In 2012, Iowa Workforce Development released its employment projections through 2020. Below is a chart of its findings.

### Iowa Industry Employment Projections, 2010-2020

<table>
<thead>
<tr>
<th>Major Industry</th>
<th>2010</th>
<th>2020</th>
<th>Growth</th>
<th>%Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Employed &amp; Unpaid Family Workers</td>
<td>141,000</td>
<td>150,980</td>
<td>9,980</td>
<td>7.1%</td>
</tr>
<tr>
<td>Natural Resources &amp; Mining</td>
<td>5,740</td>
<td>7,105</td>
<td>1,365</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td>308,245</td>
<td>346,875</td>
<td>38,630</td>
<td>12.5%</td>
</tr>
<tr>
<td>Construction</td>
<td>61,565</td>
<td>79,290</td>
<td>17,725</td>
<td>28.8%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>200,630</td>
<td>223,080</td>
<td>22,450</td>
<td>11.2%</td>
</tr>
<tr>
<td>Information</td>
<td>28,685</td>
<td>32,280</td>
<td>3,595</td>
<td>12.5%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>101,225</td>
<td>120,170</td>
<td>18,945</td>
<td>18.7%</td>
</tr>
<tr>
<td>Professional &amp; Business Services</td>
<td>121,685</td>
<td>155,125</td>
<td>33,440</td>
<td>27.5%</td>
</tr>
<tr>
<td>Educational Services</td>
<td>169,090</td>
<td>183,905</td>
<td>14,815</td>
<td>8.8%</td>
</tr>
<tr>
<td>Health Care &amp; Social Assistance</td>
<td>197,495</td>
<td>246,910</td>
<td>49,415</td>
<td>25.0%</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality</td>
<td>129,470</td>
<td>144,480</td>
<td>15,010</td>
<td>11.6%</td>
</tr>
<tr>
<td>Other Services</td>
<td>60,555</td>
<td>69,690</td>
<td>9,135</td>
<td>15.1%</td>
</tr>
<tr>
<td>Government</td>
<td>87,335</td>
<td>87,540</td>
<td>205</td>
<td>.2%</td>
</tr>
</tbody>
</table>

Source: Labor Force and Occupational Analysis Bureau, Iowa Workforce Development

According to Iowa Workforce Development’s projections, the three major industries that are expected to account for over 50 percent of the state’s job growth are: Health Care and Social Assistance; Trade, Transportation and Utilities; and Professional and Business Services.

In October 2014, Iowa Workforce Development named the following occupations the top high-demand, high-salary occupations in Region 5, which includes Calhoun, Hamilton, Humboldt, Pocahontas, Webster, and Wright counties: Registered Nurses, Heavy & Tractor-Trailer Truck Drivers, Industrial Machinery Mechanics, Mix/Blend Machine Setters & Operators, Electricians, Carpenters, Licensed Practical/Vocational Nurses, General Maintenance & Repair Workers, First-Line Supervisors of Food Prep/Serving Workers, Team Assemblers, and Medical Secretaries.
Industrial Technology Insights

Two sections of Carpentry students were very busy during 1st Trimester. One of their major projects was the construction of a new building for storage and to house the game announcer for Patterson Field. The students were responsible for designing the structure and researched the cost of materials to create an estimate. Once the students were at Patterson Field, they tore down three old buildings, poured concrete, laid cinder blocks, and constructed the building.

The Building and Trades students are currently laying flooring, installing trim, and touching up paint in a home on 4th Avenue North. At a home on 3rd Avenue North, the students are preparing to pour the flooring foundation.

The Advanced Welding Independent Study students built a Frisbee golf basket and are working on the manufacturing of a CNC Plasma table to used in the welding classroom.

During the first trimester, the FDSH auto shop mounted and balanced 32 tires, performed 12 oil changes, fixed 5 flat tires, repaired windows on 3 cars, installed 3 O2 sensors, and did 3 brake jobs. The students also completed tasks that involved intake gaskets, ball joints, CV shafts, lights, water pumps, and more.

The Fort Dodge Senior High has seen many changes in the area of equipment that allow students to fabricate items much like they would do in today’s manufacturing. Some of the equipment that we have includes:

A CNC Mill/Router that allows students to use Computer Aided Drawings and then machine the part using a variety of tool paths. Classes that use this machine include Intro to CAD, Advanced Modeling/Manufacturing, and Independent Study.

The CNC Lathe, much like the CNC Mill, can take items drawn in CAD but the only difference is that this machine deals primarily with Cylinder Stock. The Advanced Modeling/Manufacturing and Independent Study course students can learn to use this machine.

The 3D Digitizer is a new piece of technology this school year. A student can take any 3D object and have it scanned into our CAD software as a 3D image. It could then be changed/manipulated using our CAD software and then machined out on the mill or remanufactured using the school’s 3D printer. Students can use this in Advanced Modeling/Manufacturing, intro to Engineering, and Independent Study.

3D Printer is also a new piece of technology this school year. Students can design items in CAD and then print prototypes out to see if they assemble together. Students use this technology in Advanced Modeling/Manufacturing, intro to Engineering and Independent Study.

FDSH Robotics Club

The Fort Dodge Senior High robotics club participated in a scrimmage on November 8th in Humboldt.

On Saturday, November 22, the Robotics Club traveled to Ida Grove to compete. The points received at each league match continue throughout the competition season.

The next competitions will be December 9 in Ralston and then January 10 at FDSH.

Between matches, the students continually strive to improve the robot.

FDHS Robotics Club Members
Family & Consumer Sciences Facts

Congratulations to the members of the FDSH Culinary Competition squads on their finishes at the Iowa Central Food and Beverage Expo Culinary Competition which took place November 8th. Squad members include: Riley Helmers, Brock Weber, Talis Harrison, Cal Solverson, Kierra Fraser, Jasey Brightol, Sam Brown, Dray Mosley, Draven Ferry, Alexis Lessmeier and Tristan Earnest. The highest finish for the Dodgers went to the team of Mosley, Ferry, Lessmeier and Earnest, who finished second. Way to Go Dodgers!

ICCC Food Prep students prepared the food for the Rotary Club’s Christmas Social held at the Vincent House. Students prepared 3 appetizers including spicy roasted carrot and potato soup, a honey and orange ricotta flat bread with pomegranate and cranberry chutney as well as three original sauces for shrimp cocktail. The students also made an Andes’ mint chocolate mousse for dessert.

Highlights from 1st Trimester Clothing class were: creating and donating pillowcases to the pediatric wing at the hospital; touring the pediatric wing; and creating pencil pouches, card/cash holders, bags and IPAD holders for Ms. Russell’s Kindergarten class. As 2nd trimester begins, the students are looking at the World of Fashion and what all goes into it. They will soon start repurposing cell phone holders or shoes while studying the elements of design.

The Child Development students just finished studying parenting and the cost of raising an infant during their first year of life. The students were surprised to learn that the average cost of raising an infant is close to $12,000. Students are now studying prenatal development. After Winter Break, the students will start the Baby Think It Over Project.

Early Childhood Education students have just started working in the elementary classrooms. They are learning what makes a quality classroom and an effective teacher.

Clothing students donate pillowcases to Unity Point’s Pediatric Wing

Gave an informative presentation. The students and Officer Webb pointed out that when driving 55 mph, if you look at a text message, you will travel over the length of a football field without looking at the road, SCARY!!!

FCCLA

The Fort Dodge FCCLA has been busy with many different activities. They have sold a couple fundraisers to help pay for different leadership activities and state competition. The students have been working on their STAR events. Some students have helped with texting and driving presentations, World Aids Days and even helping with a can drive. They will present their projects at the District Competition in January and the State Competition at the end of March.

The Fort Dodge FCCLA Chapter just held the District 2 meeting at the Webster County Fairgrounds on December 3rd. Fort Dodge’s Alex Hays finished her term as District Treasurer and Meka Mosley was elected to the Vice President of STAR Events position. The students were able to attend sessions either on Team Building, Texting and Driving or touring the ICCC Culinary Arts Facilities. The Fort Dodge students led the Texting and Driving presentation. They played a game to show the difficulties of texting and driving and Officer Webb

FCCLA District Meeting Attendees
Medical Procedure’s students practice checking blood pressure.

The Medical Procedures class is currently learning how to take vitals and how to be first responders to a scene.

Fort Dodge firefighters came to speak to the Health Care Careers class. They were able to share their experience in Emergency Medical Services. The class just finished learning about EMS services and now looks to learn about nursing.

Basic Athletic Training students are studying sports medicine careers, legal issues in sports medicine, sports nutrition, strength and conditioning, basic evaluation of injuries, basic taping, rehabilitation, and pharmacology. They will be observing sports medicine professionals at a home wrestling meet this winter. This class is one of four courses that meet the requirements for the coaching authorization issued by the Iowa Department of Education.

Medical Terminology students are learning the necessary terminology needed to understand the human body systems, with emphasis on recognizing functional vocabulary related to medical science. Students will learn definitions, abbreviations, pronunciation, and correct spelling of anatomy and physiology, pathology, diseases, conditions, surgical and diagnostic procedures, and pharmacology.

Medical Procedure’s students practice checking blood pressure.

Health Occupations Headlines

In Career and Technical Student Organizations (CTSOs) such as DECA, FCCLA, FFA, FBLA, HOSA, SkillsUSA, TSA and BPA, two million young people work regularly with an adult advisor. A 2007 study by the National Research Center for Career and Technical Education found that CTSO activities positively affect students’ academic engagement; and the stronger the student’s involvement, the better the results.

Health Occupations

Health Occupations Education has many benefits for students. Some of the benefits include:

- Enabling students to make career decisions consistent with their aptitudes, interests, abilities, and academic achievement.
- Providing a program of instruction that prepares students for postsecondary education and for employment.
- Enabling more students to achieve higher levels of academic and career preparation.
- Providing added relevancy and meaning to the students’ educational learning from kindergarten through career.
- Eliminating the need for remediation for students in the health careers program who wish to enter postsecondary education or employment.

Approximately 28% of all new jobs will be created in the healthcare industry through the year 2018, which translates to 3.2 million new healthcare positions nationwide.
The Personal Finance class ended the trimester by competing in the DECA Knowledge Matters Personal Finance Virtual Business Challenge. The simulation was a test of the students’ money management skills. The students were required to manage their time and health, find a job, budget and save money, find an apartment, buy a car, perform shopping trips, open and manage a checking and savings account, open a credit card account, improve their credit score, finish their education, advance at a job, and perform online banking activities. During the competition, the students could see how well their money management skills matched up against those of their classmates and others in the Central Region. Myles Alcazar was the leader in the class and for the state of Iowa in the event.

Accounting Essentials students are being introduced to the accounting equation and T-charts. In Intro to Business, the students spend the trimester working on a business plan. They are currently creating a logo and slogan for their business. Money Management students just wrapped up learning how to take charge of their spending.

Technology Applications has taken on a new look this year.

Work-Based Learning Wares

The two Multi-Occupations Cooperative Education (MOC) classes are currently covering Human Relations in the workplace.

The employers currently supporting our Coop students are Tom Thumb Drive Inn & DQ, Pizza Ranch, Jimmy Johns, Friendship Haven, Menards, Clean All, Pancheros, Walmart, Fareway, Payless ShoeSource, Fort Frenzy, Burger King, Rabiner BINGO, Kohl’s and Subway.

The World of Work class has just begun completing a 3-day job shadow at a local business. Those businesses include: La James, Applebee’s, Taco Tico, and the Hy-Vee Bakery.

Work-based learning activities can help young people to:

- Strengthen academic skills
- Realize the relevance of a rigorous education and understand the need for academic success
- Gain real workplace experience and an understanding of career and educational options
- Become motivated to expand their learning through the hands-on approach of applying knowledge and gaining skills
- Work with positive adult role models
CTE Teachers’ Contact Information
Contact Number: 515-574-5747
Ed Birkey, Industrial Technology, ext. 58062
Sara Black, Health Occupations, ext. 58222
Tracy Hartley, Business & Marketing, ext. 58009
Amy Jaeschke, Business & Marketing, ext. 58075
Andy Kavanaugh, Industrial Technology, ext. 58054
Joel Kennedy, Industrial Technology, ext. 58066
Jessie Palmer, Family & Consumer Sciences, ext. 58311
Julie Schreiber, Family & Consumer Sciences, ext. 58043
Curtis Tessum, Industrial Technology, ext. 58066
Andrew Tew, Industrial Technology, ext. 58056
Bre VanDeer, Health Occupations, ext. 58107

Career & Technical Education Student Organizations Websites
http://www.fdschools.org/en/students/activities__clubs/deca/
SkillsUSA-http://www.fort-dodge.k12.ia.us/en/activities__clubs/skills_usa/

The following link is to the 2014-15 Course Catalog. A description of the courses can be found there. http://www.fort-dodge.k12.ia.us/documents/filelibrary/seniorhigh/counseling_dept/Course_Catalog_1415_60B9E52D46CF0.pdf

CTE Courses Offered

Business & Marketing

Health Occupations
Courses Offered: Health Care Foundations, Exploring Health Careers, Medical Assistant Procedures, ICCC Nurse Aide, ICCC Intro to Health Care, ICCC Medical Terminology, ICCC Body Structure & Function and ICCC Basic Athletic Training.

Family & Consumer Sciences
Courses Offered: Cooking Essentials, Intro to Culinary, ICCC Intro to Hospitality and ICCC Food Prep. Clothing I, Child Development, Child Development II, Early Childhood Education, Adult Living, Housing & Home Interiors, and Teen Living.

Industrial Technology