SIMON FRASER UNIVERSITY
Senate Committee for Undergraduate Studies
NEW COURSE PROPOSAL

Course Number: CMPT 474-3

Course Title: Web Systems Architecture
Short Course Title: Web Systems Architecture

Course vector: 3 lecture

Course Description (for Calendar). Attach a course outline to this proposal.

Web-service based systems are fundamentally different from traditional software systems. The conceptual and methodological differences between a 'standard' software-development process and the development of a web-service based information system. The technology involved during the construction of their own web-service based application in an extensive project.

Prerequisite: CMPT 371, CMPT 373. Students who have taken CMPT 470 may not take this course for further credit.

Corequisite: none

Course(s) to be dropped if this course is approved: none

Rationale for Introduction of this Course:

This course will be required in the proposed Software Systems program for the Surrey campus.

Scheduling and Registration Information:

Indicate effective **semester/year** course would be first offered and planned **frequency** of offering thereafter.

Fall 2009, initially offered annually in Surrey

Waiver required: no

Will this be a required or elective course in the curriculum?

Elective in the Software Systems program.

What is the probable enrolment when offered?

40 students.

Which of your present CFL faculty have the expertise to offer this course?

Toby Donaldson, John Edgar, Greg Baker, Dirk Beyer, Rob Cameron, Mohamed Hefeeda

Are there any proposed student fees associated with this course other than tuition fees? (if so, attach mandatory supplementary fee approval form)

no

Resource Implications:
Note: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by a library report and, if appropriate, confirmation that funding arrangements have been addressed.

Campus where course will be taught:

Surrey.

Library report status

_____

Provide details on how existing instructional resources will be redistributed to accommodate this new course. For instance, will another course be eliminated or will the frequency of offering of other courses be reduced; are there changes in pedagogical style or class sizes that allow for this additional course offering?

See attached Software Systems Curriculum document.

Any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc.

See attached Software Systems Curriculum document.

Approvals

1. **Departmental approval** indicates that the Department has approved the content of the course, and has consulted with other Departments and Faculties regarding proposed course content and overlap issues.

Chair, Dept./School Date

Chair, Faculty Curriculum Committee Date

2. **Faculty approval** indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds.

_____ Date: _____
Dean or Designate

List which other Departments and Faculties have been consulted regarding the proposed course content including overlap issues. *Attach documentary evidence of responses.*

_____
_____
_____
_____

Other Faculties approval indicates that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

_____ Date: _____

_____ Date: _____

3. **SCUS approval** indicates that the course has been approved for implementation subject, where appropriate, to financial issues being addressed.

Course approved by SCUS (Chair of SCUS)

_____ Date: _____

Approval is signified by date and appropriate signature.

Proposed CMPT 474 Course Outline

Web-service based systems are fundamentally different from traditional software systems. This course covers the conceptual and methodological differences between a 'standard' software-development process and the development of a web-service based information system. Students will learn and practice the technology involved during the construction of their own web-service based application in an extensive project.

Topics:
- Introduction to service-oriented software engineering
- Web-engineering standards, such as XML, SOAP, WSDL, UDDI, WS-BPEL
- Web services: agents, services, requesters, providers, brokers
- Web-service based system architecture
- Component-based system development using web services
- Development environments and server-based middleware for web services
- Design of web-application front-ends
- Testing of web-service based systems: interface, component-level, navigation, configuration, security, performance
- Project management issues for web engineering

Grading:
Assignments 50%, project 50%

Textbook:
Web-based resources will be used.