

# SUNY Fredonia

## Guidelines for Numbering Courses at the Undergraduate Level

These guidelines are intended to help the university community achieve consensus as to how the level of an undergraduate course relates to course structure, organization, and degree of difficulty or sophistication.

### **Lower-Level vs. Upper-Level**

Lower-level courses are those at the 100-level and 200-level.

Upper-level courses are those at the 300-level and 400-level. In addition, a 200-level course may be proposed to count as an upper-level course, particularly if it has a university-level prerequisite.

### **Upper-Level Requirement for a Bachelor's Degree**

Of the 120 credit hours required for the degree, at least 45 must be at the upper-level.

### **100-Level Courses**

These are typically introductory courses having no university-level prerequisites, often presenting basic concepts and terminology. Students in such courses are expected to operate largely at the “knowledge” and “comprehension” levels, but should be provided opportunities to develop at the “application” and “analysis” levels (refer to the revised Bloom’s taxonomy below).

### **200-Level Courses**

Such courses are at an intermediate level of difficulty, and sometimes survey a subfield within a discipline. They often have a prerequisite at the 100-level. Students taking such courses should solidify their abilities at the knowledge and comprehension levels, and be provided ample opportunity to develop their application and analysis skills.

### **300-Level and 400-Level Courses**

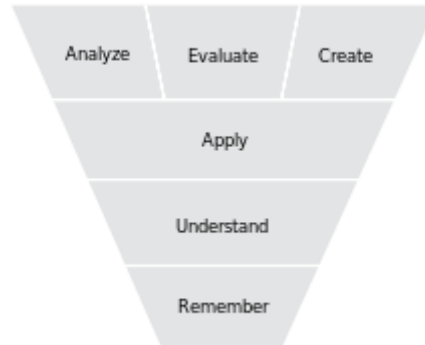
Such courses are at an advanced-undergraduate level of difficulty, and are generally taken by majors, minors, and other students with a well-defined interest and demonstrated ability in a particular subject area.

While continuing to develop proficiency at the lower cognitive levels, 300-level courses are expected to provide students with the opportunity to operate at the “synthesis” and “evaluation” levels.

Courses at the 400-level operate mostly at the “synthesis” and “evaluation” levels. They are often of a “seminar” nature, with the students taking significant responsibility for the course agenda. In particular, courses which provide students with the opportunity to perform directed research are usually at the 400-level.

# Revised Bloom's Taxonomy for the Cognitive Domain

From Wikipedia



Categories in the cognitive domain of the revised Bloom's taxonomy ([Anderson et al. 2000](#))

Skills in the **cognitive domain** revolve around knowledge, comprehension, and critical thinking on a particular topic. Traditional education tends to emphasize the skills in this domain, particularly the lower-order objectives.

There are six levels in the taxonomy, moving through the lowest order processes to the highest:

## **Knowledge Level**

Exhibit memory of learned materials by recalling facts, terms, basic concepts and answers

- Knowledge of specifics - terminology, specific facts
- Knowledge of ways and means of dealing with specifics - conventions, trends and sequences, classifications and categories, criteria, methodology
- Knowledge of the universals and abstractions in a field - principles and generalizations, theories and structures

## **Comprehension Level**

Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating the main ideas

- Translation
- Interpretation
- Extrapolation

## **Application Level**

Using new knowledge. Solve problems in new situations by applying acquired knowledge, facts, techniques and rules in a different way.

## **Analysis Level**

Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations

- Analysis of elements
- Analysis of relationships
- Analysis of organizational principles

## **Synthesis Level**

Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions

- Production of a unique communication
- Production of a plan, or proposed set of operations
- Derivation of a set of abstract relations

## **Evaluation Level**

Present and defend opinions by making judgments about information, validity of ideas or quality of work based on a set of criteria

- Judgments in terms of internal evidence
- Judgments in terms of external criteria