## Requirement

The program of study shall integrate academic and technical instruction through the efforts of technical and academic teachers who share responsibility for the development of the knowledge and skills of their students. [603 CMR 4.03(4)](http://www.doe.mass.edu/lawsregs/603cmr4.html?section=03)

## Documentation

Submit evidence of the integration of academic and technical instruction.

While common planning time has been an effective strategy for integration, many have found that tight schedules make that challenging, if not impossible. Integration does not require common planning time, but it does require collaboration. Collaboration may involve the curriculum coordinator, CTE director, CTE cluster chairs, academic teachers, and technical teachers. The school or district may take stock of currently existing integration activities and/or develop new integration models.

**Examples of** **Integrated Academic and Technical Instruction activities:**

* Some districts have utilized Professional Development days to provide opportunities for academic and technical teachers to identify potential areas of integration.
* Other districts have used results of MCAS exams as a catalyst for enhancing integration. For example, when technical teachers learn of particular areas of struggle in mathematics, they are able, in collaboration with academic teachers, to emphasize real-life projects that include using those mathematical concepts and skills to reinforce the learning taking place in the academic classroom.
* Academic teachers have also reached out to technical teachers to learn about relevant examples from the vocational program that they can use in their instruction.
* Some districts have held mini-exploratory sessions in technical areas as a Professional Development activity for academic teachers to increase their understanding of the content taught in each technical area. Those who have done this have spoken about how effective it has been in breaking down barriers between academic and technical teachers and in fostering integration.
* One district that has a Business teacher teaching the standards of Strand 4 and 5 to all technical students also has the technical teacher accompany their students to the class. The technical teacher is able to add career specific context to the lessons, providing examples that enhance the overall curriculum. The lessons become more powerful and relevant for the students and the Business teacher and the Technical teachers learn from each other.
* Academic lesson and unit plans that reference VTE Frameworks and VTE lesson and unit plans that reference academic Frameworks constitute evidence of integration of academic and technical education.

Note that ***embedded academics***\* may be, but are not always, examples of integrated academic and technical instruction activities.

Technical teachers can embed academic content without collaborating with an academic teacher. Technical teachers can reach out to academic teachers in order to embed additional academic content\* into their technical program curriculum. Working with an academic teacher to embed academic content addresses the requirement to *integrate academic and technical instruction through the efforts of technical and academic teachers who share responsibility for the development of the knowledge and skills of their students.* Lesson Plans are a one good way to document integration, through identification of specific academic and technical standards being taught in the lesson.

**\*Embedded Academics:** All chapter 74 vocational programs contain embedded academics. For examples of embedded academics, see Strand 3 of any Vocational Technical Education (VTE) Framework. The purpose of Strand 3 is to identify areas where academic content as outlined in various Massachusetts Curriculum Frameworks intersects with knowledge and skills necessary to perform technical skills. This crosswalk between the technical standards and relevant standards in Massachusetts Curriculum Frameworks supports effective integration of academic and technical content. The crosswalk also includes performance examples which illustrate integrated academic and technical content.