

Fanshawe College

FIRST: Fanshawe Innovation, Research, Scholarship, Teaching

Documentation (Approvals etc...)

Practical Elements of Mechanical Engineering

2018

PEM1 Curriculum Modification for 2018-19

Fanshawe College

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CURRICULUM MODIFICATION REQUEST FORM

COURSE OR PROGRAM CURRICULUM "RATIONALE FOR CHANGE"

RECEIVED

JAN 05 2018

Program Requiring Changes

Office of the Registrar

Program Title: Practical Elements of Mechanical Engineering		
Program Number: PEM1	Date Submitted: Click here to enter a date.	
Dean responsible for program: Vertha Coligan	Chair: Dave Machacek	
Credential Provided: <input type="checkbox"/> Declaration of Academic Achievement <input type="checkbox"/> Local Certificate <input type="checkbox"/> Ontario College Certificate <input type="checkbox"/> Diploma <input type="checkbox"/> Advanced Diploma <input checked="" type="checkbox"/> Grad Certificate <input type="checkbox"/> Degree <input type="checkbox"/> Apprenticeship		
Program Intakes: <input checked="" type="checkbox"/> F <input checked="" type="checkbox"/> W <input checked="" type="checkbox"/> S Other:	Catalogue Year(s) Impacted: 2018/19	
Residency Requirement: <input checked="" type="checkbox"/> Met or <input type="checkbox"/> Not Met	Date of Last Program Review: 10/1/2016	
<i>I have read the reasons for the change and...</i>	<i>Signature and date</i>	
Dean of Faculty (Lead program):	<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	<i>Vertha Coligan Jan 5/18</i>
Dean of Faculty (Affiliate program-impacted by change):	<input type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
Dean of Faculty (Affiliate program-impacted by change):	<input type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
Senior Vice President Academic (required for major changes and late DAs):	<input type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
Director, Centre for Academic Excellence:	<input checked="" type="checkbox"/> Supports <input type="checkbox"/> Does Not Support	<i>Judy Geddes Jan 12/18</i>
Office of the Registrar:	<input type="checkbox"/> Supports <input type="checkbox"/> Does Not Support	
Notes: <i>mapping missing - attached. TJS Jan. 15/18</i>		

Please answer each of the questions below, if applicable. Missing or incomplete information may delay review of the proposed changes.

1.0 Describe proposed change(s). Complete Appendix A (if necessary) and amend SDAR (Refer to Appendix C).

MGMT-1007 will be replaced with MGMT-6098.

2.0 Reason/Rationale for Changes

2.1 The reason for the change is based on:

- A recent program review
- Program Advisory Committee feedback
- Student feedback
- KPI results
- Accreditation or other regulatory requirements
- Shared curriculum
- Trends in the field/industry
- Other (please describe):

2.2 Does the change support the College's Strategic Framework (mission, vision, values)?

- Yes
- No (If no, please explain)

2.3 What strategic goal(s) does the proposed change support?

- Goal 1 - Enhance innovative practices for exceptional student learning
- Goal 2 - Manage enrolment growth
- Goal 3 - Optimize use of resources
- Goal 4 - Build sustainable sources of alternative revenue

3.0 Students

3.1 Will the change affect the cost of the program for students?

- Yes
- No

3.2 If yes, there will be an additional cost for:

- Materials (Include details):
- Equipment (Include details):
- Other (Please describe):

4.0 Program Learning Outcomes

4.1 Will the proposed change meet the Program Vocational Learning Outcomes? (Complete Appendix B and mark the changes in the mapping [e.g. red font])

Yes

No

4.2 Are there any implications related to progression because of pre-requisite courses (and/or co-requisite courses)?

No

Yes (If yes, please explain)

5.0 Relationships with Other Programs

5.1 Are any of the courses impacted by the change provided by another School (e.g., SLLS, LKSB) and/or delivered at another campus?

No

Yes

5.2 What Schools/Campuses will be impacted by the proposed change?

- Lawrence Kinlin School of Business
- School of Information Technology
- School of Tourism, Hospitality and Culinary Arts
- School of Community Studies
- School of Health Sciences
- School of Nursing
- School of Public Safety
- School of Contemporary Media
- School of Design
- School of Language and Liberal Studies
- Donald J. Smith School of Building Technology
- Norton Wolf School of Aviation Technology
- School of Applied Sciences and Technology
- School of Transportation Technology and Apprenticeship
- Continuing Education
- Simcoe/Norfolk Regional Campus
- St Thomas/Elgin Regional Campus
- Woodstock/Oxford Regional Campus
- Huron/Bruce Regional Sites

5.3 Will the change affect pathway agreements (e.g., bridging, articulations, laddering, advanced standing) with other Fanshawe program(s) and/or other institution(s)?
(Refer to the pathway agreements listed here: <http://transferagreements.fanshawec.ca/>)

- No
 Yes (If yes, indicate when you will notify the other Fanshawe program(s) and/or other institution(s) and the Pathways Coordinator in the Centre for Academic Excellence of the change)

5.4 If this program is a Co-Operative Education program, will the proposed change impact Co-op?

- No
 Yes (If yes, consult with the Co-op office prior to submission)

6.0 Resource Implications of Proposed Changes

6.1 Will the proposed change have staffing implications?

- No
 Yes (If yes, please explain)

6.2 Will the proposed change impact any of the Enabling areas?

- No
 Yes (If yes, please explain)

6.3 Will the proposed change affect space and/or technology requirements?

- No
 Yes (If yes, please explain)

7.0 General College Requirements

7.1 Are changes consistent with Colleges policies?

- Yes
 No (If no, please explain)

7.2 Will the program meet the General Education requirements (Policy 2-B-02) as listed below?

- No
 Yes

Local Certificate, Ontario College Certificate and Graduate Certificate - none required)	Diploma - 3 required (minimum of 1 must be an elective)	Advanced Diploma - 4 required (minimum of 2 must be electives)
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7.3 Will the program have 25% distinct curriculum to meet the Residency Requirement of 25% credit units? Consider all pathway agreements (e.g., bridging, internal articulations, laddering, advanced standing) with other Fanshawe programs and/or other institutions.

- No
 Yes

Note: In accordance with POLICY NUMBER: 2-B-17 Graduation from Approved College Programs

...to be eligible for any College Credential a student must be enrolled and complete at least 25% of that program's credit units at Fanshawe College, unless stipulated differently by other approving bodies such as the Postsecondary Education Quality Assessment Board (PEQAB).

7.4 Indicate:

- i) Total program hours before proposed change: 735
 ii) Total program hours after proposed change: 735
 iii) Level(s) in which the proposed change(s) occurs: level 1 and level 2

7.4.1 Are the total program hours consistent with the requirements as listed below?

- Yes
 No (If no, please explain)

Local Certificate - 300 hours	Ontario College Certificate - 600 hours
Diploma - 1200 to 1400 hours	Advanced Diploma - 1800 to 2100 hours
Graduate Certificate - 600 hours	

APPENDIX A: PROPOSED CURRICULUM MODIFICATION

Course Code	Existing DA Courses	Total Hours	Total Credits		Course Code	Proposed DA Courses	Total Hours	Total Credits
Level 1								
CADD-1054	Eng Drawing & BP reading	30	2		CADD-1054	Eng Drawing & BP Reading	30	2
CADD-1055	CADD Fundamentals	45	1.5		CADD-1055	CADD Fundamentals	45	1.5
MACH-1124	Machining 1	45	2		MACH-1124	Machining 1	45	2
WELD-1040	Welding Technology 1	45	2		WELD-1040	Welding Technology	45	2
MGMT-1007	Project Management	45	3	Course should be aligned with Embedded Systems Design	MGMT-6098	Project Management	45	3
ENGR-1026	Engineering Design 1	75	3.5		ENGR-1026	Engineering Design 1	75	3.5
MECH-1072	SPC & Metrology	60	3		MECH-1072	SPC & Metrology	60	3
MATS-1021	Ferrous Metallurgy	45	2		MATS-1021	Ferrous Metallurgy	45	2
TOTAL		390	19		TOTAL		390	19
Level 2								
TOTAL		345	16.5		TOTAL		345	16.5
Level 3								
TOTAL		0	0		TOTAL		0	0
Level 4								
TOTAL		0	0		TOTAL		0	0
Level 5								
TOTAL		0	0		TOTAL		0	0
Level 6								
TOTAL		0	0		TOTAL		0	0

PROGRAM TOTAL 735 35.5

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COMMS - Vocational Learning Outcomes by Program, Level and Course

Program Name: Practical Elements of Mechanical Engineering
Program Code: PEM1 (PEM1-MAN-20178)
Academic Year: 2017-2018
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Level 1

Course Number	Course Name	1	2	3	4	5	6	7	8	9	10	11	12
CADD-1054	Eng. Drawing & BP Reading	IBC	I	IBC		IB					IB	I	I
CADD-1055	CADD Fundamentals	I	I	IBC	I	I	I				IBC	IBC	
ENGR-1026	Engineering Design 1	IC	IC	I	I		IB				I		
MACH-1124	Machining 1						IBC	IBC			IC	I	IBC
MATS-1021	Ferrous Metallurgy	I		B	I	I	IBC	B			B	I	BC
MECH-1072	SPC & Metrology	I		I	B			B			B		
MGMT-4007	Project Management			†						†		†	
WELD-1040	Welding Technology 1			I				IB					
MGMT-6098	Project Management			I						I		I	

Level 2

Course Number	Course Name	1	2	3	4	5	6	7	8	9	10	11	12
MACH-1144	CNC Machining	C	C	B	C	B	B	C			B		
MECH-1090	Tool Design 1	BC	BC	BC	BC	BC	BC				BC	BC	
MECH-3034	Ind Hydraulics Pneumatics PLC	B	I	I	IBC								
MECH-3035	Practical Project	BC	BC	IBC	BC	BC	BC	BC	BC	IBC	BC	BC	
MECH-6005	Industrial Automation	B	I	I	IBC								
METH-1002	Technology in Industry	I			I		B		IB	IB		I	
WELD-1047	Production Welding	I	IB	IB	I	B	IB	B	B				B

Vocational Learning Outcomes

1
2
3
4
5
6
7
8
9
10
11
12

Solve complex technical problems related to mechanical environments and evaluate solutions according to accepted engineering principles.

Design and analyze mechanical components, processes, and systems through the application of complex engineering principles and practices.

Create graphics and other technical documents and evaluate these documents against appropriate engineering standards.

Utilize current and relevant hardware and software to support the mechanical engineering environment.

Design components using knowledge of manufacturing processes.

Apply knowledge of materials and engineering principles to manufacturing operations and processes as required.

Select and utilize various machinery, tools, and other equipment used in manufacturing processes as required.

Coordinate, conduct and analyze quality control and quality assurance procedures.

Create a relevant project document including the creation of a risk management strategy, incorporating the environmental, economic, legal, safety, and ethical implications inherent in mechanical engineering projects.

Produce, maintain and utilize documentation, and inventory and records systems.

Participate in the management of an engineering product.

Develop and implement strategies and plans to improve job performance and work relationships.

Degree Audit Report

Catalog: 2018/2019

Program: PEM1
Department: MAN - Applied Science and Technology
Academic Level: PS
CCD: 7 - 2AcadSem/600-700 hrs
Credential: Ontario College Graduate Cert

Name: Practical Elements of Mechanical Engineering

Grade Scheme: LG2
Major: PEM1 - Pract'l Elements of Mech'l Eng
Co-Op Indicator: N/A
Div: MAN - Manufacturing Sciences Division

Academic Program Requirement

Total Credits: 35.50
GPA Requirement: 2.00
Minimum Grade: D
Residency Reqmt: 9.00
Residency Reqmt GPA: 2.00

Academic Requirement: PEM1.18 Practical Elements of Mechanical Engineering

Major: PEM1
Grade Scheme: LG2
Minimum GPA: 2.00
Minimum Grade:

Subrequirement: Level 1

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
CADD-1054	Eng Drawing & BP Reading	30.00	2.00	
CADD-1055	CADD Fundamentals	45.00	1.50	
MACH-1124	Machining 1	45.00	2.00	
WELD-1040	Welding Technology 1	45.00	2.00	
MGMT-1007	Project Management	45.00	3.00	** Remove
ENGR-1026	Engineering Design 1	75.00	3.50	
MECH-1072	SPC & Metrology	60.00	3.00	
MATS-1021	Ferrous Metallurgy	45.00	2.00	
MGMT-6098	Project Management	45.00	3.00	Add

Subrequirement: Level 2

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
WELD-1047	Production Welding	60.00	3.00	
MACH-1144	CNC Machining	75.00	3.50	
MECH-1090	Tool Design 1	30.00	1.00	
MECH-6005	Industrial Automation	90.00	4.00	
METH-1002	Technology In Industry	45.00	3.00	
MECH-3035	Practical Project	45.00	2.00	

Subrequirement: Program Residency

Students Must Complete a Minimum of 9 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program

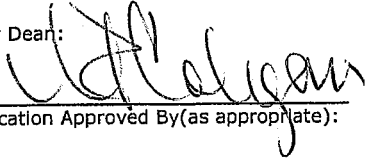
O. D. L.
 Approved By Chair/Manager:

Jan 5/2017
 Department and Date:

TJ
Jan 12/18

Degree Audit Report

Approved by Dean:



General Education Approved By (as appropriate):

Date:

Jan 5/18

Date: