Viewing: TBD-1864 : R-UG-3.1.13 Restrictions on Program Elements

Last approved: 05/17/19 10:58 am

Last edit: 05/14/19 10:19 am

Last modified by: mikelabreque

History

1. May 3, 2019 by Mike Labreque (mikelabreque)
2. May 17, 2019 by Mike Labreque (mikelabreque)

Calendar Pages Using this Program	Academic Regulations for Degree Students
Effective Date	
Workflow	
Program Code	TBD-1864
Level	Undergraduate
Faculty	Not Applicable
Academic Unit	Regulations: RO
Degree	
Title	R-UG-3.1.13 Restrictions on Program Elements

Program Requirements

3.1.13 Restrictions on Program Elements

A course is considered to be *double-counted* if it is used to satisfy both the requirements for:

a. the Major (or Majors) and a Minor; **or**,
b. a Minor, Concentration, or Specialization and any other Minor, Concentration or Specialization (See **Note 1**, below).

A maximum of 2.0 credits in double-counted courses may be included in the credits used to fulfil requirements at graduation.

Notes:

1. Item **b)** refers to specializations and concentrations that constitute optional choices. In these cases the Major(s) can be completed with or without a concentration or specialization.

In other cases, a Concentration or Specialization is contained within the Major and constitutes a required choice for that Major. These Concentrations and Specializations are not included in **b)** above.

New Resources

Summary

Rationale for change

Transition/Implementation

Program reviewer comments

Key: 1864

Program Change Request

Viewing: **MENG-82 : M.Eng. Electrical and Computer Engineering**

Last modified by: sandrabauer

Changes proposed by: sandrabauer

Completed Workflow

1. **OCIECE ChairDir GR**
2. **GRAD FCC**
3. **GRAD FBoard**
4. **PRE SCCASP**
5. **SCCASP**
6. **CalEditor**

Approval Path

1. 01/23/19 2:12 pm Sandra Bauer (sandrabauer): Rollback to Initiator
2. 02/04/19 5:55 pm Sandra Bauer (sandrabauer): Rollback to Initiator
3. 02/05/19 11:42 am Sandra Bauer (sandrabauer): Approved for OCIECE ChairDir GR
4. 02/05/19 11:56 am Sandra Bauer (sandrabauer): Approved for GRAD FCC
5. 02/14/19 3:56 pm Sandra Bauer (sandrabauer): Approved for GRAD FBoard
6. 03/13/19 12:06 pm Mike Labreque (mikelabreque): Approved for PRE SCCASP
7. 03/19/19 10:33 am Dan Begin (danbegin): Approved for SCCASP
8. 03/22/19 9:11 am Mike Labreque (mikelabreque): Approved for CalEditor

History

1. May 4, 2017 by Sandra Bauer (sandrabauer)
2. May 4, 2017 by Sandra Bauer (sandrabauer)
3. **Mar 22, 2019 by Sandra Bauer (sandrabauer)**

Calendar Pages Using this Program	Electrical and Computer Engineering
Effective Date	2019-20
Workflow	minormod
Program Code	MENG-82
Level	Graduate
Faculty	Faculty of Engineering and Design
Academic Unit	OCIECE
Degree	Master of Engineering
Title	M.Eng. Electrical and Computer Engineering

Program Requirements

M.Eng. Electrical and Computer Engineering **(4.5 ~~(5.0~~ credits)

Requirements - by project:	
~~**1. 4.5 credits in** courses~~	~~4.5~~
1. 4.0 credits in courses	**4.0**
2. 0.5 credit in project	0.5
Total Credits	4.5
Requirements - by coursework:	
~~**1. 5.0 credits in** courses~~	~~5.0~~
1. 4.5 credits in courses	**4.5**

New Resources	No New Resources
Summary	Reduce course requirements by 0.5, lowering credits required for degree to 4.5
Rationale for change	This change brings our program more in line with other M.Eng. programs. It allows students to complete their degrees in a more timely manner.
Transition/Implementation	Students can easily opt in to the new requirements.
Program reviewer comments	**sandrabauer (01/23/19 2:12 pm):** Rollback: Email problem/re-send. **sandrabauer (02/04/19 5:55 pm):** Rollback: workflow issues, cont'd **sandrabauer (02/05/19 11:56 am):** Approved by P and P e-vote Feb. 1, 2019

Key: 906

Changes saved but not submitted

Viewing: BENG-76 : Communications Engineering Bachelor of Engineering

Last approved: 04/25/19 9:03 am

Last edit: 05/03/19 9:48 am

Last modified by: jerometalim

History

1. Apr 25, 2014 by sandra
2. Jun 23, 2014 by sandra
3. May 18, 2016 by Sandra Bauer (sandrabauer)
4. Jan 25, 2017 by Ian Marsland (ian.marsland)
5. Jan 11, 2018 by Ian Marsland (ian.marsland)
6. Jan 11, 2018 by Mike Labreque (mikelabreque)
7. Apr 11, 2018 by Donald Russell (donaldrussell)
8. Apr 25, 2019 by Ian Marsland (ianmarsland)

Calendar Pages Using this Program	Engineering
Effective Date	
Workflow	
Program Code	BENG-76
Level	Undergraduate
Faculty	Faculty of Engineering and Design
Academic Unit	Department of Systems and Computer Engineering
Degree	Bachelor of Engineering
Title	Communications Engineering Bachelor of Engineering

Program Requirements

Communications Engineering
Bachelor of Engineering (21.0 credits)

First year

1. a) 4.0 credits in:		4.0
CHEM 1101 [0.5]	Chemistry for Engineering Students	
ECOR 1051 [0.5]	Fundamentals of Engineering I	
ECOR 1052 [0.5]	Fundamentals of Engineering II	
ECOR 1053 [0.5]	Fundamentals of Engineering III	

ECOR 1054 [0.5]	Fundamentals of Engineering IV	
MATH 1004 [0.5]	Calculus for Engineering or Physics	
MATH 1104 [0.5]	Linear Algebra for Engineering or Science	
PHYS 1004 [0.5]	Introductory Electromagnetism and Wave Motion	

b) The Introduction to Engineering Disciplines requirement must be met through the successful completion of:

ECOR 1055 [0.0]	Introduction to Engineering Disciplines I	
ECOR 1056 [0.0]	Introduction to Engineering Disciplines II	

2. 0.5 credit in Basic Science Electives		0.5
3. 0.5 credit in Complementary Studies Electives		0.5

Second year

4. 5.0 credits in:		5.0
CCDP 2100 [0.5]	Communication Skills for Engineering Students	
ELEC 2501 [0.5]	Circuits and Signals	
ELEC 2507 [0.5]	Electronics I	
MATH 1005 [0.5]	Differential Equations and Infinite Series for Engineering or Physics	
MATH 2004 [0.5]	Multivariable Calculus for Engineering or Physics	
SYSC 2004 [0.5]	Object-Oriented Software Development	
SYSC 2006 [0.5]	Foundations of Imperative Programming	
SYSC 2310 [0.5]	Introduction to Digital Systems	
SYSC 2320 [0.5]	Introduction to Computer Organization and Architecture	
SYSC 2510 [0.5]	Probability, Statistics and Random Processes for Engineers	

Third year

5. 5.0 credits in:		5.0
ECOR 2050 [0.5]	Design and Analysis of Engineering Experiments	
ECOR 3800 [0.5]	Engineering Economics	
ELEC 3509 [0.5]	Electronics II	
ELEC 3909 [0.5]	Electromagnetic Waves	
SYSC 3310 [0.5]	Introduction to Real-Time Systems	
SYSC 3500 [0.5]	Signals and Systems	
SYSC 3503 [0.5]	Communication Theory II	
SYSC 4502 [0.5]	Communications Software	
SYSC 4504 [0.5]	Fundamentals of Web Development	
SYSC 4602 [0.5]	Computer Communications	

Fourth year

6. 3.5 credits in:		3.5
ECOR 4995 [0.5]	Professional Practice	
SYSC 4405 [0.5]	Digital Signal Processing	
SYSC 4604 [0.5]	Digital Communication Theory	
SYSC 4607 [0.5]	Wireless Communications	
SYSC 4700 [0.5]	Telecommunications Engineering	
SYSC 4701 [0.5]	Communications Systems Lab	
SYSC 4810 [0.5]	Introduction to Network and Software Security	
7. 1.0 credit from:		1.0
SYSC 4907 [1.0]	Engineering Project (if supervisor is in Systems and Computer Engineering)	
ELEC 4907 [1.0]	Engineering Project (if supervisor is in Electronics)	
8. 1.0 credit in SYSC or ELEC at the 3000 or 4000 level		1.0

OR

1.0 credit in SYSC at the 5000 level

9. 0.5 credit in Complementary Studies Electives	0.5
Total Credits	21.0

New Resources

Summary	The item 9 had "Approved Courses Outside the Faculties of Science and Engineering and Design"; it should have been "Complementary Studies Electives"
Rationale for change	n the revision of the first year curriculum in engineering programs, the committee had initially two types of electives. But the decision was taken to keep only the Complementary Studies Electives. All the 4 programs of the department of Systems and Computer Engineering (Biomedical and Electrical, Software, Computer Systems and Communications) have 0.5 credit of Complementary Studies Electives in first year and 0.5 credit of electives of "Approved Courses Outside the Faculties of Science and Engineering and Design" in upper year. That second elective needs to be set as Complementary Studies Electives.

Transition/Implementation

Program reviewer comments

Key: 836

Changes saved but not submitted

Viewing: BENG-79 : Computer Systems Engineering Bachelor of Engineering

Last approved: 04/25/19 9:04 am

Last edit: 05/03/19 9:43 am

Last modified by: jerometalim

History

1. Apr 25, 2014 by sandra
2. Jun 23, 2014 by sandra
3. Jan 5, 2016 by Darlene Hebert (darlenehebert)
4. May 18, 2016 by Sandra Bauer (sandrabauer)
5. Jan 26, 2017 by Ian Marsland (ian.marsland)
6. Jan 17, 2018 by Ian Marsland (ian.marsland)
7. Apr 11, 2018 by Donald Russell (donaldrussell)
8. Apr 25, 2019 by Ian Marsland (ianmarsland)

Calendar Pages Using this Program	Engineering
Effective Date	
Workflow	
Program Code	BENG-79
Level	Undergraduate
Faculty	Faculty of Engineering and Design
Academic Unit	Department of Systems and Computer Engineering
Degree	Bachelor of Engineering
Title	Computer Systems Engineering Bachelor of Engineering

Program Requirements

Computer Systems Engineering
Bachelor of Engineering (21.0 credits)

First year

1. a) 4.0 credits in:		4.0
CHEM 1101 [0.5]	Chemistry for Engineering Students	
ECOR 1051 [0.5]	Fundamentals of Engineering I	
ECOR 1052 [0.5]	Fundamentals of Engineering II	
ECOR 1053 [0.5]	Fundamentals of Engineering III	

ECOR 1054 [0.5]	Fundamentals of Engineering IV	
MATH 1004 [0.5]	Calculus for Engineering or Physics	
MATH 1104 [0.5]	Linear Algebra for Engineering or Science	
PHYS 1004 [0.5]	Introductory Electromagnetism and Wave Motion	

b) The Introduction to Engineering Disciplines requirement must be met through the successful completion of:

ECOR 1055 [0.0]	Introduction to Engineering Disciplines I	
ECOR 1056 [0.0]	Introduction to Engineering Disciplines II	

2. 0.5 credit in Basic Science Electives		0.5
3. 0.5 credit in Complementary Studies Electives		0.5

Second year

4. 5.0 credits in:		5.0
CCDP 2100 [0.5]	Communication Skills for Engineering Students	
ELEC 2501 [0.5]	Circuits and Signals	
MATH 1005 [0.5]	Differential Equations and Infinite Series for Engineering or Physics	
MATH 2004 [0.5]	Multivariable Calculus for Engineering or Physics	
SYSC 2004 [0.5]	Object-Oriented Software Development	
SYSC 2006 [0.5]	Foundations of Imperative Programming	
SYSC 2100 [0.5]	Algorithms and Data Structures	
SYSC 2310 [0.5]	Introduction to Digital Systems	
SYSC 2320 [0.5]	Introduction to Computer Organization and Architecture	
SYSC 2510 [0.5]	Probability, Statistics and Random Processes for Engineers	

Third year

5. 5.5 credits in:		5.5
ECOR 2050 [0.5]	Design and Analysis of Engineering Experiments	
ECOR 3800 [0.5]	Engineering Economics	
ELEC 2507 [0.5]	Electronics I	
SYSC 3010 [0.5]	Computer Systems Development Project	
SYSC 3020 [0.5]	Introduction to Software Engineering	
SYSC 3303 [0.5]	Real-Time Concurrent Systems	
SYSC 3310 [0.5]	Introduction to Real-Time Systems	
SYSC 3320 [0.5]	Computer Systems Design	
SYSC 3501 [0.5]	Communication Theory	
SYSC 3600 [0.5]	Systems and Simulation	
SYSC 4001 [0.5]	Operating Systems	

Fourth year

6. 2.5 credits in:		2.5
ECOR 4995 [0.5]	Professional Practice	
SYSC 4310 [0.5]	Computer Systems Architecture	
SYSC 4602 [0.5]	Computer Communications	
SYSC 4805 [0.5]	Computer Systems Design Lab	
SYSC 4810 [0.5]	Introduction to Network and Software Security	
7. 1.0 credit from:		1.0
SYSC 4907 [1.0]	Engineering Project (if supervisor is in Systems and Computer Engineering)	
ELEC 4907 [1.0]	Engineering Project (if supervisor is in Electronics)	
8. 1.5 credits from:		1.5
MECH 4503 [0.5]	An Introduction to Robotics	

or SYSC or ELEC at the 3000 level or above (may include 1.0 credit in SYSC at the 5000 level)

9. 0.5 credit in Complementary Studies Electives	0.5
Total Credits	21.0

New Resources

Summary	The item 9 had "Approved Courses Outside the Faculties of Science and Engineering and Design"; it should have been "Complementary Studies Electives"
Rationale for change	n the revision of the first year curriculum in engineering programs, the committee had initially two types of electives. But the decision was taken to keep only the Complementary Studies Electives. All the 4 programs of the department of Systems and Computer Engineering (Biomedical and Electrical, Software, Computer Systems and Communications) have 0.5 credit of Complementary Studies Electives in first year and 0.5 credit of electives of "Approved Courses Outside the Faculties of Science and Engineering and Design" in upper year. That second elective needs to be set as Complementary Studies Electives.

Transition/Implementation

Program reviewer comments

Key: 837

Changes saved but not submitted

Viewing: BENG-81 : Civil Engineering Bachelor of Engineering

Last approved: 04/25/19 9:02 am

Last edit: 05/05/19 4:32 pm

Last modified by: jerometalim

History

1. Apr 25, 2014 by sandra
2. Jan 5, 2016 by Neal Holtz (nealholtz)
3. Jan 25, 2017 by Neal Holtz (nealholtz)
4. Apr 11, 2018 by Donald Russell (donaldrussell)
5. Apr 25, 2019 by Heng Khoo (hengkhoo)

Calendar Pages Using this Program	Engineering
Effective Date	
Workflow	
Program Code	BENG-81
Level	Undergraduate
Faculty	Faculty of Engineering and Design
Academic Unit	Department of Civil and Environmental Engineering
Degree	Bachelor of Engineering
Title	Civil Engineering Bachelor of Engineering

Program Requirements

Civil Engineering
Bachelor of Engineering (21.0 credits)

First year

1. a) 4.5 credits in:		4.5
CHEM 1101 [0.5]	Chemistry for Engineering Students	
ECOR 1051 [0.5]	Fundamentals of Engineering I	
ECOR 1052 [0.5]	Fundamentals of Engineering II	
ECOR 1053 [0.5]	Fundamentals of Engineering III	
ECOR 1054 [0.5]	Fundamentals of Engineering IV	

ERTH 2404 [0.5]	Engineering Geoscience	
MATH 1004 [0.5]	Calculus for Engineering or Physics	
MATH 1104 [0.5]	Linear Algebra for Engineering or Science	
PHYS 1004 [0.5]	Introductory Electromagnetism and Wave Motion	

b) The Introduction to Engineering Disciplines requirement must be met through the successful completion of:

ECOR 1055 [0.0]	Introduction to Engineering Disciplines I	
ECOR 1056 [0.0]	Introduction to Engineering Disciplines II	
2. 0.5 credit in Complementary Studies Elective		0.5

Second year

~~**3. 4.5 credits in:**~~		~~4.5~~
3. 5.0 credits in:		**5.0**
CCDP 2100 [0.5]	Communication Skills for Engineering Students	
CIVE 2004 [0.5]	GIS, Surveying, CAD and BIM	
CIVE 2101 [0.5]	Mechanics II	
CIVE 2200 [0.5]	Mechanics of Solids I	
CIVE 2700 [0.5]	Civil Engineering Materials	
ECOR 2050 [0.5]	Design and Analysis of Engineering Experiments	
MAAE 2300 [0.5]	Fluid Mechanics I	
MAAE 2400 [0.5]	Thermodynamics and Heat Transfer	
MATH 1005 [0.5]	Differential Equations and Infinite Series for Engineering or Physics	
MATH 2004 [0.5]	Multivariable Calculus for Engineering or Physics	

Third year

~~**5. 5.5 credits in:**~~		~~5.5~~
5. 5.0 credits in:		**5.0**
CIVE 3202 [0.5]	Mechanics of Solids II	
CIVE 3203 [0.5]	Introduction to Structural Analysis	
CIVE 3204 [0.5]	Introduction to Structural Design	
CIVE 3205 [0.5]	Design of Structural Steel Components	
CIVE 3206 [0.5]	Design of Reinforced Concrete Components	
CIVE 3208 [0.5]	Geotechnical Mechanics	
CIVE 3209 [0.5]	Building Science	
CIVE 3304 [0.5]	Transportation Engineering and Planning	
ECOR 3800 [0.5]	Engineering Economics	
MATH 3705 [0.5]	Mathematical Methods I	
6. 0.5 credit in Complementary Studies Elective		0.5

Fourth year

6. 3.5 credits in:		3.5
CIVE 4208 [0.5]	Geotechnical Engineering	
CIVE 4209 [0.5]	Highway Engineering	
CIVE 4400 [0.5]	Construction/Project Management	
CIVE 4407 [0.5]	Municipal Engineering	
CIVE 4918 [1.0]	Design Project	
ECOR 4995 [0.5]	Professional Practice	
7. 2.0 credits from:		2.0
CIVE 4200 [0.5]	Matrix Analysis of Framed Structures	
CIVE 4201 [0.5]	Finite Element Methods in Civil Engineering	

CIVE 4202 [0.5]	Wood Engineering
CIVE 4301 [0.5]	Foundation Engineering
CIVE 4302 [0.5]	Reinforced and Prestressed Concrete Design
CIVE 4303 [0.5]	Urban Planning
CIVE 4307 [0.5]	Municipal Hydraulics
CIVE 4308 [0.5]	Behaviour and Design of Steel Structures
CIVE 4403 [0.5]	Masonry Design
CIVE 4500 [0.5]	Computer Methods in Civil Engineering
CIVE 4614 [0.5]	Building Fire Safety
CIVE 4907 [1.0]	Engineering Research Project
CIVE 4917 [0.5]	Undergraduate Directed Study
ENVE 3003 [0.5]	Water Resources Engineering
ENVE 4105 [0.5]	Green Building Design
ENVE 4200 [0.5]	Climate Change and Engineering
Total Credits	21.0

New Resources

Summary	Move CCDP 2100 (previously was in 3rd year) to 2nd year; and move Complementary Studies Electives (scheduled in 2nd year) to 3rd year.
Rationale for change	The department believes that having CCDP 2100 in 2nd year is important for the program. The modification is about interchanging the schedule of CCDP 2100 (3rd year to 2nd year) and Complementary Studies Elective (2nd year to 3rd year)
Transition/Implementation	
Program reviewer comments	

Key: 835

Changes saved but not submitted

Viewing: BENG-821 : Biomedical and Electrical Engineering Bachelor of Engineering

Last approved: 04/24/19 8:58 am

Last edit: 05/03/19 9:40 am

Last modified by: jerometalim

History

1. Apr 25, 2014 by sandra
2. Apr 25, 2014 by sandra
3. Jan 5, 2016 by Darlene Hebert (darlenehebert)
4. Jan 23, 2017 by Ian Marsland (ian.marsland)
5. Jan 10, 2018 by Ian Marsland (ian.marsland)
6. Apr 11, 2018 by Donald Russell (donaldrussell)
7. Apr 24, 2019 by Ian Marsland (ianmarsland)

Calendar Pages Using this Program	Engineering
Effective Date	
Workflow	
Program Code	BENG-821
Level	Undergraduate
Faculty	Faculty of Engineering and Design
Academic Unit	Department of Systems and Computer Engineering
Degree	Bachelor of Engineering
Title	Biomedical and Electrical Engineering Bachelor of Engineering

Program Requirements

Biomedical and Electrical Engineering Bachelor of Engineering (21.0 credits)

First year

1. a) 4.5 credits in: 4.5

CHEM 1001 [0.5]	General Chemistry I
CHEM 1002 [0.5]	General Chemistry II
ECOR 1051 [0.5]	Fundamentals of Engineering I
ECOR 1052 [0.5]	Fundamentals of Engineering II
ECOR 1053 [0.5]	Fundamentals of Engineering III

ECOR 1054 [0.5]	Fundamentals of Engineering IV	
MATH 1004 [0.5]	Calculus for Engineering or Physics	
MATH 1104 [0.5]	Linear Algebra for Engineering or Science	
PHYS 1004 [0.5]	Introductory Electromagnetism and Wave Motion	

b) The Introduction to Engineering Disciplines requirement must be met through the successful completion of:

ECOR 1055 [0.0]	Introduction to Engineering Disciplines I	
ECOR 1056 [0.0]	Introduction to Engineering Disciplines II	

2. 0.5 credit in Complementary Studies Electives. 0.5

Second year

3. 5.0 credits in: 5.0

BIOL 1103 [0.5]	Foundations of Biology I	
CCDP 2100 [0.5]	Communication Skills for Engineering Students	
ECOR 2050 [0.5]	Design and Analysis of Engineering Experiments	
ELEC 2501 [0.5]	Circuits and Signals	
ELEC 2507 [0.5]	Electronics I	
ELEC 2607 [0.5]	Switching Circuits	
MATH 1005 [0.5]	Differential Equations and Infinite Series for Engineering or Physics	
MATH 2004 [0.5]	Multivariable Calculus for Engineering or Physics	
SYSC 2006 [0.5]	Foundations of Imperative Programming	
SYSC 2510 [0.5]	Probability, Statistics and Random Processes for Engineers	

Third year

4. 4.5 credits in: 4.5

ELEC 3105 [0.5]	Basic EM and Power Engineering	
ELEC 3500 [0.5]	Digital Electronics	
ELEC 3909 [0.5]	Electromagnetic Waves	
SYSC 3006 [0.5]	Computer Organization	
SYSC 3203 [0.5]	Bioelectrical Systems	
SYSC 3501 [0.5]	Communication Theory	
SYSC 3610 [0.5]	Biomedical Systems, Modeling, and Control	
SYSC 4201 [0.5]	Ethics, Research Methods and Standards for Biomedical Engineering	
ECOR 3800 [0.5]	Engineering Economics	

5. 0.5 credit from: 0.5

BIOL 1104 [0.5]	Foundations of Biology II	
BIOL 2005 [0.5]	Human Physiology	
BIOL 2201 [0.5]	Cell Biology and Biochemistry	
BIOL 2303 [0.5]	Microbiology	
BIOL 3306 [0.5]	Human Anatomy and Physiology	
BIOL 4309 [0.5]	Studies in Human Performance	
BIOL 4319 [0.5]	Studies in Exercise Physiology	
CHEM 2203 [0.5]	Organic Chemistry I	
CHEM 2204 [0.5]	Organic Chemistry II	

OR (with permission of the department)

0.5 credit in BIOL, BIOC or CHEM

6. 0.5 credit from: 0.5

ELEC 3908 [0.5]	Physical Electronics	
SYSC 2004 [0.5]	Object-Oriented Software Development	

Fourth year

7. 2.0 credits in:		2.0
ECOR 4995 [0.5]	Professional Practice	
ELEC 4601 [0.5]	Microprocessor Systems	
SYSC 4203 [0.5]	Bioinstrumentation and Signals	
SYSC 4405 [0.5]	Digital Signal Processing	
8. 1.0 credit in:		1.0
SYSC 4907 [1.0]	Engineering Project	
9. 0.5 credit from the list in Item 5		0.5
10. 1.0 credit from:		1.0
ELEC 4709 [0.5]	Integrated Sensors	
SYSC 4202 [0.5]	Clinical Engineering	
SYSC 4205 [0.5]	Image Processing for Medical Applications	
OR		
0.5 credit in BIOM at the 5000 level		
11. 0.5 credit from SYSC or ELEC course at the 3000 level or above		0.5
OR		
0.5 credit in BIOM at the 5000 level		
12. 0.5 credit in Complementary Studies Electives.		0.5
Total Credits		21.0

New Resources

Summary

The item 12 had "Approved Courses Outside the Faculties of Science and Engineering and Design"; it should have been "Complementary Studies Electives"

Rationale for change

In the revision of the first year curriculum in engineering programs, the committee had initially two types of electives. But the decision was taken to keep only the Complementary Studies Electives. All the 4 programs of the department of Systems and Computer Engineering (Biomedical and Electrical, Software, Computer Systems and Communications) have 0.5 credit of Complementary Studies Electives in first year and 0.5 credit of electives of "Approved Courses Outside the Faculties of Science and Engineering and Design" in upper year. That second elective needs to be set as Complementary Studies Electives, to be consistent with all the other engineering programs.

Transition/Implementation

Program reviewer comments

Key: 833

Changes saved but not submitted

Viewing: BENG-8P : Software Engineering Bachelor of Engineering

Last approved: 04/24/19 9:13 am

Last edit: 05/03/19 9:51 am

Last modified by: jerometalim

History

1. Apr 25, 2014 by sandra
2. Jun 23, 2014 by sandra
3. Mar 14, 2017 by Ian Marsland (ian.marsland)
4. Jan 25, 2018 by Ian Marsland (ian.marsland)
5. Apr 11, 2018 by Donald Russell (donaldrussell)
6. Apr 24, 2019 by Ian Marsland (ianmarsland)

Calendar Pages Using this Program	Engineering
Effective Date	
Workflow	
Program Code	BENG-8P
Level	Undergraduate
Faculty	Faculty of Engineering and Design
Academic Unit	Department of Systems and Computer Engineering
Degree	Bachelor of Engineering
Title	Software Engineering Bachelor of Engineering

Program Requirements

Software Engineering
Bachelor of Engineering (21.0 credits)

First year

1. a) 4.0 credits in:		4.0
CHEM 1101 [0.5]	Chemistry for Engineering Students	
ECOR 1051 [0.5]	Fundamentals of Engineering I	
ECOR 1052 [0.5]	Fundamentals of Engineering II	
ECOR 1053 [0.5]	Fundamentals of Engineering III	
ECOR 1054 [0.5]	Fundamentals of Engineering IV	

MATH 1004 [0.5]	Calculus for Engineering or Physics	
MATH 1104 [0.5]	Linear Algebra for Engineering or Science	
PHYS 1004 [0.5]	Introductory Electromagnetism and Wave Motion	

b) The Introduction to Engineering Disciplines requirement must be met through the successful completion of:

ECOR 1055 [0.0]	Introduction to Engineering Disciplines I	
ECOR 1056 [0.0]	Introduction to Engineering Disciplines II	

2. 0.5 credit in Basic Science Electives 0.5

3. 0.5 credit in Complementary Studies Electives 0.5

Second year

4. 5.0 credits in: 5.0

CCDP 2100 [0.5]	Communication Skills for Engineering Students	
COMP 1805 [0.5]	Discrete Structures I	
COMP 2804 [0.5]	Discrete Structures II	
ELEC 2501 [0.5]	Circuits and Signals	
MATH 1005 [0.5]	Differential Equations and Infinite Series for Engineering or Physics	
SYSC 2004 [0.5]	Object-Oriented Software Development	
SYSC 2006 [0.5]	Foundations of Imperative Programming	
SYSC 2100 [0.5]	Algorithms and Data Structures	
SYSC 2310 [0.5]	Introduction to Digital Systems	
SYSC 2320 [0.5]	Introduction to Computer Organization and Architecture	

Third year

5. 5.0 credits in: 5.0

COMP 3005 [0.5]	Database Management Systems	
ECOR 2050 [0.5]	Design and Analysis of Engineering Experiments	
SYSC 3101 [0.5]	Programming Languages	
SYSC 3110 [0.5]	Software Development Project	
SYSC 3120 [0.5]	Software Requirements Engineering	
SYSC 3303 [0.5]	Real-Time Concurrent Systems	
SYSC 3310 [0.5]	Introduction to Real-Time Systems	
SYSC 4001 [0.5]	Operating Systems	
SYSC 4106 [0.5]	The Software Economy and Project Management	
SYSC 4120 [0.5]	Software Architecture and Design	

Fourth year

6. 2.0 credits in: 2.0

ECOR 4995 [0.5]	Professional Practice	
SYSC 4101 [0.5]	Software Validation	
SYSC 4806 [0.5]	Software Engineering Lab	
SYSC 4810 [0.5]	Introduction to Network and Software Security	

7. 1.0 credit in: 1.0

SYSC 4907 [1.0]	Engineering Project	

8. 1.5 credit from: 1.5

ELEC 2507 [0.5]	Electronics I	

or SYSC or ELEC courses at the 3000 level or above

9. 1.0 credit from the list in Item 8, or from: 1.0

COMP 3002 [0.5]	Compiler Construction	
COMP 3008 [0.5]	Human-Computer Interaction	

COMP 3400 [0.5]	Computational Logic and Automated Reasoning
COMP 3501 [0.5]	Foundations of Game Programming and Computer Graphics
COMP 3801 [0.5]	Algorithms for Modern Data Sets
COMP 3803 [0.5]	Introduction to Theory of Computation
COMP 3804 [0.5]	Design and Analysis of Algorithms I
COMP 4000 [0.5]	Distributed Operating Systems
COMP 4002 [0.5]	Real-Time 3D Game Engines
COMP 4003 [0.5]	Transaction Processing Systems
COMP 4009 [0.5]	Programming for Clusters and Multi-Core Processors
COMP 4102 [0.5]	Computer Vision
COMP 4106 [0.5]	Artificial Intelligence
COMP 4109 [0.5]	Applied Cryptography
COMP 4111 [0.5]	Data Management for Business Intelligence

or (with permission of the department)

1.0 credit in SYSC at the 5000 level

10. 0.5 credit in Complementary Studies Electives	0.5
Total Credits	21.0

New Resources

Summary	The item 10 had "Approved Courses Outside the Faculties of Science and Engineering and Design"; it should have been "Complementary Studies Electives"
Rationale for change	n the revision of the first year curriculum in engineering programs, the committee had initially two types of electives. But the decision was taken to keep only the Complementary Studies Electives. All the 4 programs of the department of Systems and Computer Engineering (Biomedical and Electrical, Software, Computer Systems and Communications) have 0.5 credit of Complementary Studies Electives in first year and 0.5 credit of electives of "Approved Courses Outside the Faculties of Science and Engineering and Design" in upper year. That second elective needs to be set as Complementary Studies Electives.

Transition/Implementation

Program reviewer comments

Key: 843

Changes saved but not submitted

Viewing: BENG-951B : Sustainable and Renewable Energy Stream B: Efficient Energy Generation and Conversion Bachelor of Engineering

Last approved: 04/24/19 9:14 am

Last edit: 05/05/19 4:42 pm

Last modified by: jerometalim

History

1. Apr 25, 2014 by sandra
2. Jan 13, 2016 by Ron Miller (ronmiller)
3. Apr 11, 2018 by Donald Russell (donaldrussell)
4. Apr 24, 2019 by Irene Helder (irenehelder)

Calendar Pages Using this Program	Engineering
Effective Date	
Workflow	
Program Code	BENG-951B
Level	Undergraduate
Faculty	Faculty of Engineering and Design
Academic Unit	Department of Mechanical and Aerospace Engineering
Degree	Bachelor of Engineering
Title	Sustainable and Renewable Energy Stream B: Efficient Energy Generation and Conversion Bachelor of Engineering

Program Requirements

Sustainable and Renewable Energy Stream B: Efficient Energy Generation and Conversion
Bachelor of Engineering (21.0 credits)

First year

1. a) 4.0 credits in: 4.0

CHEM 1101 [0.5]	Chemistry for Engineering Students	
ECOR 1051 [0.5]	Fundamentals of Engineering I	
ECOR 1052 [0.5]	Fundamentals of Engineering II	
ECOR 1053 [0.5]	Fundamentals of Engineering III	
ECOR 1054 [0.5]	Fundamentals of Engineering IV	
MATH 1004 [0.5]	Calculus for Engineering or Physics	
MATH 1104 [0.5]	Linear Algebra for Engineering or Science	
PHYS 1004 [0.5]	Introductory Electromagnetism and Wave Motion	

b) The Introduction to Engineering Disciplines requirement must be met through the successful completion of:

ECOR 1055 [0.0]	Introduction to Engineering Disciplines I	
ECOR 1056 [0.0]	Introduction to Engineering Disciplines II	

2. 0.5 credit in Complementary Studies Electives 0.5

3. 0.5 credit in Basic Science Electives 0.5

Second year

4. 5.0 credits in: 5.0

ECOR 2050 [0.5]	Design and Analysis of Engineering Experiments	
ELEC 3605 [0.5]	Electrical Engineering	
ENVE 2001 [0.5]	Process Analysis for Environmental Engineering	
MAAE 2001 [0.5]	Engineering Graphical Design	
MAAE 2101 [0.5]	Engineering Dynamics	
MAAE 2202 [0.5]	Mechanics of Solids I	
MAAE 2300 [0.5]	Fluid Mechanics I	
MAAE 2400 [0.5]	Thermodynamics and Heat Transfer	
MATH 1005 [0.5]	Differential Equations and Infinite Series for Engineering or Physics	
MATH 2004 [0.5]	Multivariable Calculus for Engineering or Physics	

Third year

5. 6.0 credits in: 6.0

CCDP 2100 [0.5]	Communication Skills for Engineering Students	
ECOR 3800 [0.5]	Engineering Economics	
ELEC 4602 [0.5]	Electrical Power Engineering	
MAAE 2700 [0.5]	Engineering Materials	
MAAE 3300 [0.5]	Fluid Mechanics II	
MAAE 3400 [0.5]	Applied Thermodynamics	
MAAE 3500 [0.5]	Feedback Control Systems	
MATH 3705 [0.5]	Mathematical Methods I	
SREE 3001 [0.5]	Sustainable and Renewable Energy Sources	
SREE 3002 [0.5]	Electricity: Use, Distribution, Integration of Distributed Generation	
SREE 3003 [0.5]	Sustainable and Renewable Electricity Generation	
SYSC 3600 [0.5]	Systems and Simulation	

Fourth year

6. 4.0 credits in: 4.0

ECOR 4995 [0.5]	Professional Practice	
MECH 4406 [0.5]	Heat Transfer	
MECH 4408 [0.5]	Thermofluids and Energy Systems Design	
SREE 4001 [0.5]	Efficient Energy Conversion	
SREE 4002 [0.5]	The Energy Economy, Reliability and Risk	

SREE 4907 [1.0]	Energy Engineering Project	
SYSC 3200 [0.5]	Industrial Engineering	
7. 0.5 credit in any 4000-level Engineering course for which prerequisites have been satisfied		0.5
8. 0.5 credit in Complementary Studies Electives		0.5
Total Credits		21.0

New Resources

Summary	Move SYSC 3200 (previously scheduled in 3rd year) to 4th year. And move ELEC 4602 (previously scheduled in 4th year) to 4th year.
Rationale for change	It was an oversight from the department to have ELEC 4602 as it is a prerequisite to 3rd year courses. The modification is necessary : move ELEC 4602 back in 3rd year; move SYSC 3200 in 4th year, to keep the number of credits for 3rd and 4th year unchanged.
Transition/Implementation	
Program reviewer comments	

Key: 845

Changes saved but not submitted

Viewing: MHC : Minor in Heritage and Conservation

Last approved: 04/17/19 10:16 am

Last edit: 05/06/19 9:14 am

Last modified by: mikelabreque

History

1. Apr 17, 2019 by Donna Malone (donnamalone)

Calendar Pages Using this Program	Canadian Studies
Effective Date	2019-20
Workflow	**minormod** ~~majormod~~
Program Code	MHC
Level	Undergraduate
Faculty	Faculty of Arts and Social Sciences
Academic Unit	School of Indigenous and Canadian Studies
Degree	
Title	Minor in Heritage and Conservation

Program Requirements

Minor in Heritage and Conservation (4.0 credits)

The Minor in Heritage and Conservation is open to all undergraduate degree students.

Requirements

1. 2.0 credits in:		2.0
CDNS 1101 [0.5]	Ottawa: Exploring National Institutions	
CDNS 2400 [0.5]	Heritage Conservation in Canada	
CDNS 3700 [0.5]	Cultural Traditions in Canada	
or ARCC 3501 [0.5]	Fundamentals of Conservation and Sustainability	
CDNS 4400 [0.5]	Cultural Landscape and Cultural Identity in Canada	

or CDNS 4403 [0.5]	Heritage Conservation and Sustainability	
2. 2.0 credits from Approved Heritage Conservation Electives		2.0
Total Credits		4.0

Approved Heritage Conservation Electives

African Studies	
AFRI 3004 [0.5]	The African City
AFRI 3005 [0.5]	African Migrations and Diasporas
Architecture	
ARCH 4200 [0.5]	**Architectural Conservation Philosophy and Ethics**
Art History	
ARTH 1200 [0.5]	History and Theory of Architecture: Prehistory to 1500
ARTH 1201 [0.5]	History and Theory of Architecture: 1500 to Present
ARTH 2510 [0.5]	Architecture of the 18th and 19th Centuries
ARTH 2610 [0.5]	Twentieth-Century Architecture
ARTH 3002 [0.5]	Canadian Architecture
ARTH 3005 [0.5]	American Architecture
ARTH 3701 [0.5]	Art and Architecture on Site
ARTH 3710 [0.5]	Architecture and Empire
ARTH 4610 [0.5]	Topics in Modern Architecture or Design
ARTH 4701 [0.5]	Art and Architecture on Site
Environmental Studies	
ENST 1020 [0.5]	People, Places and Environments
Geography	
GEOG 1020 [0.5]	People, Places and Environments
GEOG 2300 [0.5]	Space, Place and Culture
GEOG 3021 [0.5]	Geographies of Culture and Identity
GEOG 3023 [0.5]	Cities in a Global World
GEOG 4021 [0.5]	Seminar in Culture, Identity and Place
History	
HIST 3209 [0.5]	Canadian Urban History
HIST 3809 [0.5]	Historical Representations
HIST 3814 [0.5]	Crafting Digital History
HIST 4302 [1.0]	Canada: Ideas & Culture
Indigenous Studies	
INDG 2015 [0.5]	Indigenous Ecological Ways of Knowing
INDG 4001 [0.5]	Indigeneity in the City

New Resources	No New Resources
Summary	Adding Architecture course additions that were part of the program's executive summary. For SCCASP review.
Rationale for change	
Transition/Implementation	

Program reviewer comments

Key: 1913

Course Change Request

Viewing: PADM 5291 : Directed Studies (Policy Analysis Concentration)

Changes proposed by: nickigaertner

Completed Workflow

1. **PADM ChairDir GR**
2. **GRAD FCC**
3. **GRAD FBoard**
4. **PRE SCCASP**
5. **SCCASP**
6. **Banner**

Approval Path

1. 11/18/15 3:36 pm Calum Carmichael (calumcarmichael): Approved for PADM ChairDir GR
2. 12/02/15 3:08 pm Leslie Macdonald-Hicks (lesliemacdonaldhicks): Approved for GRAD FCC
3. 12/03/15 11:42 am Leslie Macdonald-Hicks (lesliemacdonaldhicks): Approved for GRAD FBoard
4. 12/04/15 3:46 pm Sandra Bauer (sandrabauer): Approved for PRE SCCASP
5. 12/15/15 3:52 pm Dan Begin (danbegin): Approved for SCCASP
6. 12/16/15 3:08 am *system*: Approved for Banner

History

1. **Dec 16, 2015 by Nicki Gaertner (nickigaertner)**

Effective Date	201630
Workflow	**minormod**

Level	Graduate
Course Code	PADM
Course Number	5291
Title	Directed Studies (Policy Analysis Concentration)
Title (short)	Dir. Std. (Policy Analy. Conc)
Faculty	Faculty of Public Affairs
Academic Unit	School of Public Policy and Administration
Credit Value	0.50
Significant Experiential Learning	
Course Description	A tutorial or directed reading course on selected subjects related to policy analysis.
Prerequisite(s)	
Class Format	
Precluded Courses	
Also listed as	
Piggybacked Courses	
U Ottawa Code	
Grade Mode	Standard Letter Grade
Schedule Type	Lecture Seminar *May constitute a major modification under Carleton's IQAP. Please consult https://carleton.ca/viceprovost/major-minor-modifications/ for more details.
Unpaid Placement	No
Summary	Delete course PADM 5291
Rationale for change	Changed the calendar date from 2015-16 to 2016-17
Course reviewer comments	**sandrabauer (10/29/15 3:14 pm):** Rollback: Please change effective date to 2016-17 and re-submit into workflow.

Key: 3906
Preview Bridge
Why Did This Not Sync?

Viewing: TBD-1831 : R-UG-2.1.5 Payment of Fees

Last approved: 05/17/19 10:59 am

Last edit: 05/17/19 10:59 am

Last modified by: mikelabreque

History

1. May 7, 2019 by Mike Labreque (mikelabreque)
2. May 17, 2019 by Mike Labreque (mikelabreque)

Calendar Pages Using this Program	Registration, Evaluation and Student Records

Effective Date	
Workflow	
Program Code	TBD-1831
Level	Undergraduate
Faculty	Not Applicable
Academic Unit	Regulations: RO
Degree	
Title	R-UG-2.1.5 Payment of Fees

Program Requirements

2.1.5 Payment of Fees

A student is responsible for all tuition and other fees resulting from registration in any and all courses. The student remains responsible for paying this debt whether or not the student attends or participates in the class or classes unless they withdraw within the published deadline set out in the Academic Year section of this calendar. Student Accounts may be viewed through Carleton Central and are the administrative responsibility of the Business Office.

For fee payment policies and deadlines, please visit the Student Accounts website.

New Resources	
Summary	
Rationale for change	

Transition/Implementation

Program reviewer comments

Key: 1831

Viewing: TBD-1776 : R-UG-1.1 Student Responsibility

History

1. May 15, 2019 by Mike Labreque (mikelabreque)

Last approved: 05/15/19 1:00 pm

Last edit: 05/06/19 8:19 am

Last modified by: mikelabreque

Calendar Pages Using this Program	Student Responsibility
Effective Date	
Workflow	
Program Code	TBD-1776
Level	Undergraduate
Faculty	Not Applicable
Academic Unit	Regulations: RO
Degree	
Title	R-UG-1.1 Student Responsibility

Program Requirements

1.1 STUDENT RESPONSIBILITY

It is the student's responsibility to remain informed of all University rules and regulations as well as those pertaining to their program. Ignorance of the rules and regulations will not be accepted as grounds for waiving them.

Acceptance by the University of a registration does not exempt the student from any academic regulation or requirement.

The Senate of Carleton University may at any time require a student to withdraw from the University if his or her conduct, attendance, work, or progress is deemed unsatisfactory.

Further information:

- Carleton University disclaimer statement
- Academic Integrity Policy

New Resources

Summary

Rationale for change

Transition/Implementation

Program reviewer comments

Key: 1776

Viewing: TBD-1850 : R-UG-3.1.1 Academic Nomenclature

History

1. May 15, 2019 by Mike Labreque (mikelabreque)

Last approved: 05/15/19 12:59 pm

Last edit: 05/07/19 12:34 pm

Last modified by: mikelabreque

Calendar Pages Using this Program	Academic Regulations for Degree Students
Effective Date	
Workflow	
Program Code	TBD-1850
Level	Undergraduate
Faculty	Not Applicable
Academic Unit	Regulations: RO
Degree	
Title	R-UG-3.1.1 Academic Nomenclature

Program Requirements

3.1.1 Academic Nomenclature

For a list of common definitions and terms of the University, please consult the Glossary section of this Calendar.

New Resources	
Summary	
Rationale for change	
Transition/Implementation	
Program reviewer comments	

Key: 1850

Viewing: TBD-1960 : R-UG-4.2 Examination Rules of Conduct

Last approved: 05/17/19 9:51 am

Last edit: 05/17/19 9:51 am

Last modified by: mikelabreque

History

1. May 17, 2019 by Mike Labreque (mikelabreque)
2. May 17, 2019 by Mike Labreque (mikelabreque)
3. May 17, 2019 by Mike Labreque (mikelabreque)
4. May 17, 2019 by Mike Labreque (mikelabreque)

Calendar Pages Using this Program	Examinations
Effective Date	
Workflow	
Program Code	TBD-1960
Level	Undergraduate
Faculty	Not Applicable
Academic Unit	Regulations: RO
Degree	Not Applicable
Title	R-UG-4.2 Examination Rules of Conduct

Program Requirements

4.2 Examination Rules of Conduct

From the *Carleton University Academic Integrity Policy*, https://carleton.ca/senate/wp-content/uploads/Academic-Integrity-Policy1.pdf:

The University is committed to ensuring fairness and consistency in the completion of examinations. As part of this commitment, students are required to follow proper examinations procedures. A student who commits a violation of this Policy on an examination, test, or take-home examination, or obtains or produces an answer or unfair advantage, are subject to sanction under this Policy. This includes but is not limited to:

1. bringing to the examination/test room any unauthorized material;
2. writing an examination or part of it, by consulting any person or materials outside the confines of the examination room without permission to do so;
3. intentionally leaving answer papers exposed to view;
4. attempting to read other students' examination papers;
5. speaking to another student (even if the subject matter is irrelevant to the test);

6. disrupting or delaying a test or examination;
7. failing to comply with the instruction of a University official administering an examination.

Further to the Univeristy's Academic Integrity Policy statement, a violation of the policy may also occur by breaching one of the Policy and Procedures for Writing Examinations.

Please visit the University's Human Rights Policy and Offenses of Conductsections of this Calendar for more information.

New Resources

Summary

Rationale for change

Transition/Implementation

Program reviewer comments

Key: 1960

Viewing: TBD-1893 : R-UG-6.1 Special Students

History

1. May 15, 2019 by Mike Labreque (mikelabreque)

Last approved: 05/15/19 1:00 pm

Last edit: 05/03/19 11:40 am

Last modified by: mikelabreque

Calendar Pages Using this Program	Academic Regulations for Special Students
Effective Date	
Workflow	
Program Code	TBD-1893
Level	Undergraduate
Faculty	Not Applicable
Academic Unit	Regulations: RO
Degree	
Title	R-UG-6.1 Special Students

Program Requirements

6.1 Special Students

Special students may be admitted to a degree program if their academic achievement at Carleton University indicates a reasonable probability of future academic success. Previous post-secondary studies at other institutions will also be taken into consideration at the time the application for admission is evaluated. Students with previous, unsuccessful post-secondary studies should contact the Admissions Services before attempting to qualify for admission on the basis of studies as a Special student.

New Resources

Summary

Rationale for change

Transition/Implementation

Program reviewer comments

Key: 1893