NATURAL SCIENCE IN PERSPECTIVE (NSP) DESIGNATION PROPOSAL

Course Department and Number: _____

Course Title: _____

Term of First Offering as an NSP Course: _____

On the final page of this document, you will find the three criteria that Natural Science in Perspective (NSP) courses should satisfy. In addition, each criterion is followed by a list of issues or topics that might be considered in presenting that criterion.

For the course that you are proposing to receive the NSP designation, please respond to the following questions. Please submit this form, *along with a copy of a course syllabus*, to Alan Caniglia, Office of the Registrar.

For each of the NSP criteria, please describe how that topic will be addressed in your course. Attach additional sheets if needed.

1. NSP courses should help students to understand the role played by theory in the Natural Sciences.

2. NSP courses should help students to understand the role of evidence in developing and testing scientific theories and what constitutes acceptable evidence in the Natural Sciences. The courses should also help students understand how Natural Science deals with uncertainty and increase their ability to reason quantitatively.

3. NSP courses should help students to understand the goals of Natural Science and the role Natural Science plays in today's society, including questions Natural Science attempts to answer and questions that are outside the domain of the Natural Sciences. The courses also ask students to grapple with real-world situations in which policy decisions need to be made without complete understanding or complete certainty. The courses should also address ethical conduct and uses of Natural Science.

Instructor's Signature: _____ Date: _____

Instructor's Name (Please Print): _____

Department Chair's Signature: _____ Date: _____

If Cross-Listed, Signatures of Other Department/Program Chairs:

Approved by EPC: _____ Date: _____

Recorded in Office of the Registrar: _____ Date: _____

Natural Science In Perspective (NSP) Courses

1. NSP courses should help students to understand the role played by theory in the Natural Sciences.

This goal could be addressed, for example, by discussing some of the following:
• the meaning and uses of terms such as *hypothesis*, *law*, *theory*, and *paradigm*
• the role of theory in explaining and making predictions about natural phenomena
• why and how theories are revised in response to new evidence or interpretation
• the roles of peer review and consensus in the Natural Sciences

2. NSP courses should help students to understand the role of evidence in developing and testing scientific theories and what constitutes acceptable evidence in the Natural Sciences. The courses should also help students understand how Natural Science deals with uncertainty and increase their ability to reason quantitatively.

This goal could be addressed, for example, by discussing some of the following:
• the interplay between theory and experimentation in the Natural Sciences
• the need for reproducibility of experimental results
• the various types of evidence, including experimental, historical and proxy evidence, that Natural Scientists use
• the ways in which statistics are used and misused in society today
• the ways in which Natural Scientists draw conclusions from incomplete or contradictory evidence

3. NSP courses should help students to understand the goals of Natural Science and the role Natural Science plays in today's society, including questions Natural Science attempts to answer and questions that are outside the domain of the Natural Sciences. The courses also ask students to grapple with real-world situations in which policy decisions need to be made without complete understanding or complete certainty. The courses should also address ethical conduct and uses of Natural Science.

This goal could be addressed, for example, by discussing some of the following:
• the Natural Science involved in major policy issues facing society today
• the differences and similarities among basic Natural Science, applied Natural Science, and technology
• differences among academic, government, and industry science, including the roles of natural scientists in these positions
• funding of Natural Science and science policy
• differences among cultures and nations in the support and conduct of Natural Science
• use and misuse of Natural Science by government officials and other policy makers
• efforts by government officials and other policy makers to influence Natural Science education
• frequency and consequences of scientific fraud