

# Reform of Introductory Science Courses for Non-Majors

## Mini-Grant Final Report

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Trinity University

Title of Project: **Redesign of neuroscience courses as part of the Trinity Common Curriculum**

Dates covered by the Project: May 21 through July 20, 2007

Amount awarded: 6,500.00 USD

*1. Original Goals and Objectives:* The original goal of this project was to redesign the Introduction to Neuroscience (NEUR 2310) and the Introductory Laboratory in Neuroscience (NEUR 2110) courses as Common Curriculum courses. The redesign was geared towards producing curricula that provide non-science majors with an experience that will be useful to them in the future. This will be accomplished by providing students with knowledge regarding the way humans perceive and interact with their world and critical thinking skills to understand similar information when they are exposed to it in the future.

2. The goals and objectives of the project did not change during its course.

3. Evaluation of the results included oral reports and evaluations for the course, the peer tutor for the course and a few added questions to the standard course evaluation.

4. I found that it is sometimes difficult to know/understand what students taking a course for Common Curriculum credit expect of the course. It is not a surprise to anyone that many students opt to take the easiest science course available. I don't think this is the population of non-science students that decide to take my Introduction to Neuroscience course given that it is a 2000 level course and that it has a reputation for not being an easy. A second group of non-science students is genuinely interested in Neuroscience but obviously have no Psychology, Biology or Chemistry backgrounds. It is this group that I mostly want to reach. I find that if I can keep their interest strong during the first part of the course, which is the more 'biological', I can usually hold their interest for the rest of the semester. The computer simulations that I have worked on are a good example of how to keep their interest. They take around 20-30 min to complete and they illustrate and reinforce the information we discussed in class. Of Course, computer simulations can only go so far. There is no substitute for old-fashioned studying, and the once change I am I am working on implementing is the selection of a few questions for them to answer at home after each lecture which will be reviewed on the subsequent lecture.

5. In November 2007 the student whose Summer work was funded through the mini-grant and myself attended the 33<sup>rd</sup> Society for Neuroscience annual meeting in San Diego. We brought with us a poster (attachment 1) that described the computer simulations we produced and their use in class. This same poster was also presented at the Faculty for Undergraduate Neuroscience satellite symposium also in San Diego. We took 150 letter-sized copies of the poster and they were all distributed to people inquiring about the programs. NeuroLab, as we call the group of simulations, will be made available free of charge through my institutional website (<http://www.trinity.edu/lchetti/>) during the Spring semester of next year. I will also submit an article describing the simulations and their pedagogical use to the Journal of Undergraduate Neuroscience Education (JUNE).

6. As we all know, streamlining a course is a matter of many attempts and careful observation of the responses by the students. I will keep working at improving the design of the lectures and student work in order to achieve the goals of my courses as Common Curriculum courses. Also, next semester at Trinity, the Quantitative Reasoning Understanding, which is the division under which my courses fall within our Common Curriculum, will undergo an assessment. I have volunteered to participate in the assessment and have designed a few questions that will be posed to the students at the beginning and end of the semester (attachment 2).

**7. *Approved Budget: \$6,500.00***

Faculty stipend, summer 2007	\$3,000.00
Student stipend, summer 2007	\$3,500.00

8. I hereby give ACS permission to post my original grant proposal and the results of my work on the ACS Science Reform website. Luis F. Schettino.

**Send your report electronically to:**

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