



Lakehead University Faculty of Engineering

REQUEST REPORT

Request Tracking Number: 2013-ENG-2981
Request Title: Electrical ENGI 2014-2015 Program Changes

[DeAcTerm[EffectiveDate]] [DeAc[RequestEffectiveDate]]
Request Status: In Workflow
Request can't be split

Request Contents

Type	Title
1. New Version of a Degree	Bachelor of Engineering (Electrical Engineering)

Request History

Workflow Step	Workflow Action	User	Change Made	Comments	Date
Initiator	Approved	Laura Parker	Yes	Submitted to workflow	12/19/2013
Dean and Faculty Council Review Stage	Approved	David Barnett	No	approved	01/13/2014

Supporting Documents

File Name	Uploaded By	Upload Date	Size
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Supporting Documents Audit Trail

File Name	User	Date	Action
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Notes

Date	User	Note
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1.	New Version of a Degree	BENDIP.ELEC - Bachelor of Engineering (Electrical Engineering)
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Degree Details

CURRENT VERSION	PROPOSED VERSION
BENDIP.ELEC - Bachelor of Engineering (Electrical Engineering) Start Term: Fall 2013 End Term: No Specified End Date	BENDIP.ELEC - Bachelor of Engineering (Electrical Engineering) Start Term: Fall 2013 2014 End Term: No Specified End Date

<u>Required Information</u>	
CURRENT VERSION	PROPOSED VERSION
Institution Unit Faculty of Engineering	Institution Unit Faculty of Engineering
Degree Type BENG	Degree Type BENG
Major ELEC	Major ELEC
Minor	Minor
Specialization	Specialization
Rationale To add additional electives to offering. Also, 2013-SCI-457 PHYS 1070 associated change to BEng (Electrical).	Rationale To add additional electives to offering. Also, 2013-SCI-457 PHYS 1070 associated change to BEng (Electrical). <i>to reflect course name changes corresponding course calendar changes.</i>
Requirements Four Year program <i>**With the approval of the Department of Electrical Engineering, Computer Science 1411 may be replaced by another high-level computer programming course.</i> <i>**This course is also offered in the Summer Transition Program and is not required for the Engineering Technology Diploma.</i> Note: At this point, all students are required to apply to	Requirements Four Year program - 20 10 +Students who have completed Gr. 12U Calculus and Vectors with a minimum grade of 60% are not required to take Mathematics 1071. Microprocessors <i>Microcontrollers</i> 3 1.5 Engineering 1536 - Electric Circuit Theory II 3
Printed: 02/03/2014	

<p>graduate with an Engineering Technology Diploma in Electrical Engineering.</p> <p>ELECTRICAL ENGINEERING ELECTIVE COURSES</p> <p>Electrical Engineering students will normally select their engineering elective courses from the following list. Not all elective courses in this list will be offered every year.</p> <p>Engineering 0138 - Advanced Controls Engineering 0150 - Microwave Circuits and Design Engineering 0339 - Process Optimization Engineering 0438 - Power System Analysis and Design Engineering 0531 - Topics in Electrical Engineering Engineering 0550 - Optical Communications Engineering 0554 - Power Electronics Engineering 0573 - Fuzzy Logic Expert Systems Engineering 0578 - Wireless Communications Engineering 0654 - Advanced Electronic Devices</p> <p>*For information regarding complementary studies elective courses, contact Department Chair.</p> <p>Note: On the advice of the Chair of the Electrical Engineering Department students may interchange the position of complementary studies electives and Engineering electives from one year to another in their program to accommodate course selection.</p>	<p>1.5</p> <p>Engineering 1552 - Principles of Engineering Mechanics</p> <p>4</p> <p>0</p> <p>Engineering 1634 - Electronics I</p> <p>3</p> <p>1.5</p> <p>Computer Science 1411** - Computer Programming I</p> <p>3</p> <p>1</p> <p>Mathematics 1230 - Calculus II</p> <p><u>3</u></p> <p><u>1</u></p> <p>-</p> <p>19</p> <p>6.5</p> <p><i>**With the approval of the Department of Electrical Engineering, Computer Science 1411 may be replaced by another high-level computer programming course.</i></p> <p><i>Electronic</i> Communications I</p> <p>3</p> <p>1.5</p> <p>Engineering 2258 - Electric Machines I</p> <p>3</p>
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	1.5
	Engineering 2438 - Control Systems /
	3
	1.5
	Engineering 2451 - Electrical <i>Electric</i> Power Systems /
	3
	1.5
	Engineering 3015** - Engineering Thermodynamics and Heat Transfer
	4
	0
	Mathematics 2050 - Applied Analysis I
	<u>3</u>
	1
	-22
	8.5
	Electrical Control Devices & Applications <i>Power Electronics I</i> 3
	1.5
	Engineering 2439 - <i>Electronic</i> Communications II
	3
	1.5
	Engineering 2453 - Computer Communications and Networking
	3
	1.5
	Engineering 2939 - Technology Project
	3

0

Engineering 3014** - Engineering Chemistry

4

0

Mathematics 2070 - Applied Analysis II

3

1

-

22

5.5

***This course is also offered in the Summer Transition Program and is not required for the Engineering Technology Diploma.*

Note:

At this point, all students are required to apply to graduate with an Engineering Technology Diploma in Electrical Engineering.

~~Advanced Controls I~~ *Control Systems II*

3

1.5

Engineering 4032 - Materials
Science 3 1.5 Mathematics 3012 - Vector Analysis
and Power Series

3

1

Mathematics 4030 - Probability and Statistics

3

0

One complementary studies* elective course

3

0

-

18

5.5

-

21

7.5

Digital VLSI Circuit Design 3 1.5Engineering 4136 -
Analog Integrated Circuits

3

1.5

Engineering 4258 - Electric Machines II

3

1.5

Engineering 4969 - Degree Project

3

0

Physics 3211 - Electromagnetic Theory

3

1

One complementary studies* elective course

3

0

-

21

7

-

18

1.5

ELECTRICAL ENGINEERING ELECTIVE COURSES

Electrical Engineering students will normally select their engineering elective courses from the following list. Not all elective courses in this list will be offered every year.

Engineering 0138 - ~~Advanced Controls~~ *Control Systems III*

Engineering 0150 - Microwave Circuits and Design

Engineering ~~0339 - Process Optimization~~ *Engineering*

0438 - ~~Power System Analysis and Design~~ *Electric Power Systems II*

Engineering 0531 - ~~Topics~~ *Topic* in Electrical Engineering

Engineering 0550 - Optical Communications

Engineering 0554 - Power Electronics

Engineering 0573 - Fuzzy Logic Expert Systems

Engineering 0578 - Wireless Communications

Engineering 0654 - Advanced Electronic Devices

Engineering 0XXX - Computer Organization

*For information regarding complementary studies elective courses, contact Department Chair.

Note:

On the advice of the Chair of the Electrical Engineering Department students may interchange the position of complementary studies electives and Engineering electives from one year to another in their program to accommodate course selection.

<u>Budgetary Considerations</u>	
CURRENT VERSION	PROPOSED VERSION
Student Enrolment No	Student Enrolment No
Student Enrolment Other Units No	Student Enrolment Other Units No
Additional Resources No	Additional Resources No
Teaching Loads No	Teaching Loads No
TeachingSupport Services No	TeachingSupport Services No
Outside Support No	Outside Support No