

Explaining Employment Needs and the Registered Apprenticeship Solution

A powerpoint template to promote the
concept to Iowa businesses and high schools

Meeting Employment Needs in Iowa

The Registered Apprenticeship Model

The Problem

- Over next decade, 3.5 million U.S. manufacturing jobs need to be filled
- Skills gap expected to result in 2 million of those jobs going unfilled
- 82% - skills gap will impact ability to meet customer demand
- 78% - skills gap will impact ability to implement new technology
- 90% - moderate to severe shortage of skilled production employees

Source: “*The skills gap in US manufacturing 2015 and beyond*”, Deloitte and Manufacturing Institute

The Solution

Find better ways to prepare the workforce to fill skilled jobs.

The Partners

- Regional Apprenticeship Sponsor (Career Academy of Pella)
- Vermeer Corporation and other participating employers
- Participating School Districts
- Des Moines Area Community College
- AEA Online
- U.S. Department of Labor
- Iowa Department of Education
- Iowa Workforce Development
- Iowa Governor's STEM Advisory Council

In alignment with the Future Ready Iowa Initiative

The Plan - High School Registered Apprenticeships

Model:

- Identify skills necessary to be successful in specific careers
- Develop a pathway that ensures the development of those skills
 - Academic competencies
 - Job site competencies
- Market the pathway to students

The Picture

- Freshman and sophomore - Core and elective courses
- Junior - Core and apprentice training courses
- Summer - Initial employment/training
- Senior - 1/2 classroom (core and elective) and 1/2 employment
- Post-graduation - One year of employment

Career Academy of Pella Apprenticeship Details

*Indicates college credit course

9th Grade (A minimum of 7 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	Core Math 1 or Math 1 English 9 or English 9 Honors Physical Science American History or <i>American History AP*</i>	Core Math 1 or Math 1 English 9 or English 9 Honors Physical Science American History or <i>American History AP*</i>
Required Electives	PE	
Required Electives for Apprenticeships		
Suggested Electives	Exploring Industrial Technology Spanish 1 Robotics 1	Fundamentals of Construction Spanish 1

10th Grade (A minimum of 7 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	Core Math 2 or Math 2 English 10 or English 10 Honors Chemistry World Geography or <i>Human Geography AP*</i>	Core Math 2 or Math 2 English 10 or English 10 Honors Chemistry World Geography or <i>Human Geography AP*</i>
Required Electives	PE	
Required Electives for Apprenticeships	Metal Design & Marketing	Health/CPR
Suggested Electives	Spanish 2 Robotics 2	Spanish 2 Fundamentals of Welding

11th Grade (A minimum of 6 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	Core Math 3 or Math 3 English 11 or <i>College American Literature to 1865*</i> Biology World History or <i>Western Civilizations 1*</i>	Core Math 3 or Math 3 English 11 or <i>College American Literature since 1865*</i> Biology World History or <i>Western Civilizations 2*</i>
Required Electives	PE	
Required Electives for Apprenticeships	<i>Welding 1* - (2 High School Credits)</i>	<i>Welding 2* - (2 High School Credits)</i> <i>Care of/Use of Hand/Power Tools*</i>
Suggested Electives	Psychology Introduction to Engineering & Design	<i>Introduction to Psychology*</i> Introduction to Engineering & Design

12th Grade (A minimum of 6 classes required per semester)

	Semester 1	Semester 2
Required Core Academic Skill Courses	<i>Communication Skills*</i>	American Government <i>or</i> American Government AP*
Required Electives	PE	
Required Electives for Apprenticeships		Financial Literacy
Suggested Electives	Business Principles & Ownership <i>Statistics*</i>	<i>Oral Communication*</i>
Workplace Training	<i>Metal Work-Workplace Experience*</i> <i>(3 High School Credits)</i>	<i>Metal Work-Workplace Experience*</i> <i>(3 High School Credits)</i>

Workplace Requirements

	Summer	Semester 1	Semester 2	Post Secondary
Following 11th Grade	Full time employee for approximately 8 weeks of 40 hours per week on the worksite for approximately 320 hours			
DMACC Course and Credits	MFG 818 - 5 Credits			
12th Grade		Part time employee approximately 20 hours per week on the worksite for approximately 360 hours	Part time employee approximately 20 hours per week on the worksite for approximately 360 hours	
DMACC Course and Credits		SDV 221/226 - 6 Credits	SDV 221/225 - 5 Credits	
Post Secondary				Full time employee for approximately one year
DMACC Course and Credits				SDV 212/223 - 3 Credits MFG 510 - 3 Credits WEL 341- 6 Credits WEI 342- 6 Credits

DACC Associate of General Studies Degree

# of Credits	Course
	Welding 1 and Welding 2
6	Welding 1 (Electives) * <i>Welding 1 = 6 DACC Credits (WEL 228 - 1 Credit, WEL 233 - 3 Credits, WEL 244 - 2 Credits)</i>
8	Welding 2 (Electives)* <i>8 DACC Credits (WEL 245 - 2 Credits, WEL 208 - 2 Credits, WEL 236 - 2 Credits, WEL 238 - 2 Credits)</i>
14	Total Welding 1 & 2 Credits
	Completion of Apprenticeship (Electives)
5	MFG 818 - 5 Credits (Summer between junior and senior years)
6	SDV 212/226 - 6 Credits (Fall senior year) SDV 212 - 1 Credit, SDV 225 - 5 Credits
5	SDV 212/225 - 5 Credits (Spring senior year) SDV 212 - 1 Credit, SDV 225 - 4 Credits
18	SDV 212 - 1 Credit, SDV 223 - 2 Credits, MFG 510 - 3 Credits, WEL 341 - 6 Credits, WEL 342 - 6 Credits (Post Graduation)
34	Total On-The-Job Credits

DACC Associate of General Studies Degree

# of Credits	Pella High School Course
1	Power Tools (Electives)
3	Communication Skills (Communications)
3	Intro to Psychology (Social and Behavioral Sciences/Humanities)
4	Statistics or DACC online course (Math/Science)
3	Distributed Requirement (IED, Oral Communication, Elementary Spanish 1)
Minimum 2	2 Elective Credits
Minimum 16	Total DACC Credits through Pella High School
64 Credits	DACC AAS Credits Needed

The Product

- High School Diploma
- National Career Readiness Certification
- American Welding Society Certification
- Apprenticeship Certificate
- Associate in Applied Science Degree (optional)
- Career Readiness / Employment

Program Opportunities

Areas being pursued:

- Welding (2018-19 school year)
- Engineering Assistant (2019-20 school year)
- Certified Nursing Assistant (2019-20 school year)
- Culinary Arts (2019-20 school year)

The Future

Increase...

- available labor force
- opportunities for business to thrive and expand
- opportunities for people to live and work in Iowa
- economic development