PROTOCOL OF THE COMMITTEE TO OVERSEE THE
COMPUTATIONAL SCIENCE MINOR
Approved October 13, 2009

MISSION

Computational Science is an interdisciplinary field of study at the intersection of applied mathematics, statistics, and the natural, cognitive, social and managerial sciences. The study of Computational Science provides a critical connection between mathematics and science and will expose our students to modern computational techniques used to apply models and extract information from data. The Computational Sciences Minor at Loyola University New Orleans offers our students the opportunity to learn the latest computational techniques while working on undergraduate research under the supervision of a faculty mentor. Thus, the program will prepare students for a career in science.

MEMBERSHIP OF THE COMMITTEE

The committee to oversee the Computational Science Minor will consist of the Chair of the Department of Mathematics, one member chosen by each of the science departments, Biology, Chemistry, Mathematics and Computer Science, Physics, and Psychology, and one at-large member to be chosen by the committee. All members will serve for one year.

CHAIR OF THE COMMITTEE

The Committee will elect one of its members to serve as Chair. Duties of the Chair will include:

- calling meetings as needed;
- overseeing the approval of research projects;
- developing new courses and revising existing courses as needed;
- advising students in the program;
- scheduling seminars;
- representing the program to the University as a whole, such as to Curriculum Committees, SCAP, etc;
- working with Admissions to recruit students;
- writing the annual report;
- overseeing program assessment;
- coordinating grant proposals.

The Committee will serve to aid the Chair in these activities. The Committee will meet at least twice each semester.
PROGRAM ASSESSMENT

The Computational Science Minor Committee will assess the program. The committee will measure the success of the program in several ways:

**Recruitment and retention of new students into the program**

It is expected that the new program will attract additional students into Loyola and into our science departments. We will create a website describing the program and the different possibilities for undergraduate research in the sciences, which make our departments unique. The additional possibility of engaging in interdisciplinary studies and research in this emerging field, computational science, should spur interest in attending Loyola by students attracted to scientific computing. With our help, admissions counselors should be able to measure an increased interest in the sciences at Loyola. The close interaction between our faculty and our students should result in improved student persistence and graduation rates. Specifically, within the first five years of implementation we expect to count on 15-20 new Computational Science minors.

**Peer evaluation of course materials**

As part of ongoing faculty development activities, the Computational Science Committee members will attend Computational Science sessions in their respective professional conferences to continuously evaluate programs and courses offered at different institutions. This information will be shared with the committee and periodic revisions will be implemented in our courses and program.

**Committee evaluation of computational science research projects**

Our Computational Science minor culminates with the capstone experience of performing interdisciplinary computational research. As part of the program, a student will spend between 2 and 5 credit hours on a research project. The student will be required to write a research proposal which will be approved by the committee. Students will also be required to produce a written report detailing their efforts and results while performing the research. The committee will evaluate the overall and individual quality of the research projects and will act to assure continuous improvement of the process. Students will present their research results at a seminar.

**Success of our graduates in graduate school and in the work force**

We will keep connected with our Computational Science minors after they graduate and will assess through their experiences the quality of our program. Our graduates will have valuable information that we will use to evaluate and improve our program.