



Building a Workforce for a Gigafactory

Nevada Workforce

- Recap of Gigafactory project
- Workplace Readiness Challenges
- What we are doing differently

Capacity

Traditional Delivery

- 2 full time instructors
- 40 students per year (1 year CA)
- 2 classrooms – shared lab

Advanced Manufacturing Certificate of Achievement

rev. 5.10.17

Add	SUBJECT	CLASS NBR	TOPIC
Electrical/Electronic Circuits (4 credits - .5 units each)			
	ELM	110-1	Electrical Safety and Theory
	ELM	110-2	Symbols, Schematics and Diagrams
	ELM	110-3	Laws of Electricity/ Introduction to Series & Parallel Circuits
	ELM	110-4	Series and Parallel Practice
	ELM	110-5	Circuit Protection, Control Switches, and Relays
	ELM	110-6	Combination Circuits
	ELM	110-7	Alternating Current Theory
	ELM	110-8	Troubleshooting Electrical Systems
Automated Production Concepts I (3 credits - .5 units each)			
	MPT	110-1	Production System Overview
	MPT	110-2	Manufacturing Process Management
	MPT	110-3	Automated Manufacturing Overview
	MPT	110-4	Industrial Documentation
	MPT	110-5	Manual/Assembly Manufacturing
	MPT	110-6	Introduction to Industrial Instrumentation and Process Control
Material Handling (2 credits - .5 units each)			
	MPT	135-1	Basic material Handling Equipment
	MPT	135-2	Safe & Effective Equipment Operation

Class Format

- Each class is 0.5 credits. This is called a module.
- For each module, there are 3 steps
 1. Online reading assignments & self-check
 2. Final test
 3. Hands-on lab
- After completing the 3 steps, you can move on to the next module

Capacity

Traditional Delivery

- 2 full time instructors
- 40 students per year (1 year CA)
- 2 classrooms – shared lab

Modularized Delivery

- 2 full time instructors
- 600+ students per semester
- Learning Resource Center and 3 labs

Samples of Employer Designed Programs

Material Handler – approximately 80 hours to complete

Subject	Course	Section	Class Number	Topic	CR
MPT	135M	9501	80990	Basic Material Handling Equipment	0.5
MPT	135M	9502	80991	Safe & Effective Equipment Operation	0.5
MPT	135M	9504	80993	Automated Warehouse Concepts	0.5
MPT	140M	9501	80995	Total Quality Management	0.5
MPT	140M	9503	80997	5S Principles	0.5
MPT	140M	9504	80998	Precision Measurements	0.5
OSH	222			General Industry Safety	1
Total					4.0

Production Operator - approximately 120 hours to complete

Subject	Course	Section	Class Number	Topic	CR
MPT	140M	9502	80996	LEAN Manufacturing Principles	0.5
MPT	140M	9505	80999	Statistical Process Control	0.5
MPT	110M	9501	80976	Production System Overview	0.5
MPT	110M	9502	80977	Manufacturing Process Management	0.5
MPT	110M	9503	80978	Automated Manufacturing Overview	0.5
MPT	110M	9504	80979	Industrial Documentation	0.5
MPT	110M	9505	80980	Manual / Assembly Manufacturing	0.5
MPT	110M	9506	80981	Intro to Industrial Instrumentation & Process Control	0.5
ELM	110M	9501	80939	Electrical Safety and Theory	0.5
ELM	110M	9502	80940	Symbols, Schematics and Diagrams	0.5
ELM	110M	9503	90841	Laws of Electricity/Intro to Series & Parallel Circuits	0.5
ELM	110M	9505	80943	Circuit Protection, Control Switches, & Relays	0.5
Total					6.0

Panasonic Preferred Pathway (P3)

ENERGIZE YOUR CAREER

PANASONIC IS HIRING **NOW** AT THE GIGAFACTORY



Program Evolved

- Tesla launches incumbent worker training program (Gigafactory Gateway)
- State training funds become available
- Other employer endorse program for hiring
- Spring 2017 High School pilot
- Fall 2018 both companies launch apprenticeship programs
- 58 students (FA 16) to 579 students (FA 2018)

Fall 2018

- Panasonic
 - 181 P3 students
 - 380 PENA Apprentices
- Tesla
 - 344 Gigafactory Gateway students (incumbent)
 - 60 Apprentices

Workplace Readiness Issues

- Students who:
 - do not complete coursework
 - do not complete registration requirements
 - complained (lack of positive work ethic)
 - lacked the basic skills to complete the training
 - are shy, intimidated or have no confidence
 - procrastinated (labs too full at end of semester)

Self-paced Program Format Addresses:

- Work ethic
- Time and task management
- Information technology
- Communication
- Embedded math, critical thinking, problem solving
- Teamwork

Changes Made

- Non-instructional staff is needed
- Required students to attend an orientation before signing up
- Worked with employer to develop application/screening process
- Increased communication with employer
- Set performance goals for students
- Changed the format (online, lab, final test)
- Stopped enabling

Measureables for Completions

- Panasonic
 - 25% more likely to get a promotion
 - Average \$2.30 per hour wage increase
- Tesla
 - Program completers significantly higher performance reviews
 - Averaged increase of 19% in wages

Don't Be Afraid to Change

- Phase out P3 – replace with higher level technician training program
- Subcontracts with workforce development agencies (where funds available)
- Increasing lab simulations in content
- Apprenticeship!!

Know When to Say “No”

- SNAP grant
 - Over 200 participants offered program
 - 50 participants signed up
 - 2 completed required paperwork and orientation
 - 1 attended training
- Not pursuing additional State training dollars
- Discontinued off site High School program

Questions

