

LANSING COMMUNITY COLLEGE

CURRICULUM GUIDE

Computer-Aided Drafting/Design
Associate in Applied Science Degree

Curriculum Code: 0165 (Effective Fall 2005 – Summer 2010)

This program prepares individuals to apply technical skills and advanced computer software and hardware to the creation of graphic representations and simulations in support of engineering projects. Students receive instruction in the use of engineering graphics, two-dimensional and three-dimensional engineering design graphics, parametric solid modeling, animation, sketching and illustration, and specification interpretation. Proficiency in the use of current computer-aided design packages, geometric tolerancing techniques, and descriptive geometry applications is necessary to succeed in the industrial workplace. Employment possibilities include engineering firms, consulting firms, the automotive industry, manufacturers of special machinery, the tool and die industry, etc. **Not all courses in this program transfer to all colleges.** Students planning to transfer should see an academic advisor or counselor before enrolling in any course.

PREREQUISITES

Students should see *Course Descriptions* or *Course Offerings* for course prerequisite information. See the *Assessment and Placement Testing* section for skills assessment and advising information.

INFORMATION

Contact the Manufacturing Engineering Technologies Department, West Campus Building, Room M103, telephone number (517) 483-1339.

REQUIREMENTS (See Note 1)

| CODE | TITLE | TOTAL: 62 CREDITS CREDIT HOURS |
|---------|-------------------------------------|-----------------------------------|
| CADD101 | Mechanical CAD Drafting I | 4 |
| CADD103 | Geometric Dimension and Tolerancing | 4 |
| CADD105 | PC Applications for Technology | 3 |
| CADD112 | Mechanical CAD Drafting II | 4 |
| CADD270 | Detailing Assembly Drawings | 4 |
| CADD284 | Jigs and Fixture Design | 4 |
| CADD286 | Beginning Mold Design | 4 |
| CADD288 | Advanced Mold Design | 3 |
| MATH118 | The Art of Geometry | 3 |
| MGMT234 | Diversity in the Workplace | 3 |
| PHYS120 | The Art of Physics | 4 |
| PMMT100 | Manufacturing Processes | 4 |
| PMMT105 | Machine Tool Survey | 4 |
| PMMT190 | Metallurgy and Heat Treatment | 4 |
| PMMT210 | Basic Mastercam | 4 |
| SPCH110 | Oral Communication in the Workplace | 3 |
| WRIT124 | Technical Writing | 3 |

LIMITED CHOICE REQUIREMENTS**TOTAL: 8 CREDITS**Complete the indicated number of credits from **EACH CHOICE** listed below.**CHOICE 1: General Education Core Areas****0 Credits***(See General Education Core Requirements for information on how to fulfill these requirements.**Core area proficiency exams, where appropriate, are available for each core area.)*

| | |
|--|---|
| Communication Core Area (See Note 2) | 0 |
| Global Perspectives and Diversity Core Area (See Note 2) | 0 |
| Mathematics Core Area (See Note 2) | 0 |
| Science Core Area (See Note 2) | 0 |
| Writing Core Area (See Note 2) | 0 |

CHOICE 2: Computer Graphics (Choose one subchoice. See Note 3)**8 Credits****Subchoice 2A:**

| | | |
|---------|----------------------------|---|
| CADD222 | Basic Autodesk Inventor | 4 |
| CADD223 | Advanced Autodesk Inventor | 4 |

Subchoice 2B:

| | | |
|---------|----------------------|---|
| CADD242 | Unigraphics Basic | 4 |
| CADD243 | Unigraphics Advanced | 4 |

MINIMUM TOTAL**70****NOTES:**

1. Basic mechanical drafting skills are necessary to begin this curriculum and may be demonstrated by a score of 80% or better on the Drafting Placement Test or by passing CADD100 with a 2.0 minimum grade.
2. Students completing "REQUIREMENTS" have fulfilled the requirements for this Core area.
3. The Computer Graphics series (8 credits) may be replaced by another approved computer graphics software package available through the CADD Program. See a CADD program advisor for more information.

SUGGESTED COURSE SEQUENCE

Students should see course descriptions to find out when departments plan to offer courses. Students who for any reason are unable to follow the course sequence suggested below (for example, those who are part-time, have transferred in courses from another school, or have prerequisites to fulfill) should contact an academic advisor or counselor for help with adjustments.

| I | II | III | IV |
|----------|-----------|------------|-----------|
| CADD101 | CADD112 | CADD270 | CADD284 |
| CADD103 | MATH118 | PHYS120 | CADD286 |
| CADD105 | PMMT105 | PMMT190 | PMMT210 |
| PMMT100 | SPCH110 | Lim.Ch.2 | Lim.Ch.2 |
| | WRIT124 | | |
| V | | | |
| CADD288 | | | |
| MGMT234 | | | |