

## **Writing:**

Courses emphasizing writing offer students the opportunity to develop writing skills useful in a range of contexts and disciplines. Emphases will vary from course to course: some courses will emphasize research; others will focus on persuasion. All will help students make clear and effective presentations in formats appropriate to their disciplines and purposes.

Courses with emphasis on writing will include:

- A significant amount of writing, usually spread over the entire semester
- Writing assignments designed to improve writing skill as well as explore the subject matter of the course
- Discussion in class of the assigned papers, or opportunities for students to talk with the professor, T.A., or writing tutor
- Consideration of students' writing performance in their grades or evaluations.

The courses might also consider some of these topics:

- how to write a particular kind of piece, such as an article for a science journal, or, more broadly, how to write within the conventions of a discipline
- use of source materials and appropriate citation forms
- choice of syntax and phrasing, and the development of style and voice
- uses of rough drafts and revisions. Courses may offer students the chance to revise their work.

## **Speaking:**

Speaking: Courses with an emphasis on speaking help students develop the ability to speak effectively in a variety of situations, including small discussion groups, formal debates, public meetings, and lecture halls. Some courses may offer formal training in public speaking; all will involve a significant amount of oral expression. Courses with a speaking emphasis will offer one or more of the following features:

- Regular opportunities to present, develop, and advocate ideas orally in such formats as debates, classroom panel discussions, informal presentations, and scripted speeches.
- Instruction on how to speak effectively, including:
  - how to engage, inform, and persuade an audience
  - how to choose appropriate levels of discourse
  - how to lead, facilitate, and summarize discussions
  - how to use evidence, logic, imagery, and rhetoric
  - how to enhance oral presentations with audiovisual aids
  - how to listen attentively and respond constructively.

### **Quantitative Reasoning:**

Courses emphasizing quantitative reasoning teach the use of mathematical ideas and methods, for example to describe and analyze quantifiable properties of the world. Science and technology rely on our ability to characterize and understand the world by measuring its properties and by using mathematical models to test hypotheses against data derived from these measurements. Quantitative reasoning courses will emphasize such skills as:

- developing reliable methods of measurement
- analyzing empirical data
- formulating mathematical theories or descriptions and understanding their behavior
- using mathematical and numerical models to explain the data and predict outcomes.

### **Logical Reasoning:**

Although students in any course are normally expected to reason in a logical manner, courses emphasizing this capability will include a significant component in which students self-consciously reflect on the forms of reasoning and their properties. Logical reasoning can be either deductive or inductive in nature, the key difference being that in the latter case conclusions are not understood to follow *necessarily* from given premises. Courses that emphasize this capability teach students to:

- recognize or construct formally valid forms of deductive argument
- identify elements that increase or decrease the cogency of inductive arguments
- detect logical fallacies
- make formally correct arguments.

Deductive arguments include syllogisms and arguments by contradiction; forms of inductive reasoning include statistical inference and argument by analogy. Education in logical argumentation should involve oral or written exercises evaluated for analytical coherence as well as content, and so would require more than the uncritical application of given formulas, algorithms, or computer programs.

### **Interpretation:**

Courses satisfying this capability familiarize students with the importance of interpretation to the acquisition of knowledge and understanding. Students are encouraged to develop their own interpretive skills as well as to analyze and evaluate approaches to interpretation employed by texts and other materials used in the class. Interpretation courses will emphasize one or more of the following features:

- A critical and practical engagement with analytical tools that enable interpretation
- An exploration of competing or complementary interpretations, and criteria for evaluating them
- Training in the effective presentation of interpretations in a variety of formats, including writing, speech, images, and analyses
- The study of formal and informal modes or traditions of interpretation.

### **Designing, Creating, and Realizing:**

These courses are designed to teach students to design, create, and build. These skills might be honed through a diversity of exercises or projects, including:

- scientific experimentation
- performing or directing a dance, music, or theater production
- creating works such as paintings, films, or musical compositions.

Students will create something from a concept, and their creations will then be analyzed and interpreted. What is built should be physical, e.g., a scientific experiment, a sculpture, or a dance composition. Creations might range from objects that are entirely original with the student to reconstructions of objects previously created; different points along the continuum of originality will emphasize the facets of designing, creating, and realizing to different extents. Each course should provide an historical and theoretical context for determining what is important to design and create in the first place.

There are different approaches to teaching how to design, create, and build, but in all cases the instructor should take care that these capabilities are learned. The designing, creating, and building part of the course could be as laissez-faire as simply assigning a project, provided that the instructor is confident that the students will acquire the skills on their own. In most cases, students will benefit from one-on-one interactions with the instructor, to steer the students' efforts in productive and provocative directions. The skills can also be taught through lectures and notes provided by the instructor. The instructor should offer opportunities for students to learn from one another. For example, students might be given an opportunity to discuss their projects with each other at different stages of the work, or groups of students might work on projects together as creative teams. What is designed and built can be a series of projects, or a single term project. In either case, students should have multiple opportunities to improve their skills.

### **Intercultural Literacy:**

Intercultural literacy is developed by any course that encourages a comparative reflection about cultural practices from different communities, ethnicities, or nationalities within a country or between several countries. The ability to make such comparisons is not a native endowment but an art that can be learned through courses that emphasize the "vertical axis" of study of past cultures, including their literature, music, dance, ideas, and languages, and/or the "horizontal axis" of the study of contemporary instances of these subjects in diverse and unfamiliar cultures, be they domestic or international. Possible criteria for courses that satisfy the intercultural literacy capability include:

- Acquisition of a new language
- Comparison of cultural practices between one's own culture and another
- Critical reflection on what constitutes a culture, border, or boundary

## **Ethical Reasoning:**

Ethical questions concern judgments of right and wrong, good and bad, as well as matters of justice, fairness, virtue, and social responsibility. An ethical reasoning course is one that integrates ethical questions into the intellectual work required in the course. A substantial part of the course should be devoted to exploring the range of ethical issues associated with the central topic of the course. The course should move students beyond mere reactions to ethical issues and toward discussions of various frameworks for thinking systematically about them.

### Full Description:

Courses emphasizing ethical reasoning will foster the ability to reflect rigorously on ethical issues and to apply ethical reasoning to choices in private and public life. Courses in ethical reasoning will not require that students adopt any particular ethical position, but will encourage students to begin to develop a defensible ethical position of their own.

This may be achieved by:

- giving serious consideration to more than one side of personal or policy dilemmas
- teaching students how to distinguish ethical claims from descriptive and other sorts of claims, how to evaluate the evidence used in support of such claims, and how to test the consistency of a position and its coherence with other moral commitments
- helping students to identify conflicting values in order to assess and employ various strategies for resolving value conflicts
- identifying good, compelling reasons from personal, arbitrary or prejudicial reasons
- exploring ethical reasoning in a historical or cross-cultural perspective.

## **Effective Citizenship:**

An understanding of the possibilities and challenges inherent in effective citizenship can be acquired through coursework or through engaging in co-curricular and extracurricular activities. Courses and activities that promote effective citizenship should enable students to do some or all of the following:

- Learn how to frame and articulate political and social questions affecting their local, regional, national, or global community
- Learn how to gather information on such questions
- Learn how to assess the validity of sources of information and arguments
- Acquire an understanding of the differing definitions and models of citizenship that exist in a variety of settings
- Develop an understanding of the roles the individual can play acting as a citizen separately or in groups
- Learn how to engage individuals and groups with different views
- Learn to assess the costs and benefits of different forms of citizen action
- Come to recognize the assumptions underlying seemingly absolute categories such as “good” and “evil” when applied to choices with which citizens are confronted, and to recognize the extent to which these judgments are adequately grounded.

## **Information Literacy:**

Courses teaching information literacy explicitly include the discovery and evaluation of information resources as an object of study. Often faculty invite librarians to teach specific class sessions in such courses. Two types of courses are good candidates for a focus on information literacy: introductory courses and advanced courses for majors. In introductory courses, students new to college can gain a basic introduction to the life of information in a university setting. In advanced courses for majors, students can learn the specific information systems and conventions within their chosen field of study.

Examples of information literacy topics include:

- Critical evaluation of the Internet as an information source
- Citation systems in various subject disciplines
- Reliability of information resources, including the process and significance of peer review
- Knowing how information in a discipline is produced, published, disseminated, indexed, and retrieved
- Ethical use of information, including the issues of privacy, copyright, and plagiarism
- Misrepresentation of information, from statistical data to maps to quotations
- Skills in using and producing a variety of information formats, from graphs, maps, video, complex software packages to graphics
- Knowledge production, including various types (newspapers, government documents, scholarly journals, etc.).

Information literacy is best learned in conjunction with authentic inquiry into the subject matter of the course. Librarians can help faculty construct meaningful assignments that provide students with opportunities to develop information literacy skills while simultaneously learning within the field of inquiry of the course. Examples of such assignments include:

- writing a literature review in preparation for a term paper
- creating an annotated bibliography
- finding and evaluating Web resources for a given topic
- making a documentary
- finding articles cited in a paper's bibliography and critiquing how and why the author used them.