

Providing Science Credit through completion of Career-Technical Education course in the Agricultural and Environmental Systems Career Field

To support the varied opportunities for high school graduation requirements outlined in section 3313.603 of the Ohio Revised Code, the following provides ways in which school districts can offer science credit for Career-Technical Education courses in the Agricultural and Environmental Systems Career Field.

A local school district's Board of Education has the responsibility of determining how credits are earned and awarded. As to whether such credit may count towards an Ohio graduation requirement, Ohio Revised Code provides additional guidance.

Ohio Revised Code Section 3313.603 outlines the expectations for high school graduation for students entering ninth grade for the first time on or after July 1, 2010. Students must earn three units of science that includes inquiry-based laboratory experiences that engage students in asking valid scientific questions and gathering and analyzing information. The units can be attained by any of the following, or their equivalent:

ORC.3313.603(C)(5) Science, three units with inquiry-based laboratory experience that engages students in asking valid scientific questions and gathering and analyzing information, which shall include the following, or their equivalent:

(a) Physical sciences, one unit;

(b) Life sciences, one unit;

(c) Advanced study in one or more of the following sciences, one unit:

(i) Chemistry, physics, or other physical science;

(ii) Advanced biology or other life science;

(iii) Astronomy, physical geology, or other earth or space science;

(iv) Computer science.

No student shall substitute a computer science course for a life sciences or biology course under division (C)(5) of this section.

ORC.3313.603(C)(8) The requirements for graduation prescribed in division (C) of this section are the standard expectation for all students entering ninth grade for the first time at a public or chartered nonpublic high school on or after July 1, 2010. A student may satisfy this expectation through a variety of methods, including, but not limited to, integrated, applied, career-technical, and traditional coursework.

When properly designed and implemented, career-technical education courses in the Agricultural and Environmental Systems Career Field have a strong science component that embody the life and physical sciences. As such, many school districts grant science credit through enrollment in career-technical education courses based on integrated, applied, career-technical coursework as well as through their understanding of the "or their equivalent" portion of the Ohio Revised Code.

Additionally,

ORC.3313.603(I) A school district or chartered nonpublic school may integrate academic content in a subject area for which the state board has adopted standards under section 3301.079 of the Revised Code into a course in a different subject area, including a career-technical education course, in accordance with guidance for integrated coursework developed by the department. Upon successful completion of an

integrated course, a student may receive credit for both subject areas that were integrated into the course. Units earned for subject area content delivered through integrated academic and career-technical instruction are eligible to meet the graduation requirements of division (B) or (C) of this section.

For purposes of meeting graduation requirements, if an end-of-course examination has been prescribed under section 3301.0712 of the Revised Code for the subject area delivered through integrated instruction, the school district or school may administer the related subject area examinations upon the student's completion of the integrated course.

Nothing in division (I) of this section shall be construed to excuse any school district, chartered nonpublic school, or student from any requirement in the Revised Code related to curriculum, assessments, or the awarding of a high school diploma.

This method of organizing instruction allows school districts to customize educational programs to meet student needs and learning styles. At the same time, we must know our instructional designs will prepare students for success. It is highly recommended that (1) the agricultural education instructor work cooperatively with the school's science department in planning and delivery, (2) that the program course of study illustrate the aligned science and academic content standards, (3) that the program clearly addresses the requirement for inquiry-based laboratory experiences and (4) that the teacher participate in professional development that strengthens and refines their ability to become exemplary in their field. For additional information please visit the Ohio Department of Education [Integrated Coursework and Awarding Simultaneous](#) Credit page.