COURSE OUTLINE: AMF105 - PROJECT RESEARCH ERW

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Course Code: Title	AMF105: PROJECT RESEARCH/ETHICS/REPORT WRITING
Program Number: Name	4069: AUTOMATED MANUFACT.
Department:	ROBOTICS GRADUATE CERTIFICATE
Semesters/Terms:	20F, 21W
Course Description:	The students in this course will gain the understanding of project management and research which includes: project planning, scheduling and reporting. The students will also gain the understanding of ethics and technical report writing.
Total Credits:	2
Hours/Week:	2
Total Hours:	30
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	AMF205
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4069 - AUTOMATED MANUFACT.** 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 5 Incorporate sustainable, economic, safe and ethical approaches in the design and implementation of projects. VLO 7 Exercise professionalism, leadership, and effective communication in an industrial work setting to increase overall productivity and support a positive work environment.
Essential Employability Skills (EES) addressed in this course:	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 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.

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.

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	EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	Grade Definition Grade Point Equivalent A+ 90 - 100% 4.00 A 80 - 89% B 70 - 79% 3.00 C 60 - 69% 2.00 D 50 - 59% 1.00 F (Fail)49% and below 0.00 CR (Credit) Credit for diploma requirements has been awarded. S Satisfactory achievement in field /clinical placement or non-graded subject area. U Unsatisfactory achievement in field/clinical placement or non-graded subject area. X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. NR Grade not reported to Registrar`s office. W Student has withdrawn from the course without academic penalty. 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.
Books and Required Resources:	Engineering Ethics: Concepts and Cases by Charles E. Harris, Jr., Michael S. Pritchard, Ray W. James, Elaine E. Englehardt, Michael J. Rabins Publisher: Cengage Learning Edition: Sixth ISBN: 978-1-337-55450-3

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Understand how to research.	1.1 Investigate and practice how to choose a topic. 1.2 Understand and utilize the various types of resources available. 1.3 Understand and practice compiling resources.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Understand how to write a technical document.	2.1 Understand the audience for the document. 2.2 Understand the objectives and purpose of the document. 2.3 Understand and apply the various kinds of reports needed in a technical field. 2.4 Understand the different sections of a document and how to format them. 2.5 Understand the MLA and APA formats and how to use them.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Understand engineering	3.1 Understand the definition of ethics

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	ethics.

3.2 Understand ethical behavior with engineering and society.
3.3 Understand applications of ethics, evolving issues in engineering ethics and ethics of emerging technologies.
3.4 Understand and analyze ethical case studies.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments	20%
Attendance & Participation	10%
Case Studies / Project	20%
Test 1	25%
Test 2	25%

Date: December 1, 2020

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

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