



## COURSE OUTLINE: AMF202 - SOLID MODELLING II

Prepared: Donovan Kennedy

Approved: Corey Meunier, Chair, Technology and Skilled Trades

<b>Course Code: Title</b>	AMF202: SOLID MODELLING II
<b>Program Number: Name</b>	4069: AUTOMATED MANUFACT.
<b>Department:</b>	ROBOTICS GRADUATE CERTIFICATE
<b>Academic Year:</b>	2022-2023
<b>Course Description:</b>	Solid Modelling II course builds on the fundamentals presented in Solid Modeling I. This course will provide students with an understanding of the parametric design philosophy through a hands-on, practice-intensive curriculum.
<b>Total Credits:</b>	3
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	45
<b>Prerequisites:</b>	AMF102
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>	<b>4069 - AUTOMATED MANUFACT.</b>
<b>Please refer to program web page for a complete listing of program outcomes where applicable.</b>	VLO 1 Solve automated manufacturing problems found in a typical industrial environment by applying engineering principles and decision-making strategies.
	VLO 2 Analyze and synthesize technical data to develop graphics and related technical documents conforming to engineering standards.
	VLO 3 Select and manage appropriate hardware and software for the creation of engineering designs.
	VLO 4 Identify and utilize manufacturing processes, rapid prototyping methods, and automation technologies to optimize product development.
	VLO 7 Exercise professionalism, leadership, and effective communication in an industrial work setting to increase overall productivity and support a positive work environment.
<b>Essential Employability Skills (EES) addressed in this course:</b>	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
	EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.
	EES 4 Apply a systematic approach to solve problems.
	EES 5 Use a variety of thinking skills to anticipate and solve problems.
	EES 6 Locate, select, organize, and document information using appropriate technology and information systems.
	EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.
	EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
	EES 10 Manage the use of time and other resources to complete projects.



	EES 11 Take responsibility for ones own actions, decisions, and consequences.												
<b>Course Evaluation:</b>	<p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>												
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	<p>Grade</p> <p>Definition Grade Point Equivalent</p> <p>A+ 90 - 100% 4.00</p> <p>A 80 - 89%</p> <p>B 70 - 79% 3.00</p> <p>C 60 - 69% 2.00</p> <p>D 50 - 59% 1.00</p> <p>F (Fail)49% and below 0.00</p> <p>CR (Credit) Credit for diploma requirements has been awarded.</p> <p>S Satisfactory achievement in field /clinical placement or non-graded subject area.</p> <p>U Unsatisfactory achievement in field/clinical placement or non-graded subject area.</p> <p>X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.</p> <p>NR Grade not reported to Registrar's office.</p> <p>W Student has withdrawn from the course without academic penalty.</p> <p>Smart watches, smart phones and similar devices are not allowed during tests or quizzes and must be removed. Smart phones are not acceptable for use as a calculator during a test or quiz.</p> <p>A student who attends less than 80% (12) classes will receive a zero (0) for their attendance grade.</p> <p>Sault College is committed to student success. There is a direct correlation between academic performance and class attendance, therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.</p> <p>It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.</p>												
<b>Course Outcomes and Learning Objectives:</b>	<table border="1"> <thead> <tr> <th><b>Course Outcome 1</b></th> <th><b>Learning Objectives for Course Outcome 1</b></th> </tr> </thead> <tbody> <tr> <td>1. Design for Additive Manufacturing</td> <td>1.1 - Iterative Design 1.2 - Part Families 1.3 - File types</td> </tr> <tr> <th><b>Course Outcome 2</b></th> <th><b>Learning Objectives for Course Outcome 2</b></th> </tr> <tr> <td>2. Design for Subtractive Manufacturing</td> <td>2.1 Design for Turning Operations 2.2 Design for Milling Operations</td> </tr> <tr> <th><b>Course Outcome 3</b></th> <th><b>Learning Objectives for Course Outcome 3</b></th> </tr> <tr> <td>3. CAM</td> <td>3.1 Basic CAM 3.2 Work Holding and Locating for CAM 3.3 Sequence of Operations for CAM</td> </tr> </tbody> </table>	<b>Course Outcome 1</b>	<b>Learning Objectives for Course Outcome 1</b>	1. Design for Additive Manufacturing	1.1 - Iterative Design 1.2 - Part Families 1.3 - File types	<b>Course Outcome 2</b>	<b>Learning Objectives for Course Outcome 2</b>	2. Design for Subtractive Manufacturing	2.1 Design for Turning Operations 2.2 Design for Milling Operations	<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>	3. CAM	3.1 Basic CAM 3.2 Work Holding and Locating for CAM 3.3 Sequence of Operations for CAM
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**Evaluation Process and Grading System:**

<b>Evaluation Type</b>	<b>Evaluation Weight</b>
Assignments	70%
Attendance	10%
Final Exam	20%

**Date:**

August 15, 2022

**Addendum:**

Please refer to the course outline addendum on the Learning Management System for further information.

