing jobs. Employers are engaged with students from the beginning by offering plant tours and interviews for the opportunity to work with them on an 8-week Paid Internship. Program prepares students to earn several industry recognized credentials:

Short Term
Technical
Certificate

Industry-Recognized Credentials:

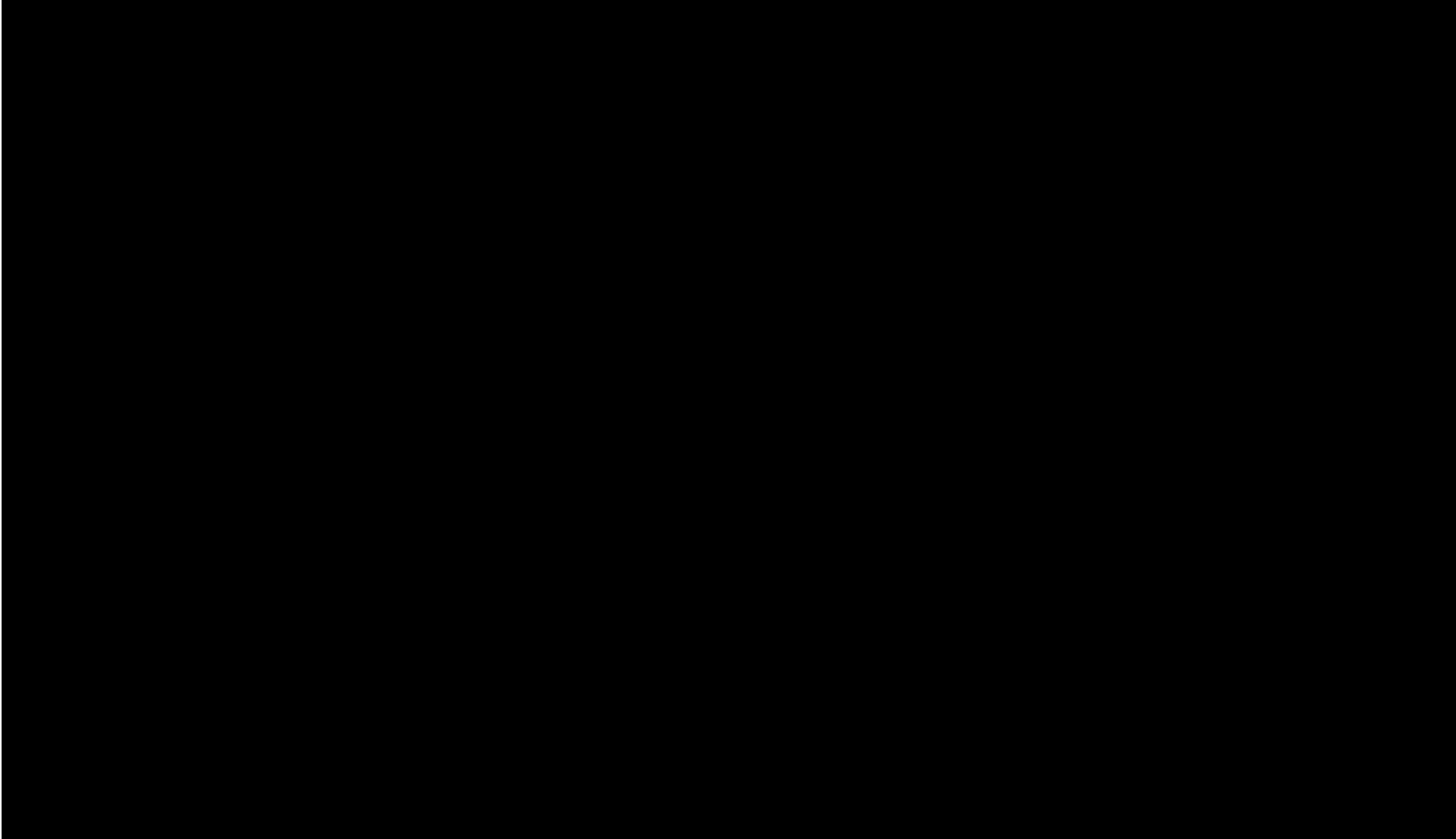
- ✓ 2 National Institute of Metalworking Skills Credentials:
Job Planning, Bench work & Layout and Measurement, Materials & Safety
- ✓ National Career Readiness Certificate - Silver, Level 4 (NCRC)
- ✓ OSHA-10 Certification

| Occupational Title | Starting Wage: | Annual Job Openings |
|---|----------------|---------------------|
| ■ CNC Machine Tool Operators, Metal/Plastic | \$25,760 | 511 |
| ■ Machinist | \$27,300 | 937 |
| ■ CNC Machine Tool Programmers, Metal/Plastic | \$32,860 | 79 |
| ■ Tool and Die Makers | \$36,040 | 87 |

Industry Partners:



Right Skills Now CNC



Retooling Adults for Manufacturing Programs (RAMP)

Industry-Recognized Credentials:

- ✓ 2 National Institute of Metalworking Skills Credentials:
Job Planning, Bench work & Layout and Measurement, Materials & Safety
- ✓ National Career Readiness Certificate - Silver, Level 4 (NCRC)
- ✓ OSHA-10 Certification



Readiness

CORE
Career and
Occupational
Readiness
Education in
Manufacturing

Short Term
Technical
Certificate

RSN CNC
#6031

17 credit hours
28 non credit
contact hours

Internship
Opportunities

Short-Term Technical Certificate

Lorain County Community College Manufacturing Engineering Technology Right Skills Now

Engineering, Business & Information Technologies Division
Short Term Technical Certificate - Curriculum Code 6031

The Right Skills Now program is designed to provide students with the knowledge, skills and competencies necessary to perform as an entry-level CNC technician. Lorain County Community College has articulation agreements with colleges and universities including programs offered by LCCC's University Partnership.

| Course | Course Title | Credits | Contact Hrs | Lec Hrs | Lab Hrs |
|------------------------------------|--|-----------|-------------|---------|---------|
| First Semester | | | | | |
| * CAMM 111 | Introduction to Computer Numerical Control | 2 | 4 | 1 | 3 |
| SAFE 105 | General Safety OSHA 10 | 1 | 1 | 1 | 0 |
| ☆ SDEV 101 | College 101 | 1 | 1 | 1 | 0 |
| SDEV 104 | Job Search Strategies | 1 | 1 | 1 | 0 |
| TECN 111 | Technical Problem Solving | 3 | 5 | 2 | 3 |
| TECN 115 | Industrial Blueprint Reading | 2 | 3 | 1 | 2 |
| * TECN 131 | Manufacturing Processes I | 3 | 6 | 2 | 4 |
| > TECN 245 | Geometric Dimensioning & Tolerancing | 2 | 2 | 2 | 0 |
| | | <u>15</u> | | | |
| Second Semester | | | | | |
| CAMM 287 | Work Based Learning | <u>2</u> | | | |
| | | 2 | | | |
| Total Semester Credit Hours | | 17 | | | |

Established March 17
Effective May 17

Notes

- > Indicates that this course requires a prerequisite.
- * Indicates that this course requires a prerequisite or may be taken concurrently.
- This certificate requires completion of the two (2) non-credit courses listed below:
 - NQUA101 Quality Basics
 - NTEC 115A NIMS Exam Prep
- ☆ A student must register for the orientation course when enrolling for more than six credit hours per semester or any course that would result in an accumulation of thirteen or more credit hours.

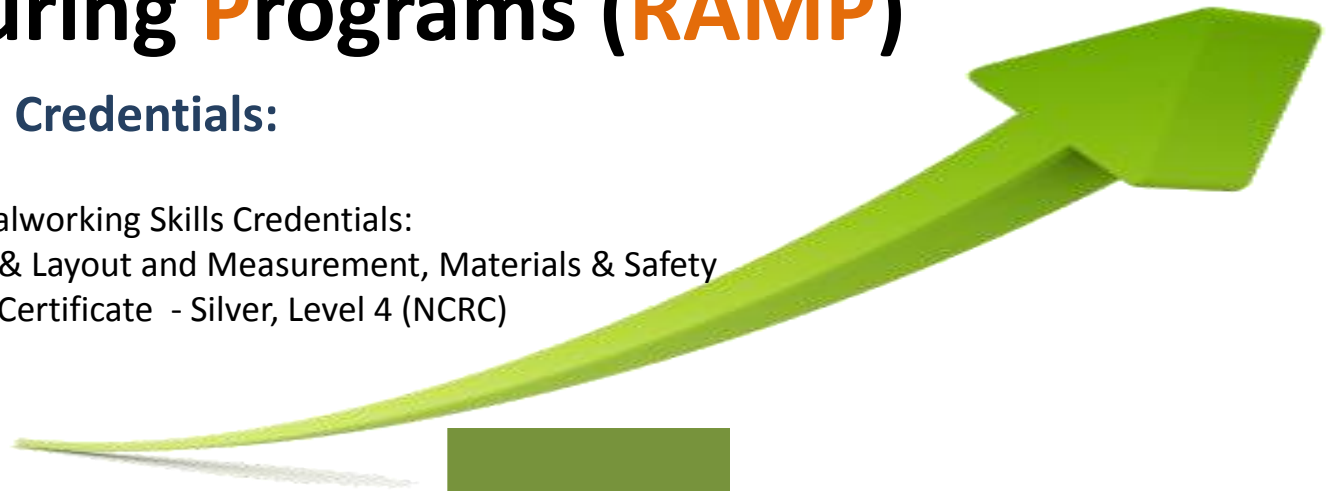
Schedule – Fall 2017 - Right Skills Now CNC

| Fall Full Semester | Course Name | Credits | Start Date | End Date | Days | Start Time | End Time |
|---|------------------------------|---------|---------------------------------------|------------|----------|---|----------|
| CAMM 111 E P101 | Intro to CNC | 2 | 8/28/2017 | 12/17/2017 | T | 12:00 PM | 12:50 PM |
| CAMM 111 L P601 | Intro to CNC | | 8/28/2017 | 12/17/2017 | T | 1:00 PM | 3:30 PM |
| TECN 131 E P100 | Manufacturing Processes | 3 | 8/28/2017 | 12/17/2017 | M,W | 12:00 PM | 12:50 PM |
| TECN 131 L P600 | Manufacturing Processes | | 8/28/2017 | 12/17/2017 | M,W | 1:00 PM | 2:40 PM |
| NIMS 101 | NIMS | 0 | 8/28/2017 | 12/17/2017 | M,W | 2:40 PM | 2:55 PM |
| | | 5 | | | | | |
| Fall First Eight Weeks | Course Name | Credits | Start Date | End Date | Days | Start Time | End Time |
| TECN 111 E P42X | Technical Problem Solving | 3 | 8/28/2017 | 10/22/2017 | M,T,W,R | 9:00 AM | 9:50 AM |
| TECN 111 L P62X | Technical Problem Solving | | 8/28/2017 | 10/22/2017 | M,T,W,R | 10:00 AM | 11:15 AM |
| TECN 115 E P42X | Industrial Blueprint Reading | 2 | 8/28/2017 | 10/22/2017 | M, W | 3:00 PM | 3:25 PM |
| TECN 115 L P62X | Industrial Blueprint Reading | | 8/28/2017 | 10/22/2017 | M, W | 3:30 PM | 4:20 PM |
| SDEV 101 P122 - ??? | College 101 | 1 | 8/28/2017 | 10/22/2017 | F | 1:00 PM | 2:40 PM |
| | | 6 | | | | | |
| Fall Second Eight Weeks | | | | | | | |
| NQUA 101 | Quality Basics | 0 | 10/23/2017 | 12/17/2017 | T | 9:00 AM | 11:30 AM |
| TECN 245 | G, D, & T | 2 | 10/23/2017 | 12/17/2017 | T,R | 4:00 PM | 5:35 PM |
| SDEV 104 P??? | Job Search Strategies | 1 | 10/23/2017 | 12/17/2017 | | | |
| | | 3 | | | | | |
| Fall 6 Weeks | | | | | | | |
| SAFE 105** | General Safety OSHA 10 | 1 | 10/26, 11/2, 11/9, 11/16, 11/30, 12/7 | | R | 1:00 PM | 3:05 PM |
| | | 1 | | | | | |
| Spring Eight Week Internship | | | | | | | |
| CAMM 287 P42X | Work-Based Learning | 2 | 1/16/2018 | 3/9/2018 | Arranged | Arranged | Arranged |
| | | 2 | | | | | |
| Classroom Totals: | | 17 | | | | | |
| Other scheduled dates: | | | | | | | |
| Employer Meet & Greet | - | 0 | TBD | TBD | TBD | TBD | TBD |
| NTEC 114 | NIMS Registration | 0 | TBD | TBD | TBD | TBD | TBD |
| Work-Based Learning Interviews (six each day) | | 0 | TBD | TBD | TBD | TBD | TBD |
| NTEC 115A | NIMS Exam Prep | 0 | TBD | TBD | TBD | TBD | TBD |
| NTEC 115B | NIMS Exams | 0 | TBD | TBD | TBD | TBD | TBD |
| *Industry Tour Dates/Options: | | | TBD | TBD | TBD | TBD | TBD |
| SDEV104 Resume Critiques (30 mins each): | | | | | | Resume Critiques held in AT building; two students for each time slot | |
| SDEV104 Mock Interviews (One hour each): | | | | | | Mock Interviews held in Career Services; four students for each time slot | |

Retooling Adults for Manufacturing Programs (RAMP)

Industry-Recognized Credentials:

- ✓ 2 National Institute of Metalworking Skills Credentials:
Job Planning, Bench work & Layout and Measurement, Materials & Safety
- ✓ National Career Readiness Certificate - Silver, Level 4 (NCRC)
- ✓ OSHA-10 Certification



Readiness

CORE
Career and
Occupational
Readiness
Education in
Manufacturing

Short Term
Technical
Certificate

RSN CNC
#6031

17 credit hours
28 non credit
contact hours

One Year
Technical
Certificate

Computer-Aided
Machining
Operator
#6112

39 credit hours

Internship Opportunities

One-Year Technical Certificate

Lorain County Community College
Manufacturing Engineering Technology
Computer-Aided Machining Operator
Engineering Technologies Division
One Year Technical Certificate - Curriculum Code 6112

Computer Aided Machining (CAM) Operator is a one-year technical certificate program designed to provide students with knowledge, skills and competencies in programming, set-up and operating CNC machines, in a manufacturing setting. Lorain County Community College has articulation agreements with colleges and universities including programs offered by Lorain County Community College's University Partnership.

| Course | Course Title | Credits | Contact Hrs. | Lec Hrs. | Lab Hrs. |
|------------------------|--|-----------|--------------|----------|----------|
| Fall Semester | | | | | |
| * CADD 111 | Introduction to Computer Aided Drafting | 2 | 4 | 1 | 3 |
| MTHM 121 | Technical Mathematics I | 4 | 4 | 4 | 0 |
| ☆ SDEV 101 | College 101 | 1 | 1 | 1 | 0 |
| TECN 111 | Technical Problem Solving | 3 | 5 | 2 | 3 |
| TECN 115 | Industrial Blueprint Reading | 2 | 3 | 1 | 2 |
| TECN 131 | Manufacturing Processes I | 3 | 6 | 2 | 4 |
| | Arts and Humanities Elective ** | 3 | | | |
| | | 18 | | | |
| Spring Semester | | | | | |
| > CABB 111 | Introduction to Computer Numerical Control | 2 | 4 | 1 | 3 |
| ENGL 161 | College Composition I | 3 | 3 | 3 | 0 |
| QLTY 121 | Quality Assurance Techniques (SPC) | 2 | 4 | 1 | 3 |
| * TECN 121 | Fluid Power | 3 | 4 | 2 | 2 |
| > TECN 132 | Manufacturing Processes II | 3 | 6 | 2 | 4 |
| > TECN 245 | Geometric Dimensioning and Tolerancing | 2 | 2 | 2 | 0 |
| | Social Science Elective *** | 3 | | | |
| | | 18 | | | |
| Summer Semester | | | | | |
| > CABB 215 | Advanced CNC Milling Machines OR | 3 | 6 | 2 | 4 |
| > CABB 225 | Advanced CNC Lathes | 3 | 5 | 2 | 3 |
| | | 3 | | | |
| | Total Semester Credit Hours | 39 | 58 | | |

| | |
|-------------|----------|
| Established | Oct-90 |
| Revised | Jul - 12 |
| Effective | Aug-12 |

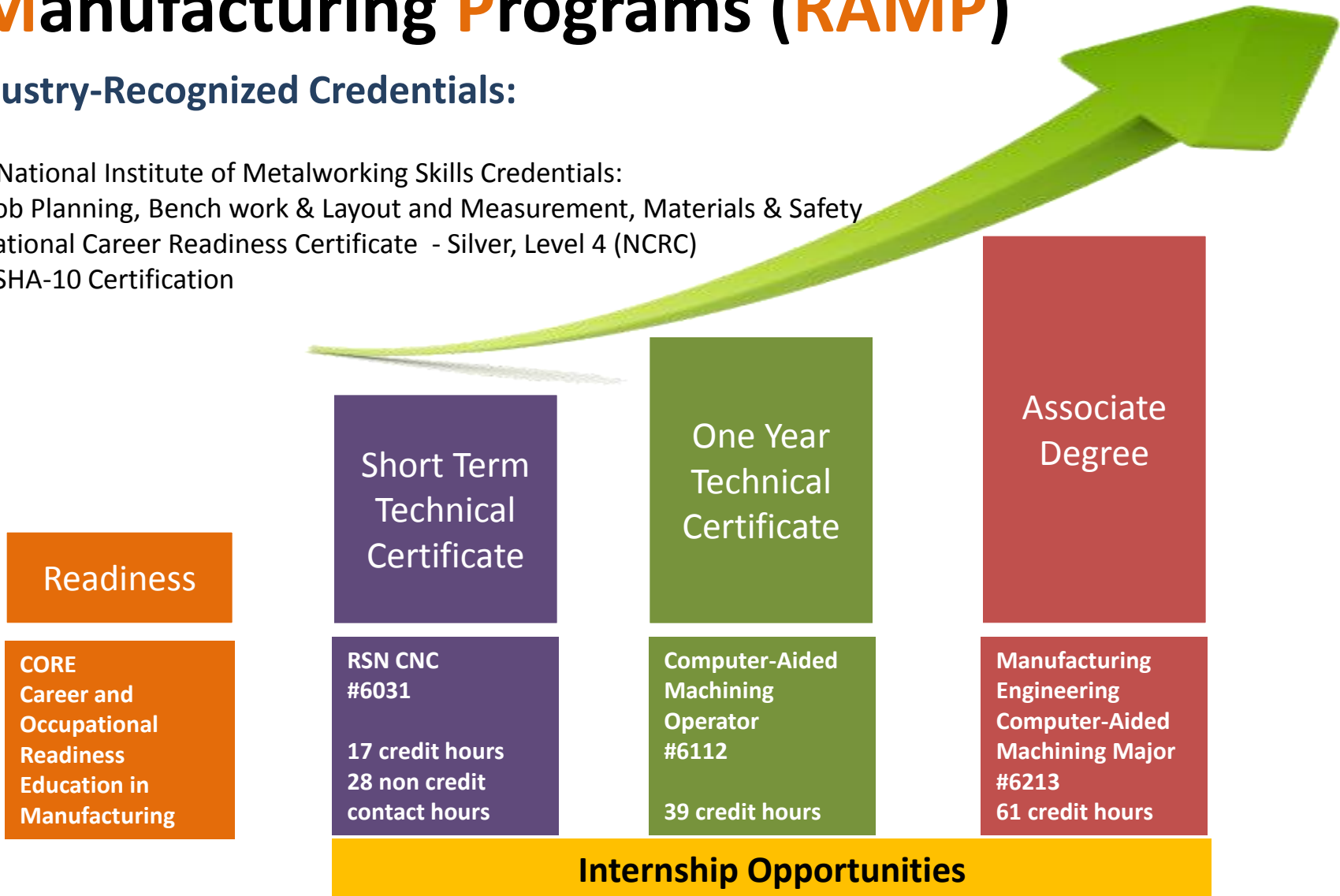
Notes

1. > Indicates that this course requires a prerequisite.
2. OR Indicates that a student may select either course which may have an effect on the total credit hours.
3. * Indicates that this course requires a prerequisite or may be taken concurrently.
4. ** Courses selected from the following list: ARTS 243, 244, 245, 246, 254; ENGL 251, 252, 253, 254, 255, 257, ENGL 259, 261, 262, 265, 266, 269; HUMS 151, 161, 261, 262, 271, 274; MUSC 262; PHLX 165, 262; RELG 181, 261, 262; THTR 151.
5. *** Course selected from the following list: HSTR 151, 152, 161, 162, 171, 252, 267; PLSC 156; PSYH 151; SOCY 151.
6. ☆ A student must register for the orientation course when enrolling for more than six credit hours per semester or any course that would result in an accumulation of thirteen or more credit hours.

Retooling Adults for Manufacturing Programs (RAMP)

Industry-Recognized Credentials:

- ✓ 2 National Institute of Metalworking Skills Credentials:
Job Planning, Bench work & Layout and Measurement, Materials & Safety
- ✓ National Career Readiness Certificate - Silver, Level 4 (NCRC)
- ✓ OSHA-10 Certification



Associate of Applied Science

Lorain County Community College
Manufacturing Engineering Technology
Computer Aided Machining Major
 Engineering Technologies Division
 Associate of Applied Science - Curriculum Code 6213

The Computer Aided Machining Major prepares the student with the knowledge, skills and hands-on experience needed to program, set-up and operate Computer Numerical Controlled (CNC) machines, specifically the Machining and Turning Center. Lorain County Community College has articulation agreements with colleges and universities including programs offered by LCCC's University Partnership.

| Course | Course Title | Credits | Contact Hrs. | Lec Hrs. | Lab Hrs. |
|------------------------------------|--|-----------|--------------|----------|----------|
| First Year | | | | | |
| Fall Semester | | | | | |
| * CADD 111 | Introduction to Computer Aided Drafting | 2 | 4 | 1 | 3 |
| ENGL 161 | College Composition I | 3 | 3 | 3 | 0 |
| MTHM 121 | Technical Mathematics I | 4 | 4 | 4 | 0 |
| ☆ SDEV 101 | College 101 | 1 | 1 | 1 | 0 |
| TECN 111 | Technical Problem Solving | 3 | 5 | 2 | 3 |
| TECN 115 | Industrial Blueprint Reading | 2 | 3 | 1 | 2 |
| * TECN 131 | Manufacturing Processes I | 3 | 6 | 2 | 4 |
| | | 18 | | | |
| Spring Semester | | | | | |
| > CAMM 111 | Introduction to Computer Numerical Control | 2 | 4 | 1 | 3 |
| EMCH 112 | Engineering Materials | 3 | 4 | 2 | 2 |
| > ENGL 164 | College Composition II with Technical Topics | 3 | 3 | 3 | 0 |
| > MTHM 122 | Technical Mathematics II | 3 | 3 | 3 | 0 |
| QLTY 121 | Quality Assurance Techniques (SPC) | 2 | 4 | 1 | 3 |
| > TECN 132 | Manufacturing Processes II | 3 | 6 | 2 | 4 |
| | | 16 | | | |
| Second Year | | | | | |
| Fall Semester | | | | | |
| > CAMM 215 | Advanced CNC Milling Machines | 3 | 6 | 2 | 4 |
| > PHYC 150 | General Physics I | 4 | 6 | 3 | 3 |
| * TECN 121 | Fluid Power*** | 3 | 4 | 2 | 2 |
| | | 3 | | | |
| | | 13 | | | |
| Spring Semester | | | | | |
| > CAMM 225 | Advanced CNC Lathes | 3 | 5 | 2 | 3 |
| > CAMM 235 | CAD-CAM Graphics | 3 | 6 | 2 | 4 |
| ELCT 111 | Electrical Circuits I | 3 | 5 | 2 | 3 |
| > TECN 245 | Geometric Dimensioning and Tolerancing | 2 | 2 | 2 | 0 |
| | | 3 | | | |
| | | 14 | | | |
| Total Semester Credit Hours | | 61 | | | |

Notes

1. > Indicates that this course requires a prerequisite.
2. * Indicates that this course requires a prerequisite or may be taken concurrently.
3. ^ Courses selected from the following list: ARTS 243, 244, 245, 246, 254; ENGL 251, 252, 253, 254, 255, 257, ENGL 259, 261, 262, 265, 266, 269; HUMS 151, 161, 261, 262, 271, 274; MUSC 262; PHLI 165, 262; RELG 181, 261, 262; THTR 151.
4. ** Course selected from the following list: HSTR 151, 152, 161, 162, 171, 252, 267; PLSC 156; PSYH 151; SOCY 151.
5. *** Indicates that a student may substitute Work-Based Learning (CAMM 287, 288, and/or 289) for the equivalent number of credit hours for this course.
6. ☆ A student must register for the orientation course when enrolling for more than six credit hours per semester or any course that would result in an accumulation of thirteen or more credit hours.

| | |
|-------------|--------|
| Established | Oct-90 |
| Revised | Apt 15 |
| Effective | May 16 |