

Massachusetts is in the process of crafting specific language that will be used to determine “college and career readiness (CCR) as it relates to science and engineering.” This language would then be reviewed by the Board of Elementary and Secondary Education and the Board of Higher Education for approval to be added to Massachusetts’ approved definition of college and career readiness, along with language for ELA/Literacy and Mathematics. It would be used to inform our PreK-12 science and technology/engineering standards and pathways for middle and high school students.

Stated below is draft CCR language for science and technology/engineering that considers such sources as the Board of Education’s Advisory Councils for Math & Science and for Technology/Engineering, Next Generation of Science Standards, David Conley, College Board, and ACT. **We ask that you review it and consider whether it resonates and conveys CCR for science and engineering.**

Please keep in mind that a definition of CCR is not about defining the needs of students entering STEM fields; defining CCR is aimed at identifying what *all* students need to be successful in post-secondary opportunities. “Being College and Career Ready means that an individual has the knowledge, skills and experiences necessary for success in postsecondary education and economically viable career pathways in a 21st century economy” (ESE, 2013). Students planning to pursue STEM fields will likely need to meet additional, or more specific, expectations to succeed in those endeavors.

We would like diverse reactions and input to the draft language below. **All responses to this initial language are due to mathsciencetech@doe.mass.edu by Monday, June 24.**

DRAFT CCR LANGUAGE FOR SCIENCE AND ENGINEERING

Essential Competencies

Learning

Students who are college and career ready in Science and Technology/Engineering will demonstrate the academic knowledge, skills, and practices necessary to enter into and succeed in entry-level, credit-bearing courses in science, engineering or technical courses; certificate or workplace training programs requiring an equivalent level of science; or a comparable entry-level science or technical course at the institution. College and career ready students in Science and Technology/Engineering will be academically prepared to:

- Effectively apply the science and engineering practices to analytical problem solving across disciplines and in real-world contexts.
- Design and modify scientific investigations and engineering designs in the pursuit of explanations of natural phenomena or solutions to technical problems.
- Effectively communicate, document and defend scientific reasoning and technical decisions.

- Use appropriate mathematics in relevant scientific and technical contexts.