Objectives and Outcomes
To embark on a self-directed course of study in a specific area of computer science, under the guidance of the instructor. The student selects the topic and assists in identifying source material. In addition to learning more about the specific topic, the student will learn how to organize, execute, and document an intensive, individualized semester of self-study. Additional objectives depend on the selected subject matter.

Course Requirements
For individual studies in a bioinformatics practicum project, the student must have proficiency with the Java programming language and associated development tools, some familiarity with relational database management systems, experience with the XMLPipeDB project software suite, and sufficient domain knowledge, especially in the realm of biological databases.

Materials and Texts
Mostly to be identified and reported by the student. Primary leads, for this particular project, include any resources or documents available for the XMLPipeDB, UniProt, Gene Ontology, and PostgreSQL projects, as well as the Microsoft JDBC/ODBC bridge for Microsoft Access database files.

Course Work and Grading
Graded coursework consists of 1 online study journal (20%), 1 final study report (40%), and modifications or extensions to the XMLPipeDB open source code base (40%). Letter grades are determined as follows: ≥ 90% gets an A– or better; ≥ 80% gets a B– or better; ≥ 70% gets a C– or better. I may curve grades upward based on qualitative considerations such as degree of difficulty, effort, class participation, time constraints, and overall attitude throughout the course. Grades are never curved downward.
the list of references cited, is typical. The report will be evaluated along the following criteria:

1. **Content (40%)**: What is the quality of the work? Are the background and motivation relevant and well-stated? Is the literature review thorough and well-described? Is the summary or survey complete and substantive? How well-documented is the programming project?

2. **Organization (30%)**: Is the text structured well? Are its ideas and flow easy to follow? Are distinct sections or topics clearly identified?

3. **Writing (20%)**: Are statements clear and easy to follow? Is the language precise and grammatically correct? Is the paper’s tone appropriate?

4. **Polish (10%)**: Is the content properly proofread? Are there any misspellings, typos, or other formatting faux pas?

The final study report is due at the end of finals week, **December 17**.

### Open Source Contributions

You will apply what you learn in the form of modifications or extensions to the XMLPipeDB code base. This work will be graded along these criteria:

1. **Design (30%)**: Clarity, flexibility, and ease of maintenance; elegance and innovation; applies proper separation of concerns; satisfies the “one change, one place” property

2. **Functionality (30%)**: Works as intended; produces correct answers/results; performs in a reasonable amount of time; includes tests that demonstrate correct behavior

3. **Naming (20%)**: Clarity and consistency; names correspond to roles, types, or actions

4. **Documentation (15%)**: Presence of README or overview material; abundance of comments in code; genuinely useful information

5. **Version control (5%)**: Sufficient frequency; informative commit log

The state of any code at the end of finals week, **December 17**, will serve as the basis for this grade.

### Version Control

Version control is an indispensable part of today’s computer science landscape in industry, the academy, and the open source community. Take full advantage of the functionality afforded by the Subversion repository that is provided by the XMLPipeDB SourceForge project site.

### Attendance

Meeting and session schedules are determined individually, and may vary according to the specific subject matter and/or course work. The last day to add or drop a class without a grade of W is **September 3**. The withdrawal or credit/no-credit deadline is **November 5**.

### University Policy on Academic Honesty

Loyola Marymount University expects high standards of honesty and integrity from all members of its community. All students are expected to follow the LMU honor code, as stated in the *LMU Undergraduate Bulletin 2010-2011*.

### Americans with Disabilities Act

Students with special needs as addressed by the Americans with Disabilities Act who need reasonable modifications, special assistance, or accommodations in this course should promptly direct their request to the Disability Support Services (DSS) Office. Any student who currently has a documented disability (physical, learning, or psychological) needing academic accommodations should contact DSS (Daum Hall, Room 224, x84535) as early in the semester as possible. All discussions will remain confidential. Please visit [http://www.lmu.edu/dss](http://www.lmu.edu/dss) for additional information.

### Topics and Important Dates

Dependent on the specific subject matter and ongoing progress.