



Wayne
County
Community
College
District

Product Development Prototyping

PAY

The median annual wage for industrial designers was \$68,890 in May 2019.

JOB OUTLOOK

Employment of industrial designers is projected to grow 3 percent from 2018 to 2028, slower than the average for all occupations. Consumer demand for new products and new product styles should sustain the demand for industrial designers. Those individuals that have rapid prototyping and 3D experience should see employment needs matching or exceeding the projected growth.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, April 10, 2020, Industrial Designers, on the Internet at <http://www.bls.gov/ooh/arts-and-design/industrial-designers.htm>

ABOUT THE PROGRAM

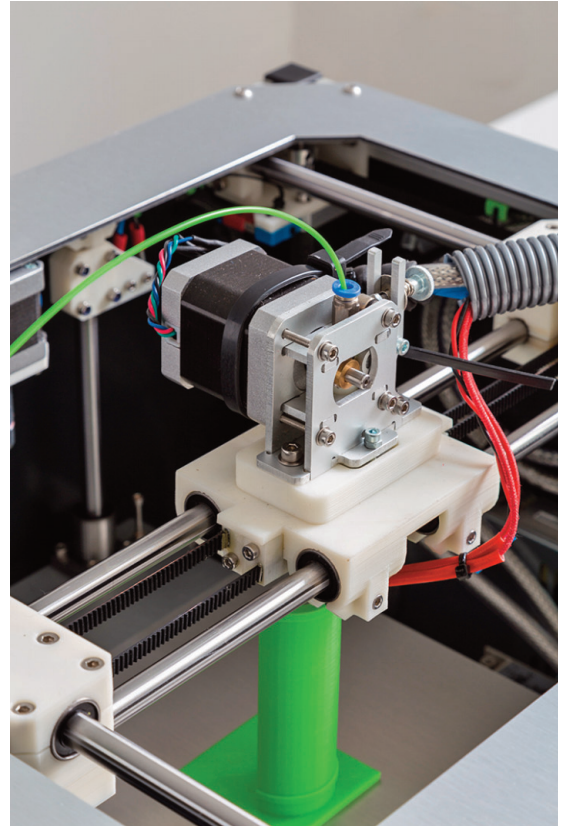
This program introduces students to product development and prototyping opportunities with emphasis on core design concepts, testing analysis, and rapid prototyping through the use of modern graphic software, laser scanning technology, and industry standard rapid prototyping equipment. This program is well suited for students looking for a career in product development, current professionals who want to update their skill level, as well as entrepreneurs interested in working to develop their own ideas and products.

WHAT DO PRODUCT DEVELOPMENT PROTOTYPING PERSONS DO?

Most rapid prototyping jobs are incorporated into different industrial positions but seem to mirror many of the duties of industrial designers. Industrial designers develop the concepts for manufactured products, such as cars, home appliances, and toys. They combine art, business, and engineering to make products that people use every day. Industrial designers focus on the user experience in creating style and function for a particular gadget or appliance.

WHERE DO THEY WORK?

Industrial designers work in offices in a variety of industries. Although industrial designers work primarily in offices, they may travel to testing facilities, design centers, clients' exhibit sites, users' homes or workplaces, and places where the product is manufactured.



**Wayne County Community College District....
Jobs for Today, Jobs for the Future!**

**FOR MORE INFORMATION, CALL 313-496-2600
OR VISIT OUR WEBSITE AT WWW.WCCCD.EDU**

Recommended Sequence of Courses

Product Development Prototyping: Associate of Science Degree (A.S.)

| CR. No. | COURSE TITLE | CREDITS |
|-----------------------|-----------------------------------|-----------|
| SEMESTER 1 | | |
| ART 101 | Drawing I | 3 |
| PDP 100 | Introduction to Rapid Prototyping | 3 |
| PDP 105 | Product Development Process | 3 |
| PDP 110 | Design Concepts I – 2D Graphics | 3 |
| SEMESTER TOTAL | | 12 |

SEMESTER 2

| | | |
|-----------------------|----------------------------------|-----------|
| ART 111 | Design I | 3 |
| PDP 115 | Introduction to 3D Printing | 3 |
| PDP 120 | Introduction to Model Surfacing | 3 |
| PDP 150 | Design Concepts II – 3D Graphics | 3 |
| SEMESTER TOTAL | | 12 |

SEMESTER 3

| | | |
|-----------------------|----------------------|-----------|
| ART 112 | Design II | 3 |
| ENG 119 | English I | 3 |
| MAT 113 | Intermediate Algebra | 3 |
| PS 101 | American Government | 3 |
| SEMESTER TOTAL | | 12 |

SEMESTER 4

| | | |
|-----------------------|--------------------------------|-----------|
| ENG 134 | Technical Communications | 3 |
| PDP 200 | Advanced Rapid Prototyping | 3 |
| PDP 205 | 3D Surface Scanning | 3 |
| PDP 210 | Design Concepts III – Assembly | 3 |
| SEMESTER TOTAL | | 12 |

SEMESTER 5

| | | |
|-----------------------|---------------------------|-----------|
| PDP 225 | Surface – Quality Control | 3 |
| PDP 250 | Reverse Engineering | 3 |
| NS REQ | Natural Science | 3 |
| SS REQ | Social Science | 3 |
| SEMESTER TOTAL | | 12 |

A.S. PROGRAM TOTAL**60**

Note: Program total hours may not include prerequisites.

Introduction to Rapid Prototyping: Short-Term Certificate

| CR. No. | COURSE TITLE | CREDITS |
|-----------------------|-----------------------------------|-----------|
| SEMESTER 1 | | |
| ART 101 | Drawing I | 3 |
| PDP 100 | Introduction to Rapid Prototyping | 3 |
| PDP 105 | Product Development Process | 3 |
| PDP 110 | Design Concepts I – 2D Graphics | 3 |
| SEMESTER TOTAL | | 12 |

SEMESTER 2

| | | |
|-----------------------|----------------------------------|-----------|
| ART 111 | Design I | 3 |
| PDP 115 | Introduction to 3D Printing | 3 |
| PDP 120 | Introduction to Model Surfacing | 3 |
| PDP 150 | Design Concepts II – 3D Graphics | 3 |
| SEMESTER TOTAL | | 12 |

CERTIFICATE TOTAL**24**

Note: Certificate total hours may not include prerequisites.

Advanced Rapid Prototyping: Short-Term Certificate

| CR. No. | COURSE TITLE | CREDITS |
|-----------------------|--------------------------------|-----------|
| SEMESTER 1 | | |
| ENG 134 | Technical Communications | 3 |
| PDP 200 | Advanced Rapid Prototyping | 3 |
| PDP 205 | 3D Surface Scanning | 3 |
| PDP 210 | Design Concepts III – Assembly | 3 |
| SEMESTER TOTAL | | 12 |

SEMESTER 2

| | | |
|-----------------------|---------------------------|----------|
| ART 112 | Design II | 3 |
| PDP 225 | Surface – Quality Control | 3 |
| PDP 250 | Reverse Engineering | 3 |
| SEMESTER TOTAL | | 9 |

CERTIFICATE TOTAL**21**

Note: Certificate total hours may not include prerequisites.