



Effective 2009/2010

Career Cluster ►



Career Pathway ►

Engineering and Technology

**MECHANICAL DESIGN TECHNOLOGY**  
 (10-606-1A) – Mechanical Engineering Tech  
 Associate of Applied Science Degree  
 Offered at: Elkhorn and Racine Campuses

△ Suggested Sequence	✓ Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1	606-126	*Introduction – AutoCAD		2	0-4
	606-149	*Introduction to MET	Coreq: 606-126	2	0-4
	606-152	*Engineering Graphics w/ CAD1	Coreq: 606-126	2	0-4
	801-136	English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
	804-113	College Technical Math 1A	Prereq: 854-769 (See Note 1)	3	3-0
	804-114	College Technical Math 1B	Coreq: 804-113	2	2-0
	809-198	Psychology, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
Semester 2	606-127	*CAD Intermediate	Prereq: 606-126	2	1-2
	606-128	*CAD – Solidworks		2	1-2
	606-136	*Manufacturing Materials		1	1-0
	606-151	*Statics	Prereq: 804-114	3	2-2
	606-153	*Engineering Graphics w/ CAD 2	Prereq: 606-152	2	0-4
	606-160	*Fluid Power and Design		3	2-2
	809-196	Sociology, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
Semester 3	606-118	*Mechanisms	Prereq: 606-132; 606-151	2	1-2
	606-122	*Geometric Dimensioning & Tolerancing		2	2-0
	606-129	*CAD Solids / Advanced	Prereq: 606-128	2	1-2
	606-131	*Strength of Materials	Prereq: 804-113	3	2-2
	606-159	*Manufacturing Processes		2	2-0
	806-154	General Physics 1	Prereq: 804-113	4	3-2
Semester 4	606-116	*Machine Design / Elements of	Prereq: 606-131	3	3-0
	606-119	*Motor Controls		3	2-2
	606-137	*Manufacturing Process Applications		2	0-4
	606-138	*Design Problems	Prereq: 606-131	2	0-4
	606-154	*Engineering Graphics w/ CAD 3	Prereq: 606-153	2	0-4
	801-198	Speech		3	3-0
Electives	Take 6 elective credits. Any associate degree level course may be taken as an elective.			6	
	<b>Suggested Electives:</b> 606-107 Drafting Seminar (2 Cr)      606-186 Directed Study/Mech. Design (1 Cr) 606-130 Introduction – SolidEdge (2 Cr)      606-199 Internship, Mechanical Technician(1 Cr) 606-139 Introduction – AutoCAD Inventor (2 Cr)				
<b>Program Total Required</b>				<b>69</b>	

△ Courses may be taken out of suggested sequence as long as requisites have been met.



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**MECHANICAL DESIGN TECHNOLOGY**

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**PROGRAM DESCRIPTION**

In *Mechanical Design Technician*, comprehensive instruction is given and practical experience gained in mechanical design, drafting, and computer aided design (CAD). Extensive experience is gained with dimensioning practices, allowances, sections, drafting standards, auxiliary views, exploded views, fabrication drawings detail and assembly drawings, gears and cams, structural shapes, and intersections. Other topics covered through classroom study include practical geometry, basic fabrication methods, engineering geometry, linear velocity, engineering materials and properties, kinematics of machinery, and manufacturing processes.

**PROGRAM LEARNING OUTCOMES**

**Graduates of the Mechanical Design Technician Associate Degree Program should be able to:**

1. Work as a member of a design team.
2. Demonstrate basic job entry computer skills.
3. Analyze applications of forces as applied in the design process.
4. Create working drawings using a combination of sketches, 2D drafting, and solids modeling.
5. Create and complete a design project.
6. Apply various math concepts.
7. Apply current drafting standards.
8. Understand how materials and manufacturing relate to design.

**CORE ABILITIES**

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

- |  |   |
|--|---|
| 1. Act responsibly                     | 6. Respect themselves and others as a member of a diverse community |
| 2. Communicate clearly and effectively | 7. Think critically and creatively                                  |
| 3. Demonstrate essential comp. skills  | 8. Work cooperatively   |
| 4. Demonstrate essential math skills   | 9. Value learning   |
| 5. Develop job seeking skills          |   |

**ADMISSION REQUIREMENTS**

1. Students must submit an application and \$30 fee.
2. Students must complete reading, writing, pre-algebra and algebra placement testing.

**GRADUATION REQUIREMENTS**

1. 69 Credits with an average of 2.0 or above.
2. \*Average of 2.0 ("C") or above for these major courses.

*For a complete list of Graduation Requirements check the Student Handbook.*

**NOTES**

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See a counselor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days.
3. A drafting kit is required for this program; the cost is approximately \$20.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

**OTHER INFORMATION**

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult the Master Class Schedule for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

**EQUAL OPPORTUNITY/ACCESS EDUCATOR / EMPLOYER  
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You may call Student Services at (262) 767-5300 (Burlington), (262) 741-8300 (Elkhorn), (262) 564-2300 (Kenosha), or (262) 619-6300 (Racine) for additional information. For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at [www.gtc.edu](http://www.gtc.edu).

My counselor is \_\_\_\_\_. My counselor's contact information is \_\_\_\_\_.