**A. Course Description**

Credits: 4

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: None

This course introduces XML technologies, web services and service-oriented architectures. Current approaches to web service design and implementation will be discussed. Models for designing and implementing a service-oriented architecture will be discussed. Security considerations and emerging trends will be explored. Students will implement web services.

**B. Course Effective Dates:** 01/08/2007 - 12/16/2009 12/16/2009 - Present

**C. Outline of Major Content Areas:**

See Course Description for major content areas.

**D. Learning Outcomes (General)**

1. Represent data using XML.
2. Use XML documents/data to construct database records.
4. Implement a simple web service.
5. Register a web service.
6. Describe a web service interface using WSDL.
7. Demonstrate expertise in reading peer-reviewed papers in service-oriented architectures and explain them in writing.
8. Implement a moderately complex web service with a database backend.

**E. Learning Outcomes (MN Transfer Curriculum)**

This contains no goal areas.

**G. Special Information**

Graduate standing. Java programming experience and experience with web application development and programmatically accessing databases or instructor permission. The equivalent undergraduate courses at Metropolitan State would be ICS 240 Programming with Elementary Data Structures (in Java), ICS 325 Web Application Development and ICS 311 Database Management Systems. Note: Students are responsible to both be aware of and abide by prerequisites for ICS courses for which they enroll, and will be administratively dropped from a course if they have not met prerequisites.