THE CENTER FOR PROFESSIONAL STUDIES

Designing Engineer

400 Contact Hours Certification with multiple CAD systems

Designing Engineer is focused on the technical professional who will be creating new products for multiple industries. This certificate represents the successful completion of all the key skills required to develop complex products in major industries.

Prerequisite: Minimum of 5 years experience in developing products

Curriculum Leader: Daryl Patrishkoff, PMP, CEO of the Center for Professional Studies
Bachelors and Masters Degrees
30 years in product engineering and management of global operations

Targeted Participants: Executives, Directors, Managers, Supervisors, Product Engineers, CAE Analysts, CAD Designers, Technicians, Sales Professionals

Targeted Industries: Automotive, Transportation, Specialty Vehicles, On-Highway, Off-Highway, Military, Aerospace, Energy, Ecology, Alternative Fuel Products, Medical Device Products, Consumer Products

Targeted Positions: Product Designing Engineers in multiple industries who develop multiple types of products for production

Objective: Well rounded curriculum that addresses specific job skills, tools and techniques that a Product Designing Engineer relies on to develop their specific product. These standards apply to multiple industries, giving the participant a broad skill set to perform multiple tasks in their current position or improve their marketability.

Core Courses:
Competent Technical Communication
Program Management
Dimensional Analysis (GD&T)
Test to Failure (TTF)
Choose (1) set of CAD courses from the following list:
- Catia V5 and Advanced Catia V5
- Pro Engineer and Advanced Pro Engineer
- Unigraphics NX7 and Advanced Unigraphics NX7

Elective Courses (choose 4):
PMP Examination Preparation
Total Quality Management (TQM)
Alternative Energy Technologies Overview
Lean Manufacturing
Lean Six Sigma 1 (2 classes)
Lean Six Sigma 2 (2 classes)
Root Cause Analysis
APQP, FMEA & PPAP
Computer Aided Engineering (CAE)
Digital Signal Processing in Noise and Vibration Testing
Experimental Modal Analysis

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Why employers need certified Designing Engineers

- Companies in all industries employ technical personnel to create new products to be launched into the market in a timely fashion that meet the customer demand

- These products must have robust engineering specifications that meet the functional, quality and governmental requirements for the products' complete product lifecycle

- As the product is being developed; all aspects of the design, engineering specifications, manufacture, assemble, service must be input into the early stages of development

- The Designing Engineer is a single individual who is completely responsible for leading the product development from original concept through development, validation, pilot, production launch and eventually to ramp down and close out

- Technology tools have grown in complexity, contribution and play a key role in combining multiple technical functions into one individual

    - Computer Aided Design (CAD): Catia, Unigraphics, Pro Engineer, etc.
    - Computer Aided Engineering (CAE): Nastran, Patran, Adams, Hypermesh, Mechanica, Virtual Lab, etc.
    - Management: Microsoft Project, Microsoft Excel, etc.

- Management niche tools, techniques and methodologies play a key role in ensuring the engineering specifications meet the customer requirements as the plants and suppliers meet those rigorous specifications

    - Program Management
    - Dimensional Analysis (GD&T)
    - Test to Failure (TTF)
    - Total Quality Management (TQM)
    - Lean Manufacturing
    - Root Cause Analysis
    - Advanced Product Quality Planning (APQP)
    - Design and Process Failure Mode and Effects Analysis (FMEA)
    - Production Part Approval Process (PPAP)

- There have been many attempts to build a common certification for this specific group of technical personnel with no success by academic and industry organizations

- A realistic approach to certifying these personnel is by targeted training in specific tools, techniques and methodologies with hands-on application of the software tools

- A certification must address multiple industries and utilize globally recognized standardized tools, techniques and methodologies

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Value of being a certified Designing Engineer practitioner

- Many new Designing Engineer positions are listed regularly on multiple website used to find positions for employment throughout Michigan and the United States

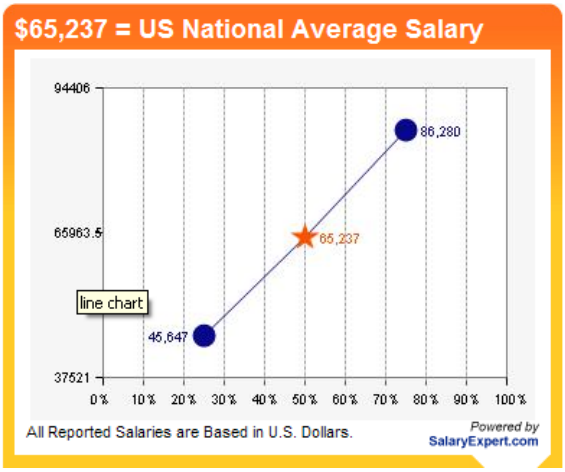
- Recent search of current open positions for Designing Engineer

Job Board	Michigan	National
Michigan Talent Bank	144	N/A
Monster	37	2,125
Career Builder	229	11,294

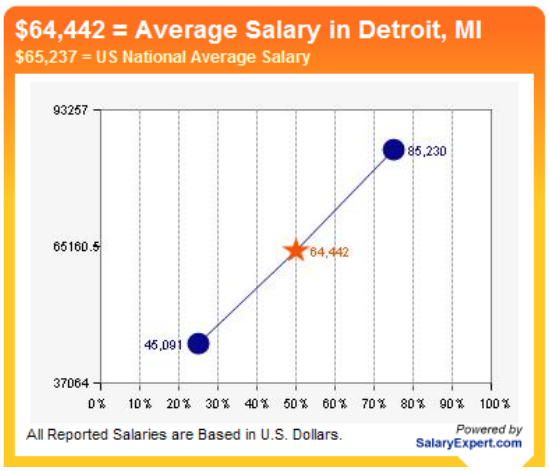
- These multifunctional highly talented personnel are key to efficiencies throughout the product development process and ensure all aspects of the products business case are delivered in the product as it is presented to the market

Career Builder Salary Surveys for the United States and Michigan

Design Engineer



Design Engineer Salary



Why choose The Center for Professional Studies

- CPS has been training professionals as a hands-on State of Michigan licensed school since 1993 in the business environment which produces real project deliverables that improve operations

- The course curriculum is fast paced, not long term semester based, with real life experienced practitioners teaching application of the subject matter for multiple industries

- The Center for Professional Studies has put together such a portfolio of fast paced hands on learning and certification of the specific tools, techniques and methodologies that lead to a complete Designing Engineer certification

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Competitive Comparison of Designing Engineer certificate programs

CPS The Center for Professional Studies
OCC Oakland Community College
MCC Macomb Community College
LTU Lawrence Technology University
OU Oakland University
MMTC Michigan Manufacturing Technology Center

Courses	CPS	OCC	MCC	LTU	OU	MMTC
Technical Communication	Yes	-	-	-	-	-
Program Management	Yes	-	-	Yes	Yes	-
Dimensional Analysis	Yes	Yes	Yes	-	-	-
Test to Failure	Yes	-	-	-	-	-
Pro Engineer	Yes	Yes	-	-	-	-
Advanced Pro Engineer	Yes	-	-	-	-	-
Catia V5	Yes	-	-	-	-	-
Advanced Catia V5	Yes	-	-	-	-	-
Unigraphics NX7	Yes	-	-	-	-	-
Advanced Unigraphics NX7	Yes	-	-	-	-	-
PMP Exam Prep	Yes	-	-	Yes	-	-
Total Quality Management	Yes	-	-	-	-	Yes
Alternative Energy	Yes	-	-	Yes	-	-
Lean Manufacturing	Yes	-	-	Yes	-	Yes
Root Cause Analysis	Yes	-	-	-	-	Yes
APQP, FMEA & PPAP	Yes	-	-	-	-	-
Computer Aided Engineering	Yes	-	-	Yes	Yes	-
Digital Signal Processing	Yes	-	-	-	-	-
Experimental Modal Analysis	Yes	-	-	-	-	-
Additional Features						
Fast paced courses	Yes	-	-	-	-	Yes
Partnering Companies	Yes	-	-	-	-	-
Real Industry Examples	Yes	-	-	-	-	-
Hands-On Industry Projects	Yes	-	-	-	-	-
Face to Face Instruction						
Application Expert Instructors	Yes	-	-	-	-	Yes
Program Contact Hours	400	n/a	n/a	n/a	n/a	n/a
Price per Contact Hour	$62	$28	$72	$58	$66	$66
Provided Technology Tools During and After Classes						
New Laptop with software	Yes	-	-	-	-	-
CAD Software	Yes	-	-	-	-	-
Text Books and Work Books	Yes	-	-	-	-	-

Note: All software is student edition versions for student's personal learning use only
Laptop is given to student after all program requirements are met