DECISION ACADEMIC

Lakehead University
Faculty of Engineering

REQUEST REPORT

Request Tracking Number: 2014-ENG-3012
Request Title: Chemical Engineering - COMP 1411

[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 (Chemical Engineering)

Request History

Workflow Step	Workflow Action	User	Change Made	Comments	Date
Initiator	Approved	Laura Parker	Yes	Submitted to workflow	01/13/2014
Dean and Faculty Council Review Stage	Approved	David Barnett	No	approved	01/13/2014
Optional Dean-Science and Environmental Studies	Relegated	Christina Maenpaa	No	Request to relegate back to Engineering on January 22.	01/23/2014
Initiator	Approved	David Barnett	Yes	approved	01/30/2014
Dean and Faculty Council Review Stage	Approved	David Barnett	No	approved	01/30/2014
Optional Dean-Science and Environmental Studies	Relegated	Christina Maenpaa	No	Asked to send back to initiator on January 30, 2014.	01/30/2014
Initiator	Approved	David Barnett	Yes	approved	01/30/2014
Dean and Faculty Council Review Stage	Approved	David Barnett	No	approved	01/30/2014
Optional Dean-Science and Environmental Studies	Approved	Christina Maenpaa	No	Approved by Dr. Andrew P. Dean	01/30/2014

Printed: 02/03/2014

Supporting Documents

File Name	Uploaded By	Upload Date	Size

Supporting Documents Audit Trail

File Name	User	Date	Action

Notes

Date	User	Note

1.	New Version of a Degree	BENGDIP.CHEM - Bachelor of Engineering (Chemical Engineering)

Degree Details

CURRENT VERSION	PROPOSED VERSION
BENGDIP.CHEM - Bachelor of Engineering (Chemical Engineering) **Start Term:** Fall 2013 **End Term:** No Specified End Date	BENGDIP.CHEM - Bachelor of Engineering (Chemical Engineering) **Start Term:** Fall ~~2013~~*2014* **End Term:** No Specified End Date

Required Information

CURRENT VERSION	PROPOSED VERSION
Institution Unit Faculty of Engineering	**Institution Unit** Faculty of Engineering
Degree Type BENG	**Degree Type** BENG
Major CHEL	**Major** CHEL
Minor	**Minor**
Specialization	**Specialization**
Rationale 1. To coincide with Lec/Lab hours listed in the Engineering Electives Course listing2. Remove electives not offered this year from the list in the Chemical Engineering Program outline.Also,2013-ENGI-468, adjust offering hours of ENGI 4132 and 4432 (referred 18Jan2013 and approved at 25Apr2013 Senate meeting) - associated program changes for BENGDIP.CHEM.Also,ENGI 0330 Senate-authorized as Not Offered in Past Five Years at 14May2013 Senate meeting. Associated program change to remove from list of Chemical Engineering Elective Courses.	**Rationale** ~~1. To coincide with Lec/Lab hours listed in the Engineering Electives Course listing2. Remove electives not offered this year from the list in the Chemical Engineering Program outline.Also,2013-ENGI-468, adjust offering hours of ENGI 4132 and 4432 (referred 18Jan2013 and approved at 25Apr2013 Senate meeting) - associated program changes for BENGDIP.CHEM.Also,ENGI 0330 Senate-authorized as Not Offered in Past Five Years at 14May2013 Senate meeting. Associated program change to remove from list of Chemical Engineering Elective Courses.~~*Students in year 1 will take COMP 1411 in the Fall term instead of WinterREVISION: In addition to the above, ENGI 3338 and 3438 have changed - see corresponding course changes. 2014-ENG-3054NOTE: We require the offering to be stated as 1-3, 1-3 for ENGI 3438 in the calendar for scheduling purposes because the experiments will be carried out over the fall and winter terms; however, the course carries a credit weight of only 0.5.*
Requirements Four Year program	**Requirements** Four Year program

	First Year: Fall Term
**This course is also offered in the Summer Transition Program and is not required for the Engineering Technology Diploma.	Lec
Note: **At this point, all students are required to apply to graduate with an Engineering Technology Diploma in Chemical Engineering.**	Lab
CHEMICAL ENGINEERING ELECTIVE COURSES	Engineering 1135 - Introduction to Chemical Engineering Calculations
Chemical 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.	3
	1.5
Engineering 0334 - Selected Topics in Chemical Engineering Engineering 0335 - Air Pollution Control Methods and Analysis Engineering 0339 - Process Optimization Engineering 0533 - Electrochemical Engineering Engineering 0551 - Kraft Mills and the Environment Engineering 0630 - Fuels, Energy and the Environment Engineering 0631 - Bioprocess Engineering Engineering 0650 - Hazardous and Industrial Waste Management Engineering 0653 - Fundamentals of Petroleum Recovery Engineering 3334 - Advanced Controls I	Engineering 1633 - Introduction to Engineering Drawing and CAD
	1
	2
*For information regarding complementary studies elective courses, contact Department Chair.	Chemistry 1110 - Modern Chemistry I
	3
	3
	English 1238 - Technical Writing II
	3
	0

	Mathematics 1071+ - Vectors and Matrices 3 2 Mathematics 1210 - Calculus I 3 1 ***Computer Science 1411 - Computer Programming I31* 16 9.5 +Students who have completed Gr. 12U Calculus and Vectors with a minimum grade of 60% are not required to take Mathematics 1071. First Year: Winter Term Lec Lab Engineering 1137 - Pulp and Paper Manufacture

	3 1.5 Engineering 1554 - Unit Operations I 3 1.5 Engineering 1635 - Fluid Mechanics 3 1.5 Chemistry 1130 - Modern Chemistry II 3 3 ~~**Computer Science 1411 - Computer Programming I~~ 3 1 Mathematics 1230 - Calculus II 3

	1 18 9.5 Second Year: Fall Term Lec LabEngineering 2151 - Electrical and Electronics Technology 3 1.5 Engineering 2330 - Applied Chemical Thermodynamics 3 1Engineering 2331 - Unit Operations II 3 1.5Chemistry 2111 - Analytical Chemistry I 3 3Chemistry 2211 - Organic Chemistry I 3 3Mathematics 2050 - Applied Analysis I 3 1 18 11 Second Year: Winter Term Lec Lab Engineering 2332 - Engineering Management and Economics 3 0

	Engineering 2434 - Measurement, Instrumentation and Control 3 3 Engineering 2450 - Organic Industrial Processes 3 0 Engineering 3016** - Engineering Mechanics 4 0 Chemistry 2231 - Organic Chemistry II 3 3 Chemistry 3131 - Analytic Chemistry II 3 3

	Mathematics 2070 - Applied Analysis II 3 1 22 10 **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 Chemical Engineering. Third Year: Fall Term Lec Lab Engineering 3070 - Material and Energy Balances 3 1.5Engineering 3333 - Process Safety 3 1

	Engineering 3338 - Mass Transfer </td></tr></tbody></table>~~Separations I~~ ~~3~~ ~~3~~ *Separations* *3* *1.5* *Engineering 3438 - Laboratory Investigations in Mass Transfer Separations* *1* *1* Mathematics 3012 - Vector Analysis and Power Series 3 1 One engineering elective course 3

	1 One complementary studies* elective course 3 0 18 ~~7.5~~ *6* ~~3~~ ~~3~~ Third Year: Winter Term Lec Lab Engineering 3434 - Chemical Engineering Thermodynamics 3

	1.5 Engineering 3438 - *Laboratory Investigations in* Mass Transfer Separations</td></tr></tbody></table>~~II~~ *0* *2* Engineering 3453 - Heat Transfer Design 3 1.5 Mathematics 3050 - Numerical Analysis and Computing 3 1 One engineering elective course 3 1 One complementary studies* elective course 3

	0 ~~18~~ *16* 8 Fourth Year: Fall Term Lec Lab Engineering 4032 - Materials Science 3 1.5 Engineering 4150 - Chemical Reactor Design 3 3 Engineering 4432 - Chemical Plant

	Design 3 1.5Engineering 4969 - Degree Project 3 0 Mathematics 4030 - Probability and Statistics 3 0 One engineering elective course 3 1 One complementary studies* elective course 3 0 21 7 Fourth Year: Winter Term

	Lec
	Lab
	Engineering 4132 - Plant Design Economics 3 1.5Engineering 4152 - Process Control
	3
	1.5
	Engineering 4539 - Professional Practice and Law
	3
	0
	Engineering 4969 - Degree Project
	3
	0
	Chemistry 3431 - Polymer Chemistry
	3
	0
	One engineering elective course

	3 1 One complementary studies* elective course 3 0 21 4 CHEMICAL ENGINEERING ELECTIVE COURSES Chemical 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 0334 - Selected Topics in Chemical Engineering Engineering 0335 - Air Pollution Control Methods and Analysis Engineering 0339 - Process Optimization Engineering 0533 - Electrochemical Engineering Engineering 0551 - Kraft Mills and the Environment Engineering 0630 - Fuels, Energy and the Environment Engineering 0631 - Bioprocess Engineering Engineering 0650 - Hazardous and Industrial Waste Management Engineering 0653 - Fundamentals of Petroleum Recovery Engineering 3334 - Advanced Controls I *For information regarding complementary studies

	elective courses, contact Department Chair.

Budgetary Considerations	
CURRENT VERSION	**PROPOSED VERSION**
Student Enrolment NO	**Student Enrolment** ~~NO~~*No*
Student Enrolment Other Units NO	**Student Enrolment Other Units** ~~NO~~*Yes - approx. 30 students to take COMP 1411 in Fall term instead of Winter*
Additional Resources NO	**Additional Resources** NO
Teaching Loads NO	**Teaching Loads** NO
TeachingSupport Services NO	**TeachingSupport Services** NO
Outside Support NO	**Outside Support** NO