

# MACHINE TOOL TECHNOLOGY

## Associate of Applied Science Degree, Diploma, Certificate

### Types of jobs available:

- Tool maker
- Die maker
- Mold maker
- Precision machinist
- Machine builder
- CNC programmer
- CNC operator

Program graduates are working in small and large companies throughout Nebraska and neighboring states. Other graduates are continuing their education.

### Program overview

The program is available at both the Lincoln and Milford campuses. Students may focus in tool & die making, die making, or mold making.

### For more information contact:

Scott Kahler, Program Chair-Milford  
402-761-8354, 800-933-7223 ext. 8354, skahler@southeast.edu

John Gabelhouse, Program Chair-Lincoln  
402-437-2667, 800-642-4075 ext. 2667, jgabelho@southeast.edu

or the College Admissions Office  
Lincoln 402-437-2600, 800-642-4075 ext. 2600  
Milford 402-761-8243, 800-933-7223 ext. 8243

## Lincoln and Milford Campuses

Credit Hours Required for Graduation:

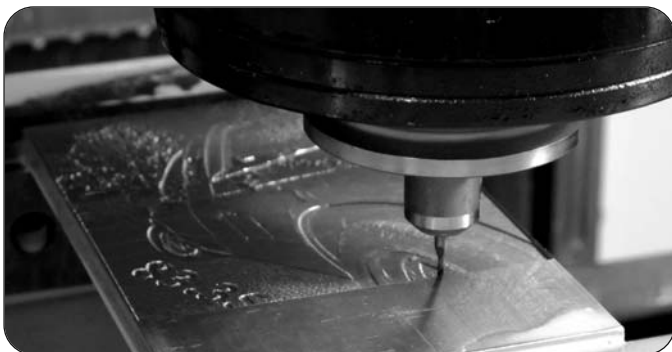
|              |      |
|--------------|------|
| Certificate: | 25.0 |
| Diploma:     | 80.5 |

|                                      |       |
|--------------------------------------|-------|
| Associate of Applied Science Degree: | 122.0 |
| - Die Maker Focus                    |       |
| - Mold Maker Focus                   |       |
| - Tool and Die Maker Focus           |       |

### Required MACH Diploma Courses:

| COURSE # | COURSE TITLE                | CREDIT HRS |
|----------|-----------------------------|------------|
| MACH1110 | Orientation                 | 0.5        |
| MACH1121 | Manufacturing Processes     | 5.0        |
| MACH1156 | Blueprint Reading & Drawing | 3.0        |
| MACH1172 | Machine Tool Lab I          | 6.5        |
| MACH1222 | Machine Tool Lab II         | 7.0        |
| MACH1225 | Materials of Industry       | 5.0        |
| MACH1241 | Machinery's Handbook        | 5.0        |
| MACH1250 | Computer Aided Drafting     | 3.0        |
| MACH1324 | Machine Tool Lab III        | 7.0        |
| MACH1349 | Basic CNC                   | 7.5        |
| MACH1370 | Applied Trigonometry        | 4.5        |
| MACH1428 | Machine Tool Lab IV         | 5.5        |
| MACH1451 | Advanced CNC                | 4.5        |
| MACH1453 | CNC Lathe                   | 3.5        |
| MACH1454 | CAM                         | 4.0        |
|          |                             | 71.5 hours |

To complete the Diploma, a total of nine (9.0) general education requirements must be fulfilled. This includes one math course plus one other general education course from Oral or Written Communications.



### MACH A.A.S. Degree Requirements:

Not all courses may be available at each SCC campus.

#### Die Maker Focus: (Milford)

|          |                   |            |
|----------|-------------------|------------|
| MACH2530 | Die Design I      | 2.0        |
| MACH2532 | Die Making Lab I  | 7.0        |
| MACH2547 | Die Theory        | 5.0        |
| MACH2634 | Die Design II     | 2.0        |
| MACH2636 | Die Making Lab II | 7.0        |
| MACH2535 | Mold Theory       | 5.0        |
|          |                   | 28.0 hours |

#### Mold Maker Focus: (Milford)

|          |                          |            |
|----------|--------------------------|------------|
| MACH2535 | Mold Theory              | 5.0        |
| MACH2537 | Injection Mold Design I  | 2.0        |
| MACH2538 | Mold Making Lab I        | 7.0        |
| MACH2547 | Die Theory               | 5.0        |
| MACH2640 | Injection Mold Design II | 2.0        |
| MACH2642 | Mold Making Lab II       | 7.0        |
|          |                          | 28.0 hours |

#### Tool and Die Maker Focus: (Lincoln)

|          |                           |            |
|----------|---------------------------|------------|
| WELD1174 | Machine Tool Welding      | 1.5        |
| MACH2245 | Introduction to Molding   | 3.0        |
| MACH2246 | Jigs and Fixtures         | 6.0        |
| MACH2256 | Die Construction          | 7.0        |
| MACH2258 | Quality Control           | 3.0        |
| MACH2266 | Advanced Die Construction | 7.5        |
|          |                           | 28.0 hours |

### General Education Requirements:

Contact your program advisor to select general education course/s from each category which will meet your program's graduation requirements. See page 4 for complete list.

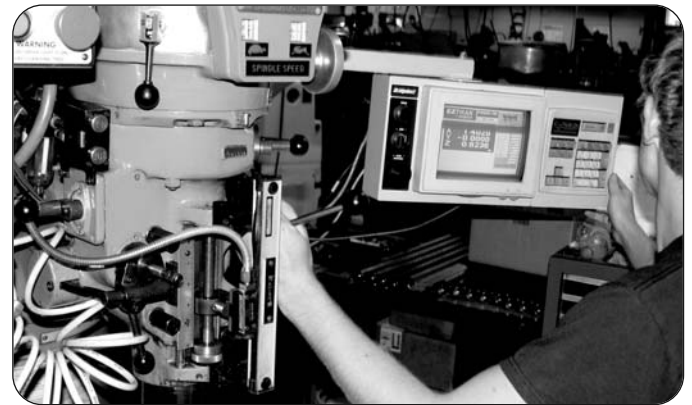
*(One class from each area below).*

|                        |     |
|------------------------|-----|
| Oral Communications    | 4.5 |
| Written Communications | 4.5 |
| Mathematics            | 4.5 |

*(Plus two classes from the four areas below; no two classes from the same area).*

|   |            |
|---|------------|
| Science, Social Science, Humanities, and/or Computer Technology | 9.0        |
|   | 22.5 hours |

Associate of Applied Science degree: 122.0 hours



### Intelligent Machine Integration Certificate: (Milford)

This Certificate is for individuals who already have an associate degree or higher in Machine Tool Technology or Manufacturing Engineering Technology and wish to earn a Certificate in Intelligent Machine Integration. Classes will cover automation and advanced CNC concepts for manufacturing environments that are becoming more computer- and network-driven.

| COURSE # | COURSE TITLE                                    | CREDIT HRS |
|----------|---|------------|
| THNC2100 | Manufacturing Windows Operating Systems         | 5.5        |
| THNC2120 | Manufacturing Networking Fundamentals           | 5.0        |
| THNC2130 | Manufacturing Automation and Integration Theory | 4.0        |
| THNC2135 | Manufacturing Automation and Integration Lab    | 2.0        |
| THNC2140 | Basic CNC Machining Techniques                  | 3.0        |
| THNC2145 | Advanced CNC Machining Techniques               | 3.5        |
| THNC2150 | Partners In THINC Applications                  | 2.0        |

Certificate: 25.0 hours