Learning Objectives for the Natural Sciences Distribution Requirement

Students will learn to:
1. Accurately use and communicate basic scientific vocabulary, terms, and concepts (including relevant quantitative concepts).
2. Gather or synthesize, evaluate, and critically interpret scientific evidence.
3. Evaluate scientific information presented in a variety of media and make decisions about its accuracy, validity, and implications.

Learning Objectives for the Mathematical Sciences Distribution Requirement

Students will:
1. Develop knowledge and problem-solving skills in using mathematical tools and procedures, and apply these skills in a variety of contexts.
2. Learn to discern underlying patterns or structure and represent these using abstract or symbolic representations.
3. Learn to reason precisely and systematically, and to critically assess the plausibility of claims or solutions.

Learning Objectives for the Social Sciences Distribution Requirement

In the context of at least one social science, students will be able to:
1. Identify the core concepts, theories, and methods used by social scientists to observe, to analyze, or to predict human behavior.
2. Identify patterns underlying everyday social phenomena that are otherwise invisible or taken-for-granted.
3. Describe the influence of historical, social, cultural, or political structures on human behavior and make comparisons and contrasts across contexts.
4. Communicate ideas clearly within the disciplinary standards of argument, evidence, analysis, and citation.

Learning Objectives for the Humanities (Revised 2012)

Students will:
1. Demonstrate skill in close reading and critical analysis while engaging questions within the humanistic tradition of interpreting text as well as oral, visual, kinetic, and other materials as expressions of human experience and thought.
2. Describe the influence of historical, social, cultural, and political contexts on human experience and make comparisons and contrasts across multiple contexts.
3. Recognize, evaluate, and use evidence effectively and in accordance with the standards of scholarship in at least one of the humanities disciplines.
4. Communicate ideas clearly and compellingly in writing and in oral presentation.

Learning Objectives for the Arts Distribution Requirement

In at least one art form, students will be able to:
1. Identify the style, concepts, materials, methods and techniques used to create a work of art or performance.
2. Recognize the historical, political, social, and/or aesthetic contexts of works of art or performance.
3. Appreciate the imaginative and expressive traditions of cultures through engagement with or creation of art work or performance.
4. Communicate effectively through or about the arts in one or more of the following ways:
   a. through a performance or personal expression that demonstrates creativity and foundational skills in the use of artistic techniques
   b. through critical analysis of a work of art or artistic tradition using evidence and formal language to support the analysis
   c. through reflective practices that integrate perceptions of the art form/art work with personal experience
Summary of the Tufts Pilot Project in Assessing Learning Outcomes in General Education

Tufts approached the requirements to demonstrate that the university is assessing student learning relative to established goals and criteria through an initiative at the Department and Program level. Every department and program developed learning objectives for majors and a method for collecting and evaluating student work to determine areas of program strengths and needs.

In the early stages of this process, Tufts learned that universities are also required to develop learning objectives and to evaluate students’ learning outcomes in the core or general education curriculum—that is, in the curriculum we require of all students and that therefore constitutes the intellectual core of a Tufts education.

In 2010, when the Learning Outcomes Committee began planning for this component, assessment of student learning in the core curriculum, we faced several challenges:

1. The core curriculum is expansive, includes several threads under two categories, and a significant number (well over half) of undergraduate courses satisfies one or more of the requirements. The core curriculum at Tufts includes Foundations requirements (College Writing, Foreign Language and Culture, World Civilizations) and Distribution requirements.
2. We decided to focus our efforts on the Distribution requirements—however, there were no learning objectives specified for these requirements.
3. We had not yet developed a culture of assessment among faculty—in fact, there was even some hostility to the assessment requirements. We needed a voluntary program enlisting faculty who were, if not enthusiastic, at least willing.

Pilot Project workshops were planned to develop the assessment of learning outcomes in the Tufts core curriculum. To do this, we would need to:

a. Recruit volunteers who teach courses designed to fulfill a distribution requirement to meet in distribution groups
b. Facilitate defining shared learning objectives that would apply to courses taught to meet the distribution area requirements
c. Develop guidelines for collecting data to inform course faculty about how well their students are meeting the learning objectives
d. Support faculty in using data to improve instruction in their courses
e. Encourage faculty to share the process with other members of their department

The project took place over two years; altogether 29 faculty members plus 2 additional faculty facilitators participated (5 faculty members participated both years). At every point, the goal was to develop meaningful, sustainable approaches to assessment that would be used to enhance teaching and learning.

In the first summer, each working group developed Learning Objectives for their distribution area. During the following year, faculty explored ways to evaluate student work using criteria derived from the learning objectives and samples of work from assignments/tests they were already using in their classes. In the second summer, we reviewed the learning objectives. The Humanities second year group revised their learning objectives; the other groups approved the original objectives. The working groups also reviewed the various methods used to evaluate student work relative to the learning objectives and to aggregate the results for the purposes of interpreting patterns in student outcomes. We developed guidelines for the second year of assessment data collection. Several faculty from each year received coaching in this process. At the end of the second year, all faculty who participated in either or both years met to review the pilot project and to make recommendations for the future. These recommendations included a request that Tufts provide more intensive coaching and support to faculty in assessing student learning outcomes using learning objectives.