Discovery Program Categories
http://www.unh.edu/academic-affairs/discovery/gesc.html
September 15, 2008

The discovery category descriptions in eight discipline areas are presented below. This draft was submitted to Academic Affairs in September 2008 and is currently under discussion within this committee of the faculty senate. The Discovery Program Advisory Committee anticipates some revision to these category descriptions; however we are placing them on the Discovery Website so that faculty may review them within the context of current major and General Education courses. If any faculty member has concerns regarding how a course would transfer from current General Education into one of the Discovery category descriptions, please contact Discovery Program Faculty Co-Directors Thomas Pistole or Barbara P. White or your current department liaison.

In the university, we organize knowledge into disciplines that explore particular areas of expertise. Although in our major requirements, we focus our attention, we also believe that intellectual breadth fosters creative work within the disciplines and fruitful collaboration beyond them. This is a collective responsibility of those who teach and learn in the Discovery Program. Each course in the Discovery Program fulfills an obligation not only to its own field but also to the others that make up the organization of modern knowledge. Courses in the proposed categories introduce students to the primary questions, methods and perspectives of the field or discipline; and they encourage students to understand the connections among different disciplines and fields of study.

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Natural Sciences (2) One must have a LAB

Biological Science
The subject matter of the biological sciences is life. In addition to acquiring an understanding of the methods of scientific inquiry, students will have some breadth and depth of knowledge in at least one of the key content areas of the biological sciences. These content areas include the basic structure and function of organisms, the interactions of organisms with their environment, human health, biotechnology, and the concepts and mechanisms of Darwinian evolution as a fundamental biological paradigm. Students should have the capacity to critically evaluate ongoing developments in the basic and applied biological sciences. Biological sciences courses will use a scientific way of thinking and employ scientific methodology to provide descriptive and explanatory answers to questions about the natural world. Students will critically assess and evaluate scientific conclusions in both technical literature and popular media as well as apply scientific knowledge and understanding to current problems and issues that have a scientific basis. These courses will provide an understanding and appreciation of the process of science, as well as its powers and limits.

Physical Science
The physical sciences seek to discover the fundamental structure, properties, and nature of interactions of components of the material world ranging from the subatomic level to the entire universe. The traditional domains of chemistry, physics, astronomy, cosmology, geology, atmospheric sciences and earth science are the essential foundations of knowledge in numerous professional disciplines, and the intersections among these fields and the biological sciences continue to yield breathtaking revelations about living organisms.
Discovery courses in the Physical Sciences should convey to the student the wonder and complexity of the physical world while engendering an appreciation for those aspects of order and predictability that may be found in empirical observation. A course in this Discovery category will employ scientific methodologies to provide

descriptive and explanatory answers to questions about the natural world. Using scientific modes of thought, students will learn to critically evaluate assertions about the structure and function of the physical world in both technical literature and popular media. They should also gain an understanding of the importance of physical instrumentation as extensions of the human senses. The illustration of the application of scientific knowledge to contemporary issues that have a basis in the physical sciences is a vital element of courses in this category

Arts & Humanities (2)

Fine and Performing Arts
Understanding and appreciating the arts enhances the quality of life for all of our students and ensures the preservation of our cultural heritage in the future. It is important for every student at UNH to experience the intellectual and emotional impact of the arts. Experiencing the Fine and Performing Arts within the artistic life of the University is an important aspect of the experience of being part of a university community. The subject will be art, architecture, theater, film, dance, or music and the course will endeavor, with some element of learning through experience, to enrich a student's understanding of and appreciation for the fine or performing arts.

Humanities
Broadly defined as the study of important works of ideas and of the imagination, the humanities are a long-standing and central component of a liberal education. More specifically, the humanities focus on questions related to meaning, ethics, aesthetics, and identity, and the foundations of knowledge; and they involve the study of major works that focus on ideas, traditions, and concepts that have fundamentally shaped our understanding of the world and our sense of self at different moments in time and in diverse places. Courses in the humanities should introduce students to central works of literature and/or ideas, or other historically important primary texts. Additionally, all humanities courses should explore the nature of humanistic inquiry, and the central methods by which scholars in the humanities pursue their work.

Historical & Global Perspectives (2)

Historical Perspectives
An educated person must have some perspective on historical change, acquaintance with major historical developments, and understanding of the historical conditions and forces which have shaped the present. Students ought to have the opportunity to acquire knowledge of major historical developments and, where appropriate, understanding of how these developments have shaped contemporary life in all its complexity. Students should have the opportunity to acquire experience in methods of historical inquiry and modes of historical thought. Courses meeting this requirement should allow students to acquire a historical understanding of past worlds. One of the assumptions behind the notion of a "historical perspective" is that the perspective to be gained arises in part from a study of particulars. To serve students with a stronger background or particular interests in certain subjects, courses can be offered that explore more specialized topics in greater depth. In all cases, however, students should learn how to identify aspects of the past that were crucial to historical persons on their own terms or that shape the present.

World Cultures
With increased globalization of information, culture, and commerce, students should strive to understand and appreciate cultures present outside the geopolitical boundaries of the United States. Courses in World Cultures open students to different ways of looking at the world; intermediate foreign language courses go beyond language skills training to offer students deeper insight into the cultures where these languages are primary. World Cultures courses will prepare the student with non-English language skills at the intermediate level OR introduce cultural and social aspects of human behavior in multiple or particular communities outside of the United States.

Social and Behavioral Sciences (2)

Social Science
The social sciences encompass major traditions of thought that provide frameworks for analyzing the challenges facing contemporary society. As the world becomes more interconnected and complex, the tools provided by the social sciences become increasingly important for understanding values, behaviors, and institutions. The social sciences requirement ensures that students learn to apply relevant theoretical perspectives, data-gathering techniques, and methodological approaches to diverse phenomena. These courses will also utilize appropriate

methods of inquiry by introducing the systematic use of data, documentation, and experimentation relevant to particular fields or disciplines. Students will weigh the trade-offs of various approaches and will develop a framework that can be applied to one or more social issues.

Environment, Technology and Society

The advancement of human understanding of the physical world through the natural sciences has enabled dramatic technological developments that address perceived individual and societal needs. The fact that these advances have also resulted in unforeseen and/or possibly undesirable consequences both for humanity and the natural world is the source of much tension within modern societies, and between modern and developing societies. An educated person should possess not only an awareness of the influence of human behaviors, as mediated by technological advances, on human and natural ecologies, but should also be able to understand the motivations, scientific bases, and means of implementation for those advances. A Discovery course fulfilling the objectives of the Technology, Environment and Society category should enable a student to comprehend and critically evaluate the forces driving the advancement and application of technological means to individual and societal needs. Such a course should also enable the student to more fully appreciate the ecological, social, and ethical dimensions of human behaviors that are mediated through the application of modern technologies. An historical perspective that provides insight into the evolution of one or more threads of technological advancement against the larger backdrop of societal developments is a particularly desirable attribute for courses in this category.

Each category will contain the following:

An overarching theme, thread, characteristic [use of scientific inquiry to seek answers]

Major subgroups [biological sciences; physical sciences]

Key areas within each [for example, traditional domains of chemistry, physics, astronomy, cosmology, geology, atmospheric sciences, & earth science]

Expected activities [Students critically assess and evaluate scientific conclusions in both technical and non-technical media]

Expected outcomes [Students will gain an understanding and appreciation of the process of science, as well as its powers and limits.]