

Precision Machining • Part-time Hybrid E-Degree

Semester Course Outline • 2021 – 2022

31 Months (6 Semesters, 2 Summer Sessions) • Revised: 6/21/21

Associate of Applied Science (A.A.S.) Degree • Credits Required for Graduation: 67



First Fall Semester (August – December)

| Course Number | Course Title | Clock Hours | Credits |
|---------------|--|-------------|---------|
| PM 101 | Machine Tool Theory | 15 | 1 |
| PM 106 | Blueprint Reading and CAD Introduction | 15 | 1 |
| PM 110 | Precision Measuring | 28 | 1 |
| PM 118 | Turning/Milling Theory | 15 | 1 |
| PM 134 | Machine Tool Fundamentals | 28 | 1 |
| PM 138 | Lathe and Mill Operations I with Lab | 154 | 5.5 |
| Total | | 255 | 10.5 |

First Spring Semester (January – May)

| Course Number | Course Title | Clock Hours | Credits |
|--|--|-------------|---------|
| PM 152 | Advanced Lathe and Mill Theory | 15 | 1 |
| PM 160 | Advanced Lathe and Mill Operations I | 84 | 3 |
| PM 167 | Introduction to Computer Numerical Control (CNC) | 28 | 1 |
| PM 168 | Precision Grinding | 56 | 2 |
| • Selected Mathematics Course (Choose one) MATH 100 – Applied General Math MATH 101 – Intermediate Algebra MATH 114 – College Algebra * | | 45 | 3 |
| Total | | 228 | 10 |

First Summer Semester (May – July)

| Course Number | Course Title | Clock Hours | Credits |
|--|--------------------------------------|-------------|---------|
| CSC 102 | Windows Applications for Technicians | 45 | 3 |
| • Selected Behavioral Science Course (Choose one) PSYC 100 – Psychology of Human Relations PSYC 101 – General Psychology * | | 45 | 3 |
| Total | | 90 | 6 |

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Second Fall Semester (August – December)

| Course Number | Course Title | Clock Hours | Credits |
|---------------|---|-------------|---------|
| PM 117 | Applied Trigonometry | 28 | 1 |
| PM 162 | Advanced Lathe and Mill Operations II | 56 | 2 |
| PM 172 | Computer Numerical Control (CNC) Turning Center | 84 | 3 |
| PM 217 | Into to Electrical Discharge Machines | 28 | 1 |
| Total | | 196 | 7 |

Second Spring Semester (January – May)

| Course Number | Course Title | Clock Hours | Credits |
|---------------|--|-------------|---------|
| PM 185 | CNC VMC Operations | 84 | 3 |
| PM 207 | Advanced Computer Numerical Control (CNC) Theory I | 30 | 2 |
| PM 208 | Advanced Computer Numerical Control (CNC) Operations I | 70 | 2.5 |
| PM 218 | Advanced Electrical Discharge Machines | 28 | 1 |
| PM 236 | Measurement Inspection Techniques | 28 | 1 |
| Total | | 240 | 9.5 |

Second Summer Semester (May – July)

| Course Number | Course Title | Clock Hours | Credits |
|--|--------------|-------------|---------|
| <ul style="list-style-type: none"> ● Selected Communications Course (Choose one) <li style="padding-left: 20px;">CMST 101 – Fundamentals of Speech * (CSS 100 – Career Search Strategies .5 credit) <li style="padding-left: 20px;">COMM 101 – Communications and Career Strategies <li style="padding-left: 20px;">ENGL 101 – Composition * (CSS 100 – Career Search Strategies .5 credit) | | 45 | 3 |
| <ul style="list-style-type: none"> ● Selected Social Science Course (Choose one) <li style="padding-left: 20px;">ECON 105 – Leadership in the Global Workplace <li style="padding-left: 20px;">ECON 201 – Principles of Microeconomics I * <li style="padding-left: 20px;">ECON 202 – Principles of Macroeconomics II * <li style="padding-left: 20px;">SOC 100 – Introduction to Sociology * | | 45 | 3 |
| Total | | | 6 |

Third Fall Semester (August – December)

| Course Number | Course Title | Clock Hours | Credits |
|---------------|-----------------------------|-------------|---------|
| PM 212 | CAD CAM | 28 | 1 |
| PM 221 | Fixture-Making Theory | 15 | 1 |
| PM 222 | Fixture-Making Applications | 56 | 2 |
| PM 226 | Die-Making Theory | 15 | 1 |
| PM 227 | Die-Making Lab | 84 | 3 |
| Total | | 198 | 8 |

Third Spring Semester (January – May)

| Course Number | Course Title | Clock Hours | Credits |
|------------------------|---|-------------|---------|
| PM 261 | Basic Molding Processes | 28 | 1 |
| PM 267 | Basic Molding Operations | 84 | 3 |
| PM 272 | Advanced Computer Numerical Control (CNC) Theory II | 15 | 1 |
| PM 274 | Advanced Computer Numerical Control (CNC) Operations II | 84 | 3 |
| PM 277 or PM 279 | Precision Machining Project or Internship | 56 | 2 |
| Total | | 267 | 10 |

Note: Labs will be on campus and scheduled in order to best accommodate all enrolled students.

- Students will select a course in each of the areas listed to meet general education requirements. Courses marked with an asterisk (*) can be transferred directly to the university system and may be substituted for recommended courses on the outline. Students should speak with an advisor before doing so.

Students who select to take transferable communications course CMST 101 or ENGL 101, must also register for CSS 100 – Career Search Strategies for .5 credit. This curriculum is required for all Lake Area Tech graduates and is included in the COMM 101 course but is separate from the university system.