



**Lakehead University**  
**Faculty of Science and Environmental Studies**

REQUEST REPORT

**Request Tracking Number:** 2013-SCI-2956  
**Request Title:** Electromagnetic Theory

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

**Request Contents**

Type	Title
1. New Version of a Course	Electromagnetic Theory

**Request History**

Workflow Step	Workflow Action	User	Change Made	Comments	Date
Initiator	Approved	Mark Gallagher	Yes	Submitted to workflow	12/12/2013
Dean and Faculty Council Review Stage	Approved	Christina Maenpaa	Yes	Approved by SES Faculty Council on January 9, 2014. Approved by Dr. Andrew P. Dean	01/20/2014
Optional Dean-Engineering	Approved	David Barnett	No	approved	01/31/2014

**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 Course	Physics 3211 - Electromagnetic Theory
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### Course Details

CURRENT VERSION	PROPOSED VERSION
Physics 3211 - Electromagnetic Theory <b>Start Term:</b> Summer 2009 <b>End Term:</b> Spring 2010	Physics 3211 - Electromagnetic Theory <b>Start Term:</b> <del>Summer 2009</del> Fall 2014 <b>End Term:</b> <del>Spring 2010</del> No Specified End Date

<u>Course Details</u>	
CURRENT VERSION	PROPOSED VERSION
<b>Code</b> Physics 3211	<b>Code</b> Physics 3211
<b>Title</b> Electromagnetic Theory	<b>Title</b> Electromagnetic Theory
<b>Description</b> Topics covered include vector operators, electrostatic potential and force, magnetostatics, Faraday's law of induction, laws relating changing electric and magnetic fields, Maxwell's equations in integral and differential form, boundary conditions, electromagnetic radiation and energy propagation, Fresnel's equations, and basic antenna theory.	<b>Description</b> Topics covered include vector operators, electrostatic potential and force, magnetostatics, Faraday's law of induction, laws relating changing electric and magnetic fields, Maxwell's equations in integral and differential form, boundary conditions, electromagnetic radiation and energy propagation, Fresnel's equations, and basic antenna theory.
<b>End Term</b> Spring 2010	<b>End Term</b> <del>Spring 2010</del> No Specified End Date
<b>Institution</b> Lakehead University	<b>Institution</b> Lakehead University
<b>Faculty</b> Faculty of Science and Environmental Studies	<b>Faculty</b> Faculty of Science and Environmental Studies
<b>CreditWeight</b> 0.5	<b>CreditWeight</b> 0.5
<b>Rationale</b>	<b>Rationale</b> <i>This course is a required course for students in Electrical Engineering as well as for students in Physics. Electrical Engineering is contemplating changes to it's current program that will mean this course will have to be offered in the winter term. To provide the department with the flexibility to adapt to this possible request we are submitting this modification to the offering.</i>
<b>Required or Elective</b>	<b>Required or Elective</b>
<b>Cross List</b>	<b>Cross List</b>

<b>Offering</b> 3-1; 0-0	<b>Offering</b> 3-1; <del>0-0</del> 3-01
<b>Prerequisites</b> Physics 2211	<b>Prerequisites</b> Physics 2211
<b>Corequisites</b>	<b>Corequisites</b>
<b>Notes</b>	<b>Notes</b>
<b>SpecialTopicDropdown</b>	<b>SpecialTopicDropdown</b>
<b>GradeSchemePF</b>	<b>GradeSchemePF</b>
<b>EffectonEnrolmentINIT</b>	<b>EffectonEnrolmentINIT</b> <i>No, we do not anticipate any change in enrollment as a result of this change. Enrollment is largely dependent on the number of Electrical Engineering students. Over the last few years the enrollment has been as low as 48 and as high as 90.</i>
<b>EffectonEnrolmentOTHER</b>	<b>EffectonEnrolmentOTHER</b> <i>No effect anticipated. We are making this change to accommodate potential changes in the Electrical Engineering program which constitutes the vast majority of students in this course.</i>
<b>AdditionalTeachingSpace</b>	<b>AdditionalTeachingSpace</b> <i>No additional resources required</i>
<b>EffectonTeachingLoads</b>	<b>EffectonTeachingLoads</b> <i>The change will not effect the overall teaching load in the department. If the course is offered in the winter term it will require faculty teaching assignments to be reorganized.</i>
<b>EffectonServices</b>	<b>EffectonServices</b> <i>No additional support required</i>
<b>DirectinkindSupport</b>	<b>DirectinkindSupport</b> <i>NoneNo additional support required</i>

### Prerequisites

CURRENT VERSION			PROPOSED VERSION		
R1: ... All Course(s) from the following...			R1: ... All Course(s) from the following...		
<b>Code</b>	<b>Title</b>	<b>Credits</b>	<b>Code</b>	<b>Title</b>	<b>Credits</b>
Physics 2211	Intermediate Electricity and Magnetism		Physics 2211	Intermediate Electricity and Magnetism	