Decision Rules for Assigning Levels and CIP Codes to Undergraduate Courses in the HEI Course Inventory

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Introduction to the CI Expert System

1. In the HEI Course Inventory, all courses are assigned a Course Level and a Classification of Instruction Program (CIP) code. An important consequence of these assignments is that the combination of Course Level and CIP for a course determines the "funding model" in which that course's full-time equivalent (FTE) enrollment is placed for purposes of expenditure per FTE calculations and State Share of Instruction (SSI) calculations.

   In addition, the levels of courses taken by students are an important factor in many enrollment and student progress reports. This is especially true for developmental courses, as enrollment in such courses is an indicator of poor academic preparation.

   Consistent assignment of courses to these categories, according to common rules, across all 37 institutions in Ohio's public higher education system is necessary for the accurate distribution of state higher education funding and accurate reporting of course-taking outcomes for students.

2. How to use this guide.

   First, become familiar with the course level definitions on page 3.

   Then, refer to the introductory page 7 to get directed to the appropriate starting point in these guidelines.

   For Developmental courses, note the inclusion of specific instructions for CIP code assignments (page 9) and coding of the new (Summer 2012) Developmental Instructional Level field (page 10).

   Note that the guidelines for the assignment of Technical course levels hinge on whether the course in question is a requirement of an institution's technical certificate and associate degree programs of study. Institutional staff who make course level designations must become familiar with those programs and their requirements.

   Before assigning the Baccalaureate level to a course, consider all of the instructions in sections 7a, 7b, and 7c. For Science, Performing Arts, Mathematics, and Business courses, also refer to the subject-specific guidance in sections 7d, 7e, 7f, and 7g.

3. <u>Summary of Changes from Prior Expert System</u>

This revision of the Course Inventory Expert System (which becomes effective for summer 2012 Course Inventory file submissions) was prompted by two recent developments.

First, Ohio Board of Regents academic policy changes for “Technical Colleges” now allow those institutions to offer a wider variety of courses and programs. Hence, the prior guidelines that restricted technical colleges from offering Baccalaureate level courses became outdated. Related to this, the “Program Summary” documents referred to in past versions of the Expert System are no longer in use, and cannot be used to identify which programs and courses are technical.

Second, CIP 2010 has superseded CIP 2000, so all references to specific CIP codes in the prior Expert System required updating.

While this review process was being undertaken, decisions were also made to implement other changes. These include:

1. Addition of instructions for the assignment of specific CIP codes to developmental courses
2. Addition of instructions for coding the new (Summer 2012) Instructional Level field for developmental courses.
3. Addition of explanatory material on the Classification of Instructional Program (CIP) code system.
4. The subject-specific guidance for potential Baccalaureate level courses has been shortened and streamlined.

Definitions of Course Levels

These course level definitions are taken from the data file submission instructions for the HEI Course Inventory file (http://regents.ohio.gov/hei/datasubdoc/enrollment/cifile.php#courselevel).

These definitions are consistent with those found in Rule 2 (Ohio Administrative Code 3333-1-02);

Developmental (V): Assign to this level all courses which are below college level. You should not use the generic subject codes "320101" or "320199" for developmental English or math courses.

Additional notes on Developmental courses: Developmental courses are “credit” courses in that developmental course hours contribute to the hours used to determine full-time enrollment status for students. However, the developmental course credits cannot be applied toward the credit requirements for academic programs.

General Studies (G): Assign to this level all courses which are general, introductory, or core courses. Courses which satisfy distributive requirements, the set of courses which provide students with a broad knowledge base, generally in the humanities, natural sciences and social sciences, for an associate or Baccalaureate degree should be assigned to the General Studies level.

Technical (T): Assign to this level only those courses which are part of an associate degree program of technical education and are within the technical portion of a curriculum as defined by current Board of Regents’ program approval standards. Courses which are "basic" and "non-technical" within those standards should be assigned to the General Studies level.

Baccalaureate (B): Assign to this level all courses which are specialized within a discipline for the Baccalaureate degree. The course should be considered specialized when a specific set of knowledge or skills is required prior to enrollment. Typically these courses are reserved for students majoring in the field. Also, assign this level to specialized courses designed to serve a related discipline.

Relationships between Course Levels, Ohio Transfer Module, and Transfer Assurance Guides

The notion of “course level” is considered in several Ohio Board of Regents data and academic policy areas, including these HEI Course Inventory instructions, the Ohio Transfer Module, and the Transfer Assurance Guides.

Each public college and university in Ohio designates a subset or a complete set of general education courses to be included in the Ohio Transfer Module (OTM). OTM courses taken at any one public institution can transfer to all other public institutions to be accepted and applied toward general education requirements. All Ohio Transfer Module courses must undergo a statewide review process and be approved by faculty review panels before any institution can offer the course as an OTM approved course.

The Transfer Assurance Guides (TAGs) provide statewide guaranteed pathways toward particular majors. They include the Ohio Transfer Module, pre-major/beginning major courses (TAG courses), advising notes, and a foreign language requirement (if applicable). TAG courses facilitate the acceptance and application of courses in a specific area among Ohio public colleges and universities. To certify as course equivalents in TAGs, courses offered by individual institutions must go through a formal review process by statewide faculty review panels in the subject areas who determine whether the specified learning outcomes are consistent with TAG outcomes. The TAGs process assures the appropriate rigor of the course and offers a statewide assurance to students that their courses will count toward their college degree.

The relationships between HEI course levels, and the inclusion of courses in the Ohio Transfer Module and TAGs, are not rigid and exclusionary:

> Ohio Transfer Module courses can be coded as either General or Baccalaureate in the HEI Course Inventory.
>
> Ohio Transfer Module courses can be part of TAGs.
>
> TAG courses can be coded as either General or Baccalaureate in the HEI Course Inventory.

There is currently no requirement that courses that are determined to be equivalent for transfer purposes through TAGs will carry the same HEI course level across all institutions.

Information on CIP Codes

The Ohio Board of Regents uses CIP codes to describe “field of study” for courses, academic programs and majors, degrees and certificates earned, and faculty teaching and research areas.

The Classification of Instructional Programs (CIP) was developed by the U.S. Department of Education's National Center for Education Statistics (NCES) in 1980, with revisions occurring in 1985, 1990, 2000, and 2010. CIP is a classification system that allows the accurate tracking and reporting of fields of study and program completions activity in a standardized manner across all higher education institutions in the United States.

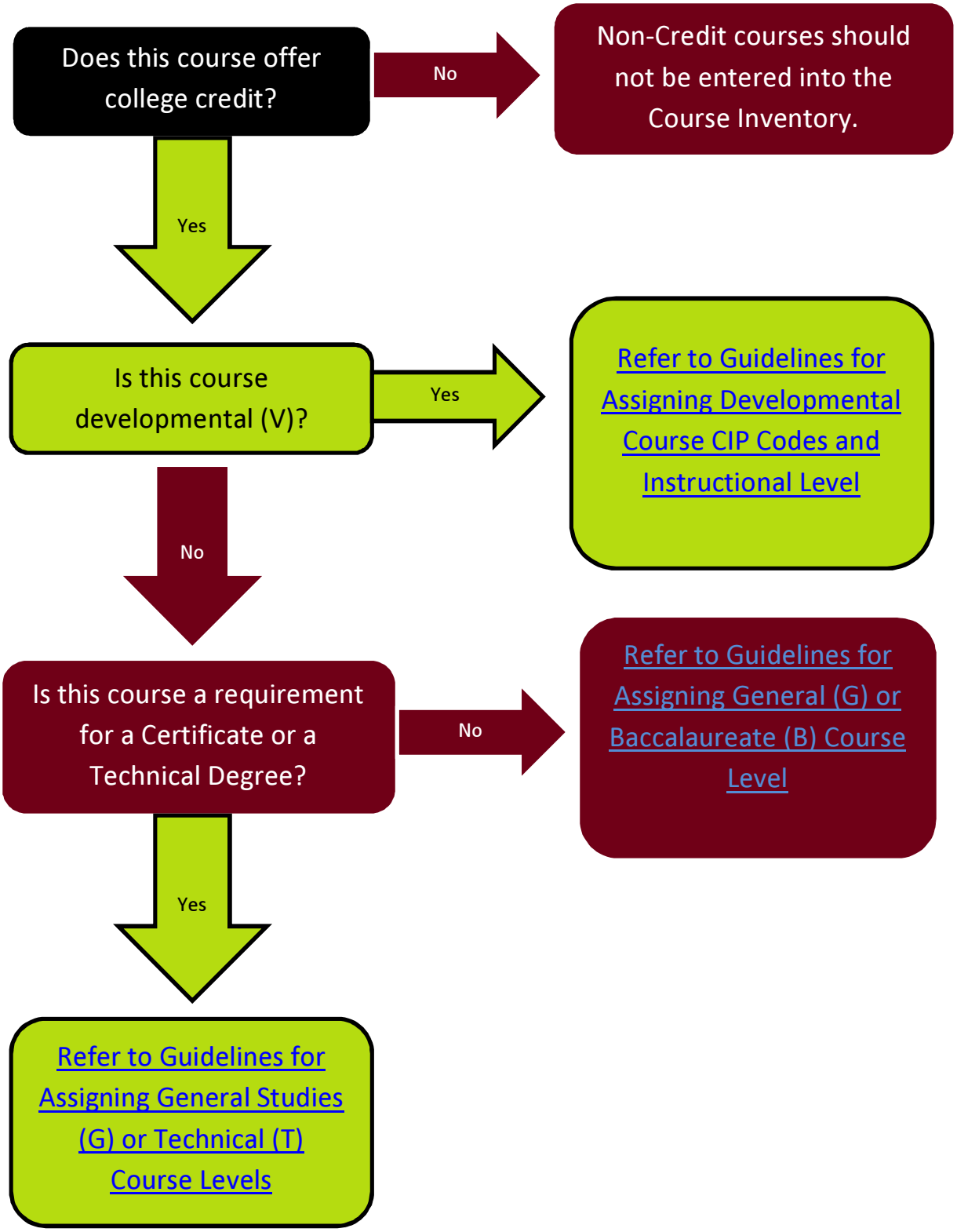
Detailed information about all 1700+ CIP codes can be found on the federal Department of Education’s website (http://nces.ed.gov/ipeds/cipcode).

In the Ohio Board of Regents State Share of Instruction (SSI) funding formulas, CIP codes and course levels are used to assign course FTE (full-time equivalent) enrollment to “funding models.” A funding model contains courses with similar subject matter, instructional level, and cost structure.

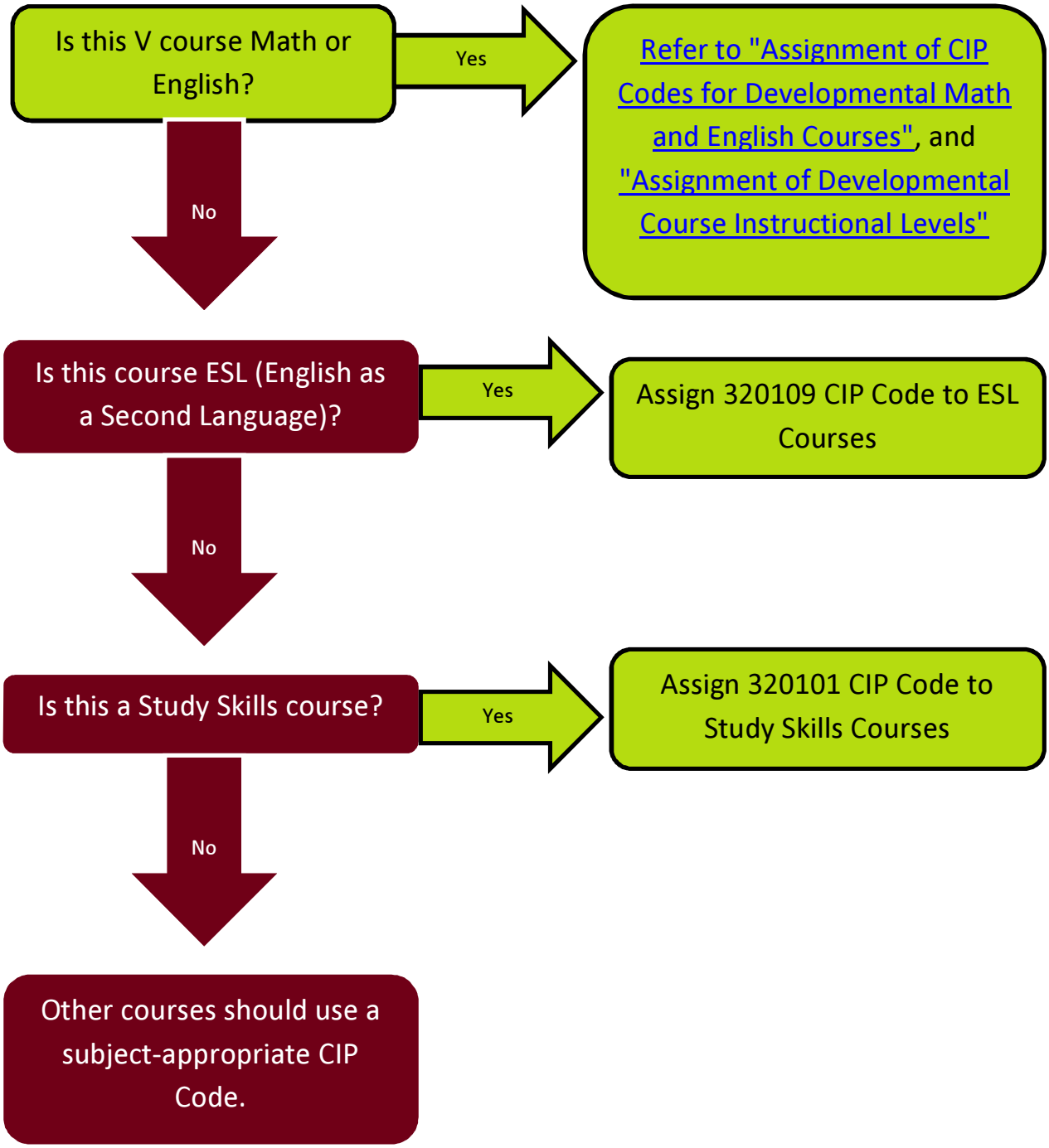
- In addition to funding purposes, CIP codes are used to identify fields of study in enrollment and degree production reports. The detailed six-digit CIP codes are typically aggregated into broad categories (10 Discipline Areas) or more detailed categories (140 Subject Fields) for reporting purposes. The following table shows the mapping of six-digit CIP codes into the Discipline Areas and Subject Fields for reporting purposes: Discipline Area, Subject Field, Subject Code, Subject Title, and STEMM Designation mapping file (Reporting purposes ONLY) /max .

It should be noted that the Regents have two mappings of CIP codes into Discipline Areas and Subject fields. One mapping is used to assign course FTE to funding models in the State Share of Instruction formulas. This was the original mapping, which has only 70 Subject Fields. The new, expanded, set of Discipline Areas and Subject Fields is considerably more detailed than the original and is much more useful for reporting and public information purposes. At a later date, consideration may be given to using the new set of Subject Fields in the construction of the funding models.

Determining Course Level



Developmental Education Courses



CIP Codes for Developmental (V level) Courses

Subject	Description	*CIP Code*
Developmental English	Below college level courses that cover topics in reading and writing to prepare students for college-level English and composition courses.	320108
Developmental Reading	Below college level courses that cover topics in reading and reading comprehension.	231499
Developmental Writing	Below college level courses that cover topics in writing skills.	231301
Developmental Math – Computational Skills/Geometry/Algebra	Below college level courses in math that cover topics in arithmetic operations, geometry, and algebra.	320104
Developmental Math – Statistics	Below college level courses that cover topics in statistics and probability.	270501
English as a Second Language	A program that focuses on the development of proficiencies in reading, writing, and speaking a language or languages, other than the mother tongue, that are needed to perform day-to-day tasks. Includes instruction in the use of basic communication skills to develop and transmit ideas and thoughts.	320109
Study Skills	Courses designed to improve study skills, time management, and other topics that aid in the transition to college. Note: Not all Study Skills courses must be classified as Developmental. The designation of Developmental depends on whether or not the course credits can be applied towards degree or certificate requirements.	320101
Other Developmental Courses		As appropriate. For Example: developmental introduction to chemistry might be 400501

Developmental Course Instructional Levels

In a data collection method to be determined in consultation with the HEI Liaisons, the Regents will collect information on developmental course instructional levels for math and English/Reading/Writing courses beginning with the Summer 2012 term.

Math courses will be divided into three groups according to the course content. English, Reading, and Writing courses will be divided into two groups according to whether or not completion of the course in question qualifies a student to progress to the first level of college level English or Composition courses.

Math Course Levels

Level Code	Course Description
01	Highest level = Intermediate Algebra, just below College Algebra. Topics include equations and inequalities in one variable and two variables, including graphing and different forms of radicals, quadratic functions, exponential functions, and logarithmic functions.
02	Middle level = Elementary Algebra and Geometry; Statistics. Algebra with basic geometry and basic right angle trigonometry. Topics include linear equations, applications, factoring algebraic fractions, exponents, graphing, basic geometry, and basic right triangle trigonometry.
03	Lowest level = Computational skills/pre-algebra; Topics include whole numbers, arithmetic operations, fractions, decimals, ratios and proportions, percents, measurement and measurement conversions, signed numbers, and linear equations.

English/Reading/Writing

Level Code	Course Description
01	Courses which, if completed successfully, qualify a student for enrollment in regular college level composition or English courses (as defined by the college level course's inclusion in the institution's Transfer Module).
02	Developmental English, Reading, or Writing courses below level "01."

Guidance on General vs. Technical Levels

Only courses that are required for certificates (less than one year or one-to-two year) or associate technical degree programs are eligible to be classified as Technical.

Courses required for these technical programs fall into three categories:

1. Courses that fit the definition of General level courses found on page 3. Examples of such courses might include English Composition courses and first college level Algebra courses.
2. Non-general courses that provide foundational scientific, mathematical, or analytical skills. These courses may be classified as Baccalaureate, especially if they are also required for students in non-technical programs. An example of this might be an advanced Chemistry course that is taken by both technology program majors and chemistry majors.
3. Non-general courses in the core subject area of the technical program of study. These courses should be classified as Technical.

Definition of Technical Programs

According to Rule 3333.1.04 – Standards for Approval of Associate Degree Programs -- defines the Associate of Applied Business and the Associate of Applied Science as, "*degrees which are awarded for the successful completion of a planned program of instruction in a technology, the primary objective of which is the preparation of individuals for paid and unpaid employment in that technology, or for additional preparation for a career requiring other than a Baccalaureate or advanced degree."*

The rule also states that degree programs offered as technical education include: Engineering and Industrial, Business, Agricultural and Natural Resource, Health and Public Service Technologies.

Following these guidelines, technical associate degree programs must be designated with the following Degree Name Codes in the HEI Academic Program (AP) inventory files submitted each term to the Regents by institutions.

AAS	ASSOCIATE OF APPLIED SCIENCE
AAB	ASSOCIATE OF APPLIED BUSINESS
ASE	ASSOCIATE OF ENGINEERING
AIT	ASSOCIATE OF SCIENCE IN INFORMATION TECHNOLOGY
ATS	ASSOCIATE OF TECHNICAL STUDIES

Guidance on Baccalaureate vs. General Levels

Basic Principles

If the course in question is not Developmental (V) or Technical (T), a distinction between General (G) and Baccalaureate (B) must be made.

In broad terms, General level (G) courses are freshman / sophomore level courses that are primarily designed to satisfy general education requirements. These courses do not have prerequisites and do not contribute toward upper-level course requirements for major programs. They may include introductory and survey courses in the arts and humanities, social sciences, math and sciences, and business.

A list of specific types of introductory courses by subject that are always coded as General can be found on page 14. Baccalaureate level (B) courses have prerequisites or require specialized knowledge (such as in mathematics) and contribute toward the upper-level requirements for majors (beyond the introductory course sequences that may be used for major requirements and general education requirements for non-majors). An exception to this rule may occur for first-year science courses that are required for science, engineering, and health majors.

A list of specific types of courses by subject that are always coded at the Baccalaureate level can be found on page 15. Generally speaking, field-specific courses that satisfy professional program major requirements are Baccalaureate level.

There is subject-specific guidance on the Baccalaureate versus General distinction for courses in the biological and physical sciences, performing arts, mathematics, and business on pages 16 through 17.

Subject-Specific Guidance on General vs. Baccalaureate Designation

A. Types of courses that are always General
B. Types of courses that are always Baccalaureate
C. Guidance for Science courses
D. Guidance for Performance Art courses
E. Guidance for Mathematics courses
F. Guidance for Business courses

A. Introductory courses in the following fields* are always General

A. Anthropology
B. Banking, Corporate, Finance, and Securities Law.
C. Communications
D. Economics
E. English
F. Geography
G. History
H. Journalism
I. Foreign Languages (Including the Classics and General, East Asian Languages, Germanic, Middle/Near Eastern, Romance, Slavic/Baltic/Albanian, and Other Foreign Language Subject Fields.)
J. Personal Enrichment (Includes Sports and Exercise, Leisure and Recreational Activities, and Dancing CIP codes)
K. Philosophy and Religion
L. Political Science
M. Psychology
N. Sociology

B. Courses in these “Professional Practice” fields are almost always Baccalaureate

Courses in these fields that are included in the requirements for completion of bachelor’s degree programs in these majors are Baccalaureate.

1. Social Work
2. Protective Services
3. Public Administration and Services
4. Engineering
5. Computer Science
6. Housing and Human Environments, General
7. Veterinary Medicine
8. Audiology and Speech-Language Pathology
9. Architecture
10. Agricultural Science
11. Agriculture Business, Operations, and Management
12. Nursing
13. Pharmacy
14. Education
15. Other Health fields, including but not limited to Dietetics and Nutrition, Health Administration and Management, Mental Health Services and Therapy, and Physical Therapy.

C. Guidance for Science Courses

Science courses with prerequisites beyond the first course (or courses) in the introductory course sequence are Baccalaureate level. Introductory science courses (lecture and lab components) can be coded as General or Baccalaureate, depending on whether they are designed for students majoring in science, technical, or health fields or are general survey courses for non-majors. Courses designed for those majors are Baccalaureate, while survey courses for non-majors are General.

For courses with lecture and lab components, the same course level should be assigned to both the lecture and the lab.

D. Guidance for Art and Performance Art Courses

Art and Performance Art courses can be General or Baccalaureate, depending on course characteristics and differences in the students that the courses are designed to serve.

Courses in Art, Dance, Drama, and Music that satisfy program requirements in those major fields are Baccalaureate. Further, courses in those fields that require some prior background or training in the fields, and those that are of a performance or production nature are Baccalaureate.

Courses designed for non-majors, such as “Appreciation” courses, are General. Activity-based Dance courses that might be used to satisfy Physical Education requirements are General.

E. Guidance for Mathematics and Statistics Courses

Math

Algebra, Geometry, Trigonometry, and Pre-Calculus courses that may be taken as a sequence leading to introductory Calculus courses are General.

Calculus, Differential Equations, and Linear Algebra courses are Baccalaureate.

Any math courses with Calculus as a prerequisite are Baccalaureate.

Statistics

Basic Statistics courses with math prerequisites below Calculus are General.

Statistics courses that have math prerequisites of Calculus and higher are Baccalaureate.

F. Guidance for Business Courses

Courses in Business that are designed to satisfy Business program requirements in business programs at the bachelor's degree level, not just the specific major requirements, are Baccalaureate.

If the Business courses in question are part of the requirements for technical programs, see the instructions for the General vs. Technical designation on page 11.

Examples of B-level courses would be the Financial Accounting "101 and 102" sequence that is required of accounting majors and is typically part of the business core requirements for other majors such as Finance and Marketing.

Examples of G-level courses would be non-sequenced, terminal courses that are designed to provide an introduction to a subject area. Such courses are not prerequisites for more advanced coursework.

Economics Principles courses (Microeconomics and Macroeconomics), even if they are part of business major requirements, are General (see page 14).