

COMPUTER-AIDED DRAFTING (CAD), CERTIFICATE OF PROFICIENCY



This program is for students who wish to acquire computer drafting skills for entry-level positions in a variety of industries. Students will get background knowledge to aid them in developing 2D drawings with an introduction to 3D CAD.

Program contact: Learn more

This certificate will be automatically awarded when the certificate requirements are completed. If you do not want to receive the certificate, please notify the Office of the Registrar at RegistrarOffice@tri-c.edu.

Learn more about how certificate credits apply to the related degree.

Program Admission Requirements

- High School Diploma/GED
- Complete ENG-1010 College Composition I or ENG-101H Honors College Composition I
- MATH-0965 Intermediate Algebra with grade of "C" or higher; or appropriate score on Math placement test.
- Complete MET-1100 Technology Orientation

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

1. Communicate effectively and efficiently with diverse individuals and teams, all levels of employees, customers, and suppliers by means of verbal, written (memos, reports, emails, etc.), graphics, symbols, and effective listening skills and using appropriate technology.
2. Complete tasks and projects on schedule through the effective use of time management, appropriate math skills, and teamwork that fosters inclusion, synergized efforts in problems identification, and troubleshooting for successful resolution of problems towards the achievement of set goals and objectives.
3. Apply quality systems, principles, and concepts, and utilize appropriate math, measurement and statistical tools and technology to improve processes and product quality, and to enhance productivity.
4. Incorporate safety awareness, principles and practices in every aspect of work and as a way of life, including machine safety, environmental safety, chemical safety, and personal/employee protection.

5. Utilize modern CAD tools and technology and appropriate engineering drafting principles to create and revise drawings that meet design and quality specifications.
6. Apply the knowledge of the principles of drafting and the communication of ideas, designs and visualization skills as the language of the engineering field, including the creation and interpretation of drawings using proper dimensioning and tolerancing for size and geometry, and use of computer aided drawing programs to incorporate proper industry acceptable standards and conventions.

Suggested Semester Sequence

| First Semester | | Credit Hours |
|------------------------------|---|--------------|
| HLTH-1230 | Standard First Aid and Personal Safety | 1 |
| MATH-1530 | College Algebra | 4 |
| MET-1100 | Technology Orientation | 2 |
| MET-1120 | Computer Applications and Programming | 2 |
| MET-1230 | Drawing & AutoCAD ¹ | 3 |
| Select one of the following: | | 3 |
| ENG-1010 | College Composition I | |
| ENG-101H | Honors College Composition I | |
| Credit Hours | | 15 |
| Second Semester | | |
| MET-1240 | Machine Tools and Manufacturing Processes | 3 |
| MET-1300 | Engineering Materials and Metallurgy | 3 |
| MET-1410 | Computer Aided Manufacturing Processes | 3 |
| MET-XXXX | Elective | 3 |
| MET-2601 | 3D Solid Modeling | 3 |
| Credit Hours | | 15 |
| Total Credit Hours | | 30 |

¹ MET-1200 & MET-1220 together will be accepted in place of MET-1230 Drawing & AutoCAD.

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a counselor to determine the appropriate math required for your current major.