OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: DMFG 210	**Number of Credits:** 15 Course credit policy (105)

Course Full Title: Project Studio

Course Short Title:

(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)

Faculty: Faculty of Applied and Technical Studies	**Department (or program if no department):** Digital Manufacturing

Calendar Description:

An intensive studio and shop blended course that brings together the skills acquired from prerequisite Digital Manufacturing courses and the learner's discipline-specific knowledge to complete a major digitally produced project from conception to completion (prototype). The approach will be problem-based learning, and projects can be team- or individual-based, under the direction and supervision of a faculty advisor/mentor.

Prerequisites (or NONE):	DMFG 201, DMFG 202, DMFG 203, DMFG 205, and DMFG 207, or department permission.
Corequisites (if applicable, or NONE):	
Pre/corequisites (if applicable, or NONE):	

Antirequisite Courses *(Cannot be taken for additional credit.)*

Former course code/number:

Cross-listed with:

Dual-listed with:

Equivalent course(s):

(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Special Topics *(Double-click on boxes to select.)*

This course is offered with different topics:

☒ No ☐ Yes *(If yes, topic will be recorded when offered.)*

Independent Study

If offered as an Independent Study course, this course may be repeated for further credit: *(If yes, topic will be recorded.)*

☒ No ☐ Yes,   repeat(s) ☐ Yes, no limit

Transfer Credit

Transfer credit already exists: *(See **bctransferguide.ca**.)*

☒ No ☐ Yes

Submit outline for (re)articulation:

☒ No ☐ Yes *(If yes, fill in transfer credit form.)*

Typical Structure of Instructional Hours

Lecture/seminar hours	15
Tutorials/workshops	360
Supervised laboratory hours	
Experiential (field experience, practicum, internship, etc.)	
Supervised online activities	
Other contact hours:	
Total hours	**375**

Labs to be scheduled independent of lecture hours: ☐ No ☒ Yes

Grading System

☒ Letter Grades ☐ Credit/No Credit

Maximum enrolment (for information only): 20

Expected Frequency of Course Offerings:

Annually *(Every semester, Fall only, annually, etc.)*

Department / Program Head or Director:	**Date approved:**	October 2018
Faculty Council approval	**Date approved:**	November 8, 2018
Dean/Associate VP: John English	**Date approved:**	November 8, 2018
Campus-Wide Consultation (CWC)	**Date of posting:**	January 18, 2019
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	February 1, 2019

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- Use digital technologies to solve problems and complete projects.
- Function competently in multidisciplinary teams.
- Communicate effectively.
- Plan and manage projects.
- Apply critical thinking process to debug and troubleshoot.
- Apply creative thinking in developing their project concept.
- Collaborate with other students and disciplines to apply improvements and corrections to design.
- Transfer and share information effectively.

Prior Learning Assessment and Recognition (PLAR)

☐ Yes   ☒ No, PLAR cannot be awarded for this course because

Typical Instructional Methods *(Guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion.)*

Intensive project-based learning in teams, with weekly seminars to review progress and provide critique. Occasional guest lectures may also be included.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Text(s) and Resource Materials *(If more space is required, download Supplemental Texts and Resource Materials form.)*

	Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1.		No textbook required – internal worksheets and lecture notes will be provided	☐		
2.			☐		
3.			☐		
4.			☐		
5.			☐		

Required Additional Supplies and Materials *(Software, hardware, tools, specialized clothing, etc.)*

Students will require a tablet-type device suitable for design collaboration and curation.

Typical Evaluation Methods and Weighting

Final exam:	%	Assignments:	20%	Field experience:	%	Portfolio:	%
Midterm exam:	%	Project:	40%	Practicum:	%	Other:	%
Quizzes/tests:	%	Lab work:	40%	Shop work:	%	Total:	100%

Details (if necessary): Assignments could include seminar presentations, progress reports, and critiques. Project would include project proposal and implementation. Lab work evaluation will be based on demonstration of collaboration and innovation in project management, problem-solving, and troubleshooting.

Typical Course Content and Topics

UNIT 1 (Weeks 1-4): Project selection and proposals — students will be challenged to develop project proposals that synthesize design solutions suitable for digital manufacture using the skills and knowledge learned from first term courses, discipline-specific skills and knowledge, and self-acquired skills and knowledge as necessary for the particular project.

UNIT 2: Project development and group collaboration — projects can be team- or individual-based, but students will be required to work collaboratively and to participate in a weekly project review and critique with the whole class. The learner or team will set up a customized work space for the duration of the course to create a motivating and functional place that promotes each learner's personal style, creative motivators, and think-spaces needed for a particular project. Typical projects may include the design and prototype of a major digital-based manufacturing machine, the digitization of an existing custom manual or labour intensive process or technique, or the application of digital methods to improve production or quality or precision.