
SHEEO Higher Education Policy Conference
Denver        August 8, 2023

Dr. Julie Hartley, Associate Commissioner, Academic Affairs
Cynthia Grua, Assistant Commissioner, Academic Affairs
Legislative Intent

[Provide] an eligible student the opportunity to enroll in a course that allows the eligible student to earn credit concurrently: toward high school graduation; and at an institution of higher education.

— *Utah Code 53E-10-302*
FY21-22 Snapshot

• 48,974 students/202 HSs/126,686 enrollments
• 367,233 earned semester credits
• 76% CE courses fulfill GenEd requirements
• Utah students and families saved an estimated $77.7M
Students/Eligibility

- Counted in the Average Daily Membership (ADM) of a public HS in grade 9, 10, 11, or 12;
- GPA, ACT score, or a placement score which predicts success (generally considered to be a “B” average or ACT score of 22 or higher);
- completion of prerequisites if any;
- appropriate placement score for courses such as MATH and WRTG;
- supportive letters of recommendation (optional);
- approval of high school and college officials; and
- have on file a completed USBE plan for college and career readiness (CCR).
CE Course Requirements

• introductory level (lower division) with a focus on highly transferrable credit
• may be GenEd, Career & TechEd, or pre-major course
• must assist students in earning post-secondary certificates or degrees
• only college courses that correspond to HS courses typically offered in grades 11 or 12
• are limited to English, mathematics, fine arts, humanities, science, social science, world languages, and career and technical education
Connect CE courses to college programs

USHE resources help HS students further explore college options:

- **CE Master List** – “CEML” (utahce.org) – listing of USHE-USBE course alignments approved for the state CE program
- **CE Advising tools** (utahce.org) – *USHE CE GenEd Pathway* help students pick GenEd courses. *USHE CE Exploratory Tracks* help students decide which QL Math class is best for their future college and career plans.
- **USHE Programs & Majors Guide** (utahmajors.org) – provides links to all certificate and degree programs offered by USHE’s 16 institutions.
- **USHE Transfer Credit Guide** (utahtransferguide.org) – show how credits earned at one USHE institution count at other USHE institutions. *(more on this resource in a sec...)*
CEML Alignment Process

Only courses taken from the CEML for a given academic year shall be reimbursed from state concurrent enrollment funds.

- Institution submits curriculum details to “propose” a new CE course or realign an existing CE course
- Faculty also compare USHE scope of instruction/learning outcomes to USBE
- USBE curriculum specialists evaluates for 80-90% alignment in scope – approve, deny or defer decision
- Annual CEML deadline: November 15
- Next year’s CEML published end of December
CEML Alignment Process/Online Proposals

Module Title: Introduction to Biology

Introduction to Biology for non-science majors. A survey of living diversity from bacteria to plants and animals. Includes physiology, inheritance, evolution and classification. Three hours of lecture per week.

Learning outcomes:

Students will be able to demonstrate an understanding of the patterns and processes of evolution and the resulting unity and diversity of life. Students will be able to describe and understand the major kingdoms of living organisms. Students will be able to describe the basic attributes that are used to define "life". Students will be able to explain how the diversity of life that exists today has arisen through the process of evolution. Students will be able to describe the "atmosphere to ecosystems" organizational system of living organisms. Students will be able to explain the pattern of increasing levels of organization accompanied by increasing levels of control of life and nature. Students will be able to describe how molecular diversity is based on the properties of certain and that the properties of water are life-supporting.
2.1: Students learn about the chemical properties of carbon, oxygen, hydrogen and nitrogen and that they are so abundant in living organisms because they are the most abundant atoms in biological molecules such as carbohydrates, lipids, proteins and nucleic acids. Enzymes and their use in metabolic reactions are discussed.

2.2: Students learn about the parts of the cell and what function they serve. They learn about the Endosymbiotic Theory. They also learn about the role of mitochondria in cellular respiration in both animals and plants and the role of chloroplasts in photosynthesis.

2.3: Cellular respiration and photosynthesis are used to describe complex biochemical pathways in which certain reactions produce products that are used as reactants in other reactions. We also learn why we inhale oxygen and exhale carbon dioxide and how plants take in carbon dioxide and release oxygen during photosynthesis as well as the role of sunlight to supply energy for photosynthesis.

2.4: Students learn about osmosis and toxicity in BIOL 1010 but only do experiments to demonstrate it in BIOL 1015.

2.5: Students learn the major events of mitosis and meiosis and how these types of cell division contribute to the growth and well-being of multicellular organisms.

2.6: Homeostasis is discussed and examples such as the impact of insulin are used, but overall organ system functions are not discussed.

2.7: Homeostasis and that feedback mechanisms maintain stability in organisms is taught in lecture but students do not carry out an investigation. Aught in BIOL 1010.
CE GenEd Navigator: USHE

Concurrent Enrollment General Education Navigator
Academic Year 2021-2024

With Concurrent Enrollment, high school students take college classes to earn both high school and college credit. General education classes are recommended because they're required for graduation and transferability from one college to another.

1. Select one class from each general education category. Look for the institution year high school partners with for CE. NOTE: There are many classes in each breadth category that may be substituted for those listed here. Ask a campus advisor if the class you have “meets an equivalent” in the institution you wish to attend.

2. Speak with an expert about class options. For advice on choosing a class, ask an academic advisor, preferably from the campus you intend to enroll in after high school. An advisor can recommend courses that fit the major goals and ensure the class is part of a core major pathway. Campus advisor contact information is listed on the next page.

General Education Categories

<table>
<thead>
<tr>
<th>General Education Categories</th>
<th>Institutions Offering CE Class</th>
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<tbody>
<tr>
<td>Written Communication</td>
<td>USU</td>
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<tr>
<td>Quantitative Literacy</td>
<td>USU</td>
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<tr>
<td>American Institutions</td>
<td>USU</td>
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<tr>
<td>Fine Arts</td>
<td>USU</td>
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<tr>
<td>Humanities</td>
<td>USU</td>
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How do CE courses fulfill high school graduation requirements?

<table>
<thead>
<tr>
<th>HB Graduation Requirement</th>
<th>USHE General Education Pathway CE Options</th>
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<tbody>
<tr>
<td>Language Arts (1-3 credits)</td>
<td>ENGL 1010, ENGL 1010, ENGL 1010</td>
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<tr>
<td>Language Arts (1-3 credits)</td>
<td>HUM 1010, HUM 1010, HUM 1010</td>
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<tr>
<td>Language Arts (12 credits)</td>
<td>MATH 1050, MATH 1050, MATH 1050</td>
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<tr>
<td>Language Arts (12 credits)</td>
<td>MATH 1050, MATH 1050, MATH 1050</td>
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<tr>
<td>Mathematics (3 credits)</td>
<td>MATH 1050, MATH 1050, MATH 1050</td>
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<tr>
<td>Social Studies (3 credits)</td>
<td>HIST 1110, HIST 1110, HIST 1110</td>
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<tr>
<td>Social Studies (3 credits)</td>
<td>HIST 1110, HIST 1110, HIST 1110</td>
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<tr>
<td>Science (1-3 credits)</td>
<td>CHEM 1130, CHEM 1130, CHEM 1130</td>
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<tr>
<td>Science (1-3 credits)</td>
<td>CHEM 1130, CHEM 1130, CHEM 1130</td>
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<tr>
<td>Fine Arts &amp; Visual Arts</td>
<td>ART 1010, ART 1010, ART 1010</td>
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<tr>
<td>Fine Arts &amp; Visual Arts</td>
<td>ART 1010, ART 1010, ART 1010</td>
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<tr>
<td>Performing Arts</td>
<td>DANCE 1010, DANCE 1010, DANCE 1010</td>
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<td>DANCE 1010, DANCE 1010, DANCE 1010</td>
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CE GenEd Navigator: USHE
CE Exploratory Tracks

Concurrent Enrollment Exploratory Tracks
Academic Year 2023-2024

In addition to earning college credit while in high school, Concurrent Enrollment (CE) helps you explore what you might study in college and connect college studies to future careers. To select CE classes to maximize your exploration:

1. **Discover your career interest personality.** Your “career interest personality” may make different careers more attractive and satisfying to you. For example, if you have an analytic personality, a career in graphic design will not be as appealing as one in accounting. If you have a social personality, a career in Nursing will reward your compassion and caring.

2. **Discover the things you like to work with.** All occupations involve some work with data, ideas, people, and things. Different personality types are attracted to computers that focus on different combinations of these tasks. When you register to take the ACT, answer all the interest questions. If you do, your ACT results will include information on the combinations of data, ideas, people, or things that you may prefer.

3. **Explore college subjects within an Exploratory Track.** In college, you pick a subject you want to study. Subjects can be anything from art to zoology, from business to engineering. Courses in the subject will provide an initial education with requirements in math, English, sciences, social science, the arts, and humanities. Give yourself an opportunity to explore your options. Each subject includes classes, often mandatory, that provides an introduction to a career of interest and may include general education requirements.

4. **Select a college math class that fits your college and career track.** Most colleges and all degree programs require students to complete a Quantitative Literacy (QL) class. You are encouraged to complete the QL during your senior year of high school. Different QL classes provide the math foundation for different pathways.

**Math/Statistics 1030 – Intro to Quantitative Reasoning**
An appropriate math class for students interested in the social sciences, humanities, or business. This is a good first course in critical thinking and problem-solving. Recommended for students not seeking a degree in the arts, humanities, business, or social sciences. This course is offered in the Fall Semester.

**Math/Statistics 1040 – Intro to Statistics**
Recommended for students interested in programs requiring statistical literacy, including health science, behavioral and social sciences, and business. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1050 – Math for Business Majors**
Designed for students interested in business or another math-intensive major. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1070 – Math for Science Majors**
Designed for students interested in science, mathematics, or statistics. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1080 – Math for Liberal Arts Majors**
Designed for students interested in liberal arts. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1090 – Math for Education Majors**
Designed for students interested in education. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1100 – Math for Nursing Majors**
Designed for students interested in nursing. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1110 – Math for Computer Science Majors**
Designed for students interested in computer science. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1120 – Math for Engineering Majors**
Designed for students interested in engineering. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1130 – Math for Finance Majors**
Designed for students interested in finance. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1140 – Math for Economics Majors**
Designed for students interested in economics. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1150 – Math for Psychology Majors**
Designed for students interested in psychology. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1160 – Math for Sociology Majors**
Designed for students interested in sociology. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1170 – Math for Anthropology Majors**
Designed for students interested in anthropology. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1180 – Math for Geography Majors**
Designed for students interested in geography. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1190 – Math for History Majors**
Designed for students interested in history. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1200 – Math for English Majors**
Designed for students interested in English. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1210 – Math for Philosophy Majors**
Designed for students interested in philosophy. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1220 – Math for Political Science Majors**
Designed for students interested in political science. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1230 – Math for Religious Studies Majors**
Designed for students interested in religious studies. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1240 – Math for Theater Majors**
Designed for students interested in theater. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1250 – Math for Dance Majors**
Designed for students interested in dance. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1260 – Math for Music Majors**
Designed for students interested in music. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1270 – Math for Visual Arts Majors**
Designed for students interested in visual arts. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1280 – Math for Communication Majors**
Designed for students interested in communication. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1290 – Math for Business Analytics Majors**
Designed for students interested in business analytics. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1300 – Math for Accounting Majors**
Designed for students interested in accounting. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1310 – Math for Economics Analytics Majors**
Designed for students interested in economics analytics. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1320 – Math for Finance Analytics Majors**
Designed for students interested in finance analytics. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1330 – Math for Data Science Majors**
Designed for students interested in data science. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1340 – Math for Information Technology Majors**
Designed for students interested in information technology. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1350 – Math for Cybersecurity Majors**
Designed for students interested in cybersecurity. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1360 – Math for Artificial Intelligence Majors**
Designed for students interested in artificial intelligence. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1370 – Math for Robotics Majors**
Designed for students interested in robotics. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1380 – Math for Game Development Majors**
Designed for students interested in game development. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.

**Math/Statistics 1390 – Math for Computer Programming Majors**
Designed for students interested in computer programming. This course is offered in the Fall Semester, Spring Semester, and Summer Sessions.
CE Students Transfer CE credits

- 2/3 of CE students graduate HS, then attend a different college or university then the one where they earned CE credit.
  - 75% of CE earned credit is GenEd required for all 2- and 4-year degrees.
  - CEML process ensures highly transferrable courses are approved for CE.
  - The USHE advising tools list select GenEd courses:
    - offered by the majority of institutions; and
    - that transfer as equivalent credit at all 8 degree-granting institutions.
Questions & Suggestions

- Advising resources are found at utahce.org
- Email cgrua@ushe.edu for policy, CE Handbook, a delimited copy of the 23-24 CEML, advising docs.