GATEWAY TECHNICAL COLLEGE **Effective 2013/2014**	**Career Cluster ►** Science, Technology, Engineering & Mathematics	**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**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113	*	DC/AC I		3	2-2
		606-126	*	Introduction – AutoCAD		2	0-4
		606-149	*	Introduction to MET	Coreq: 606-126	2	0-4
		606-152	*	Engineering Graphics w/ CAD 1	Coreq: 606-126; 606-149	2	0-4
		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
		606-127	*	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: 804-115	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
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
		606-129	*	CAD Solids / Advanced	Prereq: 606-128	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		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

606-107 Drafting Seminar (2 Cr)
606-130 Introduction – SolidEdge (2 Cr)
606-139 Intro – AutoCAD Inventor (2 Cr)
606-186 Directed Study/Mechanical Design (1 Cr)
606-199 Internship, Mechanical Technician (1 Cr)

Program Total Required 70

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

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	Science, Technology, Engineering & Mathematics	Engineering and Technology	

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

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. 70 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.

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You may call Student Services at 1-800-247-7122 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.

My advisor is _____. My advisor’s contact information is _____.