Programs & Courses

bcit.ca/study/outlines/20161073674

ACIT 4850 - Integrative Programming and Technologies

School:	School of Computing and Academic Studies
Program:	Computer Information Technology Diploma Program
Course Credits:	4
Start Date:	January 04, 2016
End Date:	April 22, 2016
Total Hours:	60
Total Weeks:	15
Hours/Weeks:	4
Delivery Type:	Lecture
Prerequisites:	ACIT 1630 and ACIT 2515 and ACIT 2520
CRN:	73674

Instructor Details

Name: James Parry
Email: jparry1@my.bcit.ca
Location: SW2-124
Office Hours:

T.B.A. - posted on office door

Course description

This course looks at systems integration with focus on communication mechanisms and data standardization. Students learn how to choose their communication approach by considering platform, data structure similarity/dissimilarity as well as client requirements. Students will learn how to represent structure and how to transport data using XML and XML related technologies and protocols. Standardization of XML documents for the purpose of data exchange is stressed.

Course learning outcomes / competencies

Upon successful completion of this course, the student will be able to:

- Create the necessary connections and scripts in order that one or more servers can share data from one or more data sources.
- Integrate databases which are dissimilar in structure, platform and DBMS.
- Use middleware where necessary to integrate data sources.
- Draw and understand architectural models of an enterprise system to the extent that they can communicate this information to and from others.
- Construct and understand an XML document.
- Parse an XML document.
- Use XML schemas and DTDs to construct data structure, constraints and type enforcement.
- Use XSL for transformations and formatting.
- Understand the difference between data-centric and document-centric XML.
- Transport XML reliably using messaging and common protocols.
- Exchange data among data sources where data structure and/or model is not the same, using XML.
- Understand how to use vendor support for XML.

Evaluation criteria

Criteria	%
Labs (9)	30
Assignments (3)	25
Midterm exam	20
Final exam	25
TOTAL	100%

Passing grade: 50%

Attendance requirements

Students missing more than two labs will receive an Unsatisfactory grade in the course, and fail.

Learning resources

Required textbook:

- Goldberg, K.M. (2009). *Visual Quickstart Guide: XML* (2nd ed.). Berkeley, CA: PeachPit Press. ISBN: 978-0-321-55967-8

Software:

- PHP and HTML/CSS aware editor; eg NetBeans 8 (from www.netbeans.org) or PhpStorm (from www.jetbrains.com/phpstorm)
- AMP (Apache + MySQL + PHP) server environment, suitable for the student's platform; eg XAMPP (from apachefriends.org) or xAMP stack (from bitnami.com)
- CodeIgniter 3 webapp framework (from codeigniter.com)
- GIT client or plugin, for your IDE or platform

Other information

Policy for School of Computing and Academic Studies:

Attempts:Students must successfully complete a course within a maximum of three (3) attempts at the course. Students with two attempts in a single course will be allowed to repeat the course only upon special written permission from the Associate Dean. Students who have not successfully completed a course within three attempts will not be eligible to graduate from their respective program.

Course specific requirements

Some labs are individual, while others will use pair programming, with both students receiving the same grade.

Assignments will be completed in project teams, of up to four students, with team members' grades commensurate with their contribution.

Labs and assignments will be done using github.com for code repositories. Starter materials and solutions will be provided through the instructor's repositories.

Course materials (presentations, examples, tutorials, labs and assignments) will be shared through D2L content and/or a public website.

Labs and assignments will be submitted as github repositories, with links provided in a readme submitted to the appropriate D2L dropbox, which will also be used for feedback.

Course schedule and assignments

Week	Date	Material Covered	Labs	Assignments	Due Date

BCIT policy

The following statements are in accordance with the BCIT Policies 5101, 5102, 5104, and 7507, and their accompanying procedures. To review these policies and procedures please click on the links below.

Attendance/Illness:
In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with his/her instructor or Program Head or Chief Instructor, indicating the reason for the absence. Students who are seeking accommodation for a medical absence must have a BCIT approved medical certificate submitted to the department, substantiating the reason for absence. For other absences, the student should be prepared to provide appropriate supporting documentation. Unapproved absence in excess of the prescribed regulations within this outline may result in failure or forced withdrawal from the course or program. **Please see Policy 5101 - Student Regulations, and accompanying procedures.** [1]

Academic Integrity:
Violation of academic integrity, including plagiarism, dishonesty in assignments, examinations, or other academic performances are prohibited and will be handled in accordance with **Policy 5104 - Academic Integrity and Appeals, and accompanying procedures.** [2]

Accommodation:
Any student who may require accommodation from BCIT because of a physical or mental disability should refer to BCIT's Policy on Accommodation for Students with Disabilities (Policy #4501), and contact BCIT's Disability Resource Centre (SW1 2360, 604-451-6963) at the earliest possible time. Requests for accommodation must be made to the Disability Resource Centre, and should not be made to a course instructor or Program area.

Any student who needs special assistance in the event of a medical emergency or building evacuation (either because of a disability or for any other reason) should promptly inform their course instructor(s) and the Disability Resource Centre of their personal circumstances.

Human Rights, Harassment and Discrimination:
The BCIT community is made up of individuals from every ability, background, experience and identity, each contributing uniquely to the richness and diversity of the BCIT community as a whole. In recognition of this, and the intrinsic value of our diversity, BCIT seeks to foster a climate of collaboration, understanding and mutual respect between all members of the community and ensure an inclusive accessible working and learning environment where everyone can succeed.

Campus Mediation Services is a supportive resource for both students and employees of BCIT, to foster a respectful learning and working environment. Any student who feels that they are experiencing discrimination or harassment (personal or human rights-related) can confidentially access this resource for advice and support. Please see **Policy 7507 – Harassment and Discrimination and accompanying procedure.** [3]

Students should make themselves aware of additional Education, Administration, Safety and other BCIT policies listed at **http://www.bcit.ca/about/administration/policies.shtml** [4]

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Approved

I verify that the content of this course outline is current.
James Parry, Instructor
January 05, 2016

I verify that this course outline has been reviewed.
Bethany Edmunds, Program Head
January 05, 2016

I verify that this course outline has been reviewed and complies with BCIT policy.
Dean Hildebrand, Associate Dean, Science and Technology
January 05, 2016

Note: Should changes be required to the content of this course outline, students will be given reasonable notice.

Links

1. bcit.ca/files/pdf/policies/5101.pdf
2. bcit.ca/files/pdf/policies/5104.pdf
3. bcit.ca/files/pdf/policies/7507.pdf
4. bcit.ca/about/administration/policies
