



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

**REQUEST REPORT**

**Request Tracking Number:** 2015-SCI-4686  
**Request Title:** Courses New UG Computer Science

[DeAcTerm[EffectiveDate]] [DeAc[RequestEffectiveDate]]  
**Request Status:** In Working Folder  
Request can be split

**Request Contents**

Type	Title
1. New Course	Mobile Computing Technology
2. New Course	Special Topics
3. New Course	Web Health Informatics
4. New Course	Big Data
5. New Course	Cloud Computing

**Request History**

Workflow Step	Workflow Action	User	Change Made	Comments	Date
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**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 Course	2430 - Mobile Computing Technology
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### Course Details

2430 - Mobile Computing Technology <b>Start Term:</b> 2015-16 <b>End Term:</b> No Specified End Date
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<b><u>Course Details</u></b>
<b>Code</b> 2430
<b>Title</b> Mobile Computing Technology
<b>Description</b> This course will cover mobile programming components such as UI programming, data management, localization, and programming sensors such as the accelerometer and compass, mobile OS services, and mobile phone games from a systems and implementation perspective and its SDK.
<b>End Term</b> No Specified End Date
<b>Institution</b> Lakehead University
<b>Faculty</b> Faculty of Science and Environmental Studies
<b>CreditWeight</b> 0.5
<b>Rationale</b> Our computer science students need exposure to this technology earlier in their program to better prepare them for potential co-op work placements and to set the stage for more advanced study of mobile computing later in their program. Mobile computing has become one of the most important driving technologies in today's world. With different brands such as Google Android, Window's Mobile, and the Apple's iPhone, mobile phones have revolutionized the way we understand computing. Many applications such as social networking, business applications and games have cropped up on mobile phones. With the help of cloud and Networking services, even sophisticated applications such as multi-player games and mobile telepresence have become feasible.
<b>Requiredor Elective</b> Required
<b>Cross List</b> no
<b>Offering</b> 0-0, 3-0
<b>Prerequisites</b>

Computer Science 1431
<b>Corequisites</b>
<b>Notes</b>
<b>SpecialTopicDropdown</b> No
<b>GradeSchemePF</b> Other
<b>EffectonEnrolmentINIT</b> no
<b>EffectonEnrolmentOTHER</b> no
<b>AdditionalTeachingSpace</b> no, we have lab space and equipment for our mobile lab. Some Android tablets may be given out for deployment.
<b>EffectonTeachingLoads</b> Teaching time will be offset by our strategic hire and by alternating course offerings in our list of electives.
<b>EffectonServices</b> none
<b>DirectinkindSupport</b> no

2.	New Course	4210 - Special Topics
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### Course Details

4210 - Special Topics <b>Start Term:</b> 2015-16 <b>End Term:</b> No Specified End Date
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<b><u>Course Details</u></b>
<b>Code</b> 4210
<b>Title</b> Special Topics
<b>Description</b> Directed studies and research under the guidance of a faculty member in an area of computer science. The student's transcript shall contain a title descriptive of the work accomplished under the course.
<b>End Term</b> No Specified End Date
<b>Institution</b> Lakehead University
<b>Faculty</b> Faculty of Science and Environmental Studies
<b>CreditWeight</b> 0.5
<b>Rationale</b> For general flexibility in delivering a variety of topics, depending on faculty availability and interests, delivered in a lecture format.
<b>Requiredor Elective</b> Elective
<b>Cross List</b> no
<b>Offering</b> 3
<b>Prerequisites</b> Permission of the department
<b>Corequisites</b>
<b>Notes</b>

<b>SpecialTopicDropdown</b> Yes
<b>GradeSchemePF</b> Other
<b>EffectonEnrolmentINIT</b> No
<b>EffectonEnrolmentOTHER</b> No
<b>AdditionalTeachingSpace</b> No
<b>EffectonTeachingLoads</b> No, it will be offered only on occasion as resources and need warrant.
<b>EffectonServices</b> None
<b>DirectinkindSupport</b> no

3.	New Course	4310 - Web Health Informatics
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### Course Details

4310 - Web Health Informatics <b>Start Term:</b> 2015-16 <b>End Term:</b> No Specified End Date
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<b><u>Course Details</u></b>
<b>Code</b> 4310
<b>Title</b> Web Health Informatics
<b>Description</b> The course introduces students to the organization and operation of the health systems of Canada as well as to various associated concepts including a variety of Electronic Healthcare Record systems, healthcare data and knowledge sharing, evidence and proximity based medicine, interoperability between diverse and distributed systems, medical terminology standards and clinical web applications.
<b>End Term</b> No Specified End Date
<b>Institution</b> Lakehead University
<b>Faculty</b> Faculty of Science and Environmental Studies
<b>CreditWeight</b> 0.5
<b>Rationale</b> This is one of our new courses designed for our health informatics initiative with our strategic hire. This is a foundation course on health informatics and its emerging eHealth technologies.
<b>Requiredor Elective</b> Elective
<b>Cross List</b> no
<b>Offering</b> 3-1 or 3-1
<b>Prerequisites</b> Computer Science 3413
<b>Corequisites</b>

<b>Notes</b>
<b>SpecialTopicDropdown</b> No
<b>GradeSchemePF</b> Other
<b>EffectonEnrolmentINIT</b> It is expected our strategic hire initiative of which this course is a part will draw a measurable number of new students to our program to fund the strategic hire.
<b>EffectonEnrolmentOTHER</b> None
<b>AdditionalTeachingSpace</b> Strategic hire will cover this course
<b>EffectonTeachingLoads</b> No impact.
<b>EffectonServices</b> None
<b>DirectinkindSupport</b> No

4.	New Course	4311 - Big Data
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### Course Details

4311 - Big Data <b>Start Term:</b> 2015-16 <b>End Term:</b> No Specified End Date
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<b><u>Course Details</u></b>
<b>Code</b> 4311
<b>Title</b> Big Data
<b>Description</b> Students will learn how to select and apply the correct Big Data stores for disparate data sets and how to use proper data analytics techniques. Many data analytics techniques will be introduced such as classification and clustering, decision trees, linear and logistic regression, time series analysis, and text analytics. Students will develop a variety of Big Data applications in their assignments and exercises.
<b>End Term</b> No Specified End Date
<b>Institution</b> Lakehead University
<b>Faculty</b> Faculty of Science and Environmental Studies
<b>CreditWeight</b> 0.5
<b>Rationale</b> This is one of our new courses designed for our health informatics initiative with our strategic hire. This course presents a holistic approach to unleash the power of Big Data for competitive advantage. Data sets collected from different social media or distributed file systems have the potential to grow rapidly and need to be manageable as well as to provide analytics for better understanding.
<b>Requiredor Elective</b> Elective
<b>Cross List</b> No
<b>Offering</b> 3-1 or 3-1
<b>Prerequisites</b> Computer Science 2477
<b>Corequisites</b>



<b>Notes</b>
<b>SpecialTopicDropdown</b> No
<b>GradeSchemePF</b> Other
<b>EffectonEnrolmentINIT</b> It is expected our strategic hire initiative of which this course is a part will draw a measurable number of new students to our program to fund the strategic hire.
<b>EffectonEnrolmentOTHER</b> No
<b>AdditionalTeachingSpace</b> Strategic hire will cover this course
<b>EffectonTeachingLoads</b> No
<b>EffectonServices</b> No
<b>DirectinkindSupport</b> No

5.	New Course	4312 - Cloud Computing
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### Course Details

4312 - Cloud Computing <b>Start Term:</b> 2015-16 <b>End Term:</b> No Specified End Date
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<b><u>Course Details</u></b>
<b>Code</b> 4312
<b>Title</b> Cloud Computing
<b>Description</b> This course discusses the key cloud concepts of: (i) Infrastructure as a Service (IaaS), (ii) Platform as Service (PaaS), and (iii) Software Application as Service (SaaS), as well as new and contemporary trends in cloud computing. It also expose students to concepts and technologies related to cloud computing such as Virtualization, Cloud Computing Platforms, Public Cloud, Private Cloud, Hybrid Cloud and Community Cloud Deployment Models, Business Cost Metrics and Formulas for Comparing and Calculating Cloud and On-Premise Solution Costs and Service Level Agreements (SLAs) for Cloud-based IT Resources. Selecting a cloud environment and deploying/implementing cloud based applications will be among the student projects/assignments of this course.
<b>End Term</b> No Specified End Date
<b>Institution</b> Lakehead University
<b>Faculty</b> Faculty of Science and Environmental Studies
<b>CreditWeight</b> 0.5
<b>Rationale</b> This is one of our new courses designed for our health informatics initiative with our strategic hire.
<b>Required or Elective</b> Elective
<b>Cross List</b> No
<b>Offering</b> 3-1 or 3-1
<b>Prerequisites</b> Computer Science 2477

<b>Corequisites</b>
<b>Notes</b>
<b>SpecialTopicDropdown</b> No
<b>GradeSchemePF</b> Other
<b>EffectonEnrolmentINIT</b> It is expected our strategic hire initiative of which this course is a part will draw a measurable number of new students to our program to fund the strategic hire.
<b>EffectonEnrolmentOTHER</b> None
<b>AdditionalTeachingSpace</b> No
<b>EffectonTeachingLoads</b> No impact, strategic hire will cover this course
<b>EffectonServices</b> Use of existing TSC resources.
<b>DirectinkindSupport</b> No