



Simulation / Test Engineer

400 Contact Hours with multiple CAE and test systems

A Simulation / Test Engineer are focused on the technical professional who will be creating and refining new products for multiple industries. This certificate represents the successful completion of all the key skills required to analyze and validate complex products in all major global industries.

Prerequisite:	Minimum of 5 years experience in product development
Curriculum Leader:	Kevin Grenier, Senior Technical Specialist at LMS International Bachelors and Masters Degrees 20 years in the Test and Hybrid Simulation engineering profession
Targeted Participants:	Executives, Directors, Managers, Supervisors, Product Engineers, CAE Analysts, Test Engineers, Sales Professionals
Targeted Industries:	Any industry that develops products, manufactures products, assembles products or provides a service to companies or consumers
Targeted Positions:	Technical Managers, Product Design, Test or CAE Engineers, Technicians who develop multiple types of products
Objective:	Present a well rounded curriculum that addresses specific job skills, tools and techniques that an 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 on their current position or improve their marketability for prospective positions.
Core Courses:	Competent Technical Communication Computer Aided Engineering (CAE) Digital Signal Processing in Noise and Vibration Testing Experimental Modal Analysis Rotating Machinery Testing and Source Path Models Simulation for Kinematic and Dynamic Behavior and Fatigue Life Design of Hydraulic and Thermal Fluid Systems
Elective Courses (choose 3):	Numerical Optimization Methods for Correlation and Updating Design of Vehicle Energy Management for Improved Performance Acoustic Simulation Sound Engineering Testing and Analysis Advanced Modal Analysis Test to Failure (TTF) Program Management PMP Examination Preparation Unigraphics NX7 Advanced Unigraphics NX7 Pro Engineer Advanced Pro Engineer



Why employers need certified Simulation / Test Engineers

- Manufacturers need to meet tight development schedules and budgets while competing for customers' interest and loyalty.
- To remain competitive and profitable, they have to create a continuous stream of innovative products, appeal to specific market segments and compete with attractive brand values.
- Engineering departments now more than ever are challenged to tune the functional performance characteristics of their new designs to deliver the values that support their brand identity.
- Manufacturers are pressed to refresh their product models much faster than before. Shortening time to market and reducing costs are simply not good enough anymore.
- These manufacturers have to penetrate new markets with innovative new products that support and cultivate strong brand values.
- This calls for a high performance functional performance development process – with high throughput and high precision. A process that delivers the right products – designed right the first time.
- Engineering departments are challenged to tune the functional performance characteristics of new designs to the values that support their brand identity. To meet these challenges, product development and engineering must take on a new mission.
- The Simulation / Test Engineer needs proficiency in a variety of virtual simulation and testing tools in order to effectively develop and refine areas like system dynamics, structural integrity, sound quality, durability, comfort, safety and power consumption.
- With multi-domain solutions for thermal, hydraulics, electrical and mechanical system behavior, the Simulation / Test Engineer will be equipped to address the engineering challenges associated with intelligent system design.
- The industry evolution towards more virtual prototyping results in fewer prototypes that must be tested in greater detail. As a result, engineering teams must use sophisticated testing systems to maximize the productivity of prototype troubleshooting, refinement and validation.
- 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 these software tools and techniques.
- A certification must address multiple industries and utilize globally recognized standardized tools, techniques and methodologies.



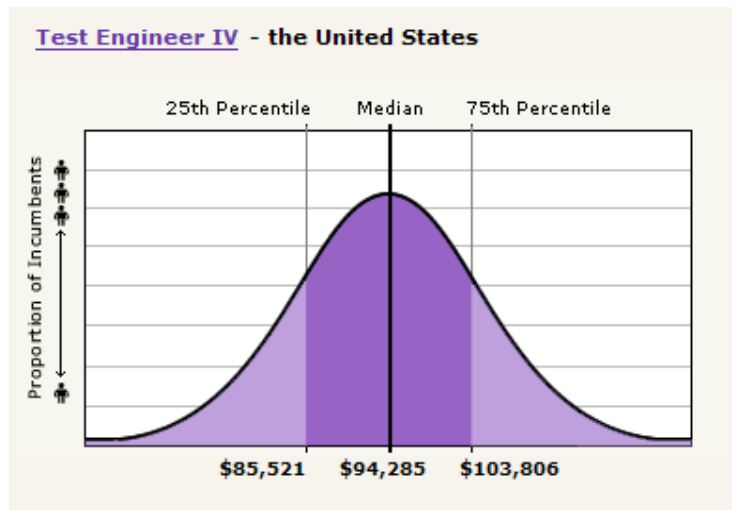
Value of being a certified Simulation / Test Engineer

- Many Simulation / Test Engineer positions are listed regularly on multiple websites used to find positions for employment throughout Michigan and the United States
- Recent search of current open positions for Simulation / Test Engineer

Job Board	Michigan	National
Michigan Talent Bank	199	N/A
Monster	146	5,000+
Career Builder	303	5,000+

- Many job search firms specialize just in recruiting Simulation / Test Engineers

Monster Salary Surveys for the United States



Why choose Center for Professional Studies (CPS) for PMP training

- 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.
- CPS has partnered with LMS, an international software company, which specializes in developing software focused on the specific Simulation / Test Engineer tools and techniques.
- LMS is the world leader in this software solution by being on the cutting edge of this technology and how it is applied throughout the world in multiple industries.
- All courses are taught by industry experts who are currently developing the next generation of software, tools, techniques and methodologies.



Competitive Comparison of Program Management certificate programs

CPS	The Center for Professional Studies
OCC	Oakland Community College
MCC	Macomb Community College
LTU	Lawrence Technology University (online course, no face-to-face instruction)
OU	Oakland University
UM	University of Michigan

Courses	CPS	OCC	MCC	LTU	OU	UM
Technical Communication	Yes	-	-	-	-	-
Computer Aided Engineering	Yes	-	-	Yes	Yes	-
Digital Signal Processing	Yes	-	-	-	-	-
Experimental Modal Analysis	Yes	-	-	-	-	-
Rotating Machinery Testing	Yes	-	-	-	-	-
Simulation for Kinematic	Yes	-	-	-	-	-
Hydraulic and Thermal Fluids	Yes	-	-	-	-	-
Numerical Optimization Methods	Yes	-	-	-	-	-
Design of Vehicle Energy Mange	Yes	-	-	-	-	-
Acoustic Simulation	Yes	-	-	-	-	-
Sound Engineering Test & Analysis	Yes	-	-	-	-	-
Advanced Modal Analysis	Yes	-	-	-	-	-
Test to Failure	Yes	-	-	-	-	-
Program Management	Yes	-	-	Yes	Yes	Yes
PMP Exam Prep	Yes	-	-	Yes	-	-
Pro Engineer	Yes	Yes	-	-	-	-
Advanced Pro Engineer	Yes	-	-	-	-	-
Unigraphics NX7	Yes	Yes	-	-	-	-
Advanced Unigraphics NX7	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	Yes	-	-	-	-	-
LMS 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*