



Effective 2014/2015

Career Cluster ►



Career Pathway ►

Engineering and Technology

**MECHANICAL DESIGN TECHNOLOGY  
(10-606-1B) – Mechatronics**  
Associate of Applied Science Degree  
Most Courses Offered at Elkhorn Campus  
and iMET Center

<sup>Δ</sup> Suggested Sequence	✓	Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113 *	DC/AC I		3	2-2
		606-128 *	CAD Solidworks		2	1-2
		606-149 *	Introduction to MET	Coreq: 606-128	2	1-2
		606-152 *	Engineering Graphics w/ CAD 1	Coreq: 606-128	2	1-2
		801-136	English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-115	College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
Semester 2		605-114 *	DC/AC II	Prereq: 605-113	3	2-2
		606-129 *	CAD Solids / Advanced	Prereq: 606-128	2	1-2
		606-136 *	Manufacturing Materials		1	1-0
		606-141 *	AutoCAD – Mech Design Tech		3	2-2
		606-151 *	Statics	Prereq: 804-115	3	2-2
		606-153 *	Engineering Graphics w/ CAD 2	Prereq: 606-152	2	1-2
		606-160 *	Fluid Power and Design		3	2-2
Semester 3		605-120 *	Electronic Devices I	Prereq: 605-113	4	2-4
		605-130 *	Digital Electronics	Coreq: 605-113	4	3-2
		606-118 *	Mechanisms	Prereq: 606-151; 606-152	2	1-2
		606-159 *	Manufacturing Processes		2	2-0
		806-154	General Physics 1	Prereq: 804-115	4	3-2
Semester 4		606-137 *	Manufacturing Process Applications		2	0-4
		606-138 *	Design Problems	Prereq: Instructor Consent	2	0-4
		801-198	Speech	Prereq: 838-105 (See Note 1)	3	3-0
		809-196	Sociology, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
		809-198	Psychology, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
Electives	<b>Take 6 elective credits. Any associate degree level course may be taken as an elective.</b>				<b>6</b>	
	<b>Suggested Electives:</b>					
		606-107	Drafting Seminar (2 Cr)	606-142	Introduction – Pro-E (2 Cr)	
		606-130	Introduction – SolidEdge (2 Cr)	606-186	Directed Study/Mechanical Design (1 Cr)	
	606-139	Intro – AutoCAD Inventor (2 Cr)	606-199	Internship, Mechanical Technician (1 Cr)		
<b>Minimum Program Total Credits Required</b>					<b>69</b>	

<sup>Δ</sup> Courses may be taken out of suggested sequence as long as requisites have been met.



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**PROGRAM DESCRIPTION**

In *Mechanical Design Technology*, 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 Technology Associate Degree Program should be able to:**

1. Prepare detail and assembly drawings for documentation of mechanical components and products.
2. Create CAD geometry, parts, and assemblies.
3. Design mechanical components and products.
4. Analyze mechanical engineering problems.
5. Select purchase parts.

**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, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

**GRADUATION REQUIREMENTS**

1. Minimum 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 an advisor 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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To schedule an appointment with an advisor, please call 1-800-247-7122.  
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 advisor is \_\_\_\_\_. My advisor's contact information is \_\_\_\_\_.