

**281—46.4 (258) Career and technical education service areas.** Districts shall comply with the requirements of rule 281—46.5(258) in offering programming pursuant to this rule. Instructors teaching courses pursuant to this rule shall hold and maintain appropriate board of educational examiners licensure pursuant to Iowa Code chapter 272.

**46.4(1) Grades 7-8.** Pursuant to 281—subrule 12.5(4), districts shall offer career exploration and development in grades 7 and 8. Career exploration and development shall be designed so that students are appropriately prepared to create an individual career and academic plan pursuant to 281—Chapter 49, incorporate foundational career and technical education concepts aligned with the six career and technical education service areas as defined in subrule 46.4(2), and incorporate relevant twenty-first century skills.

**46.4(2) Grades 9-12.** Pursuant to 281—subrule 12.5(5), districts shall offer career and technical education programming in the following service areas:

*a.* Agriculture, food, and natural resources, including the career cluster of agriculture, food, and natural resources.

*b.* Information solutions, including the career clusters of arts, audio and video technology, and communications; and information technology.

*c.* Applied sciences, technology, engineering, and manufacturing, including the career clusters of architecture and construction; manufacturing; science, technology, engineering, and mathematics; and transportation, distribution, and logistics.

*d.* Health sciences, including the career cluster of health science.

*e.* Human services, including the career clusters of education and training; human services; hospitality and tourism; government and public administration; and law, public safety, corrections, and security.

*f.* Business, finance, marketing, and management, including the career clusters of business, management, and administration; finance; and marketing.