

# Industrial Engineering

**STARTING SALARY: \$58,581**  
**MEDIAN INCOME: \$78,860**



Industrial engineers figure out how to improve everything. They work with people and companies to help them be more efficient. Industrial engineers save employers money by streamlining systems, often making the workplace better for employees too. They improve productivity and quality while saving time and money.

Industrial engineers work on all type of businesses. They see the big picture and focus on what makes a system perform efficiently, safely, and effectively to produce the highest quality. They often work with or are closely associated with manufacturing engineers.

According to the Institute of Industrial Engineers (IIE), “Industrial engineering (IE) is about choices. Other engineering disciplines apply skills to very specific areas. IE gives you the opportunity to work in a variety of businesses. The most distinctive aspect of industrial engineering is the flexibility that it offers. Whether it’s shortening a roller coaster line, streamlining an operating room, distributing products worldwide, or manufacturing superior automobiles, all share the common goal of saving companies money and increasing efficiencies.”

Industrial engineers work in many different types of organizations. They apply their special skills in hospitals, banks, manufacturing plants, insurance companies, or government agencies. Major employers of industrial engineers include corporations such as Microsoft, Boeing, Disney, Intel, and Nike. And the list goes on.

As an industrial engineer, you may look for new ways to do things better. You may try to automate agencies so that their customers don’t have to wait in long lines. You may find ways to make sure employees always have what they need to complete their job. You may survey locations to find the best place to build a major facility.

The Institute of Industrial Engineers (IIE) has a website at [www.iienet.org](http://www.iienet.org) that is full of great information for students. The Institute recognizes outstanding students, offers several scholarships, and has annual competitions.

## Job Outlook

Employment of industrial engineers is projected to grow 5 percent from 2012 to 2022, slower than the average for all occupations. This occupation is versatile both in the kind of work it does and in the industries in which its expertise can be put to use.

## Industries with the highest levels of employment in this occupation:

1. Aerospace product and parts manufacturing
2. Machinery manufacturing
3. Architectural, engineering, and related services
4. Motor vehicle parts manufacturing
5. Management of companies and enterprises

## Top paying industries for this occupation:

1. Aerospace product and parts manufacturing
2. Management of companies and enterprises
3. Architectural, engineering, and related services
4. Machinery manufacturing
5. Motor vehicle parts manufacturing

Source: US Bureau of Labor Statistics

# **Glossary of Terms**

Analyze - to study (something) closely and carefully : to learn the nature and relationship of the parts of (something) by a close and careful examination

Automate – to run or operate (something, such as a factory or system) by using machines, computers, etc., instead of people to do the work

Communications – the ways of sending information to people by using technology

Efficient – capable of producing desired results without wasting materials, time, or energy

Fabricate - to make or build (something)

Microprocessor - the device in a computer that manages information and controls what the computer does

Productivity – the rate at which goods are produced or work is completed

Streamline - to make (something) simpler, more effective, or more productive

System – a group of related parts that move or work together

## ABET Accredited Programs in Industrial Engineering

School Name	Location	Website	Program and Degree Name
Arizona State University	Tempe, AZ, US	www.asu.edu	Industrial Engineering, BSE
Auburn University	Auburn, AL, US	www.auburn.edu	Industrial and Systems Engineering, BISE
Bradley University	Peoria, IL, US	www.bradley.edu	Industrial Engineering, BS
California Polytechnic State University, San Luis Obispo	San Luis Obispo, CA, US	www.calpoly.edu	Industrial Engineering, BS
California State Polytechnic University, Pomona	Pomona, CA, US	www.csupomona.edu	Industrial Engineering, BS
California State University, East Bay	Hayward, CA, US	www.csueastbay.edu	Industrial Engineering, BS
Clemson University	Clemson, SC, US	www.clemson.edu	Industrial Engineering, BS
Colorado State University - Pueblo	Pueblo, CO, US	www.colostate-pueblo.edu	Industrial Engineering, BS
Florida A&M University	Tallahassee, FL, US	www.famu.edu	Industrial Engineering, BS
Florida State University	Tallahassee, FL, US	www.fsu.edu	Industrial Engineering, BS
Georgia Institute of Technology	Atlanta, GA, US	www.gatech.edu	Industrial Engineering, BS
Inter American University of Puerto Rico, Bayamon Campus	Bayamon, PR, US	bc.inter.edu	Industrial Engineering, B.S.
Iowa State University	Ames, IA, US	www.iastate.edu	Industrial Engineering, BS
Kansas State University	Manhattan, KS, US	www.k-state.edu	Industrial Engineering, BS
Kettering University	Flint, MI, US	www.kettering.edu	Industrial Engineering, BSIE
Lamar University	Beaumont, TX, US	www.lamar.edu	Industrial Engineering, BS
Lehigh University	Bethlehem, PA, US	www.lehigh.edu	Industrial Engineering, BS
Liberty University	Lynchburg, VA, US	www.liberty.edu	Industrial & Systems Engineering, B.S.
Louisiana State University and A&M College	Baton Rouge, LA, US	www.lsu.edu	Industrial Engineering, BS
Louisiana Tech University	Ruston, LA, US	www.latech.edu	Industrial Engineering, BS
Milwaukee School of Engineering	Milwaukee, WI, US	www.msoe.edu	Industrial Engineering, BS
Mississippi State University	Mississippi State, MS	www.msstate.edu	Industrial Engineering, BS
Montana State University - Bozeman	Bozeman, MT, US	www.montana.edu	Industrial Engineering, BS
Morgan State University	Baltimore, MD, US	www.morgan.edu	Industrial Engineering, BS
New Jersey Institute of Technology	Newark, NJ, US	www.njit.edu	Industrial Engineering, BSIE
New Mexico State University	Las Cruces, NM, US	www.nmsu.edu	Industrial Engineering, BSIE
North Carolina Agricultural and Technical State University	Greensboro, NC, US	www.ncat.edu	Industrial & Systems Engineering, BS
North Carolina Agricultural and Technical State University	Greensboro, NC, US	www.ncat.edu	Industrial & Systems Engineering, BS
North Carolina State University at Raleigh	Raleigh, NC, US	www.ncsu.edu	Industrial Engineering, BS
North Dakota State University	Fargo, ND, US	www.ndsu.edu	Industrial Engineering and Management, BS
Northeastern University	Boston, MA, US	www.northeastern.edu	Industrial Engineering, BS
Northern Illinois University	Dekalb, IL, US	www.niu.edu	Industrial and Systems Engineering, B.S.
Northwestern University	Evanston, IL, US	www.northwestern.edu	Industrial Engineering, BS

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Oakland University	Rochester, MI, US	<a href="http://www.oakland.edu">www.oakland.edu</a>	Industrial and Systems Engineering, BSE
Ohio University	Athens, OH, US	<a href="http://www.ohiou.edu">www.ohiou.edu</a>	Industrial and Systems Engineering, BS
Oklahoma State University	Stillwater, OK, US	<a href="http://www.osu.okstate.edu">www.osu.okstate.edu</a>	Industrial Engineering and Management, BSIEM
Oregon State University	Corvallis, OR, US	<a href="http://www.oregonstate.edu">www.oregonstate.edu</a>	Industrial Engineering, BS
Pennsylvania State University	University Park, PA, US	<a href="http://www.psu.edu">www.psu.edu</a>	Industrial Engineering, BS
Philadelphia University	Philadelphia, PA, US	<a href="http://www.philau.edu">www.philau.edu</a>	Industrial and Systems Engineering, B.S.E.
Polytechnic University of Puerto Rico	San Juan, PR, US	<a href="http://www.pupr.edu">www.pupr.edu</a>	Industrial Engineering, BS
Purdue University at West Lafayette	West Lafayette, IN, US	<a href="http://www.purdue.edu">www.purdue.edu</a>	Industrial Engineering, BS
Rensselaer Polytechnic Institute	Troy, NY, US	<a href="http://www.rpi.edu">www.rpi.edu</a>	Industrial and Management Engineering, BS
Rochester Institute of Technology	Rochester, NY, US	<a href="http://www.rit.edu">www.rit.edu</a>	Industrial Engineering, BS
Rutgers, The State University of New Jersey	New Brunswick, NJ, US	<a href="http://www.rutgers.edu">www.rutgers.edu</a>	Industrial Engineering, BS
San Jose State University	San Jose, CA, US	<a href="http://www.sjsu.edu">www.sjsu.edu</a>	Industrial and Systems Engineering, BS
South Dakota School of Mines and Technology	Rapid City, SD, US	<a href="http://www.sdsmt.edu">www.sdsmt.edu</a>	Industrial Engineering and Engineering Management, B.S.
Southern Illinois University Edwardsville	Edwardsville, IL, US	<a href="http://www.siu.edu">www.siu.edu</a>	Industrial Engineering, BS
St. Ambrose University	Davenport, IA, US	<a href="http://www.sau.edu">www.sau.edu</a>	Industrial Engineering, BS
St. Mary's University	San Antonio, TX, US	<a href="http://www.stmarytx.edu">www.stmarytx.edu</a>	Industrial Engineering, BS
State University of New York at Binghamton	Binghamton, NY, US	<a href="http://www.binghamton.edu">www.binghamton.edu</a>	Industrial and Systems Engineering, BS
State University of New York at Buffalo	Buffalo, NY, US	<a href="http://www.buffalo.edu">www.buffalo.edu</a>	Industrial Engineering, BS
Tennessee Technological University	Cookeville, TN, US	<a href="http://www.tntech.edu">www.tntech.edu</a>	Industrial Engineering, BS
Texas A&M University	College Station, TX, US	<a href="http://www.tamu.edu">www.tamu.edu</a>	Industrial Engineering, BS
Texas A&M University - Commerce	Commerce, TX, US	<a href="http://www.tamu-commerce.edu">www.tamu-commerce.edu</a>	Industrial Engineering, BS
Texas Tech University	Lubbock, TX, US	<a href="http://www.texastech.edu">www.texastech.edu</a>	Industrial Engineering, BS
The Ohio State University	Columbus, OH, US	<a href="http://www.osu.edu">www.osu.edu</a>	Industrial and Systems Engineering, BSIE
The University of Alabama in Huntsville	Huntsville, AL, US	<a href="http://www.uah.edu">www.uah.edu</a>	Industrial and Systems Engineering, BSE
University of Arizona	Tucson, AZ, US	<a href="http://www.arizona.edu">www.arizona.edu</a>	Industrial Engineering, BSIE
University of Arkansas	Fayetteville, AR, US	<a href="http://www.uark.edu">www.uark.edu</a>	Industrial Engineering, BS
University of California, Berkeley	Berkeley, CA, US	<a href="http://www.berkeley.edu">www.berkeley.edu</a>	Industrial Engineering and Operations Research, BS
University of Central Florida	Orlando, FL, US	<a href="http://www.ucf.edu">www.ucf.edu</a>	Industrial Engineering, BS
University of Florida	Gainesville, FL, US	<a href="http://www.ufl.edu">www.ufl.edu</a>	Industrial and Systems Engineering, BS
University of Houston	Houston, TX, US	<a href="http://www.uh.edu">www.uh.edu</a>	Industrial Engineering, BSIE
University of Illinois at Chicago	Chicago, IL, US	<a href="http://www.uic.edu">www.uic.edu</a>	Industrial Engineering, BS
University of Illinois at Urbana - Champaign	Urbana, IL, US	<a href="http://www.illinois.edu">www.illinois.edu</a>	Industrial Engineering, BS

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University of Iowa	Iowa City, IA, US	<a href="http://www.uiowa.edu">www.uiowa.edu</a>	Industrial Engineering, BSE
University of Louisville	Louisville, KY, US	<a href="http://www.louisville.edu">www.louisville.edu</a>	Industrial Engineering, BS
University of Massachusetts Amherst	Amherst, MA, US	<a href="http://www.umass.edu">www.umass.edu</a>	Industrial Engineering, BS
University of Miami	Coral Gables, FL, US	<a href="http://www.miami.edu">www.miami.edu</a>	Industrial Engineering, BSIE
University of Michigan	Ann Arbor, MI, US	<a href="http://www.umich.edu">www.umich.edu</a>	Industrial and Operations Engineering, BSE
University of Michigan - Dearborn	Dearborn, MI, US	<a href="http://www.umd.umich.edu">www.umd.umich.edu</a>	Industrial and Systems Engineering, BSE
University of Minnesota Duluth	Duluth, MN, US	<a href="http://www.d.umn.edu">www.d.umn.edu</a>	Industrial Engineering, BSIE
University of Missouri-Columbia	Columbia, MO, US	<a href="http://www.missouri.edu">www.missouri.edu</a>	Industrial Engineering, BSIE
University of Nebraska - Lincoln	Lincoln, NE, US	<a href="http://www.unl.edu">www.unl.edu</a>	Industrial Engineering, BS
University of Oklahoma	Norman, OK, US	<a href="http://www.ou.edu">www.ou.edu</a>	Industrial Engineering, BS
University of Pittsburgh	Pittsburgh, PA, US	<a href="http://www.pitt.edu">www.pitt.edu</a>	Industrial Engineering, BS
University of Puerto Rico, Mayaguez Campus	Mayaguez, PR, US	<a href="http://www.uprm.edu">www.uprm.edu</a>	Industrial Engineering, BS
University of Rhode Island	Kingston, RI, US	<a href="http://www.uri.edu">www.uri.edu</a>	Industrial and Systems Engineering, BS
University of San Diego	San Diego, CA, US	<a href="http://www.sandiego.edu">www.sandiego.edu</a>	Industrial and Systems Engineering, BS/BA
University of South Florida	Tampa, FL, US	<a href="http://www.usf.edu">www.usf.edu</a>	Industrial Engineering, BS
University of Southern California	Los Angeles, CA, US	<a href="http://www.usc.edu">www.usc.edu</a>	Industrial and Systems Engineering, BS
University of Tennessee at Knoxville	Knoxville, TN, US	<a href="http://www.utk.edu">www.utk.edu</a>	Industrial Engineering, BS
University of Texas at Arlington	Arlington, TX, US	<a href="http://www.uta.edu">www.uta.edu</a>	Industrial Engineering, BS
University of Texas at El Paso	El Paso, TX, US	<a href="http://www.utep.edu">www.utep.edu</a>	Industrial Engineering, BSIE
University of Turabo	Gurabo, PR, US		Industrial and Management Engineering, B.S.
University of Washington	Seattle, WA, US	<a href="http://www.engr.washington.edu">www.engr.washington.edu</a>	Industrial Engineering, BSIE
University of Wisconsin - Madison	Madison, WI, US	<a href="http://www.wisc.edu">www.wisc.edu</a>	Industrial Engineering, BS
University of Wisconsin - Platteville	Platteville, WI, US	<a href="http://www.uwplatt.edu">www.uwplatt.edu</a>	Industrial Engineering, BS
University of Wisconsin - Milwaukee	Milwaukee, WI, US	<a href="http://www.uwm.edu">www.uwm.edu</a>	Industrial Engineering, BSE
Virginia Polytechnic Institute and State University	Blacksburg, VA, US	<a href="http://www.vt.edu">www.vt.edu</a>	Industrial and Systems Engineering, BS
Wayne State University	Detroit, MI, US	<a href="http://www.wayne.edu">www.wayne.edu</a>	Industrial Engineering, BSIE
West Virginia University	Morgantown, WV, US	<a href="http://www.wvu.edu">www.wvu.edu</a>	Industrial Engineering, BS
Western Michigan University	Kalamazoo, MI, US	<a href="http://www.wmich.edu">www.wmich.edu</a>	Industrial and Entrepreneurial Engineering, BSE
Western New England College	Springfield, MA, US	<a href="http://www.wnec.edu">www.wnec.edu</a>	Industrial Engineering, BS
Wichita State University	Wichita, KS, US	<a href="http://www.wichita.edu">www.wichita.edu</a>	Industrial Engineering, BS
Worcester Polytechnic Institute	Worcester, MA, US	<a href="http://www.wpi.edu">www.wpi.edu</a>	Industrial Engineering, BS
Wright State University	Dayton, OH, US	<a href="http://www.wright.edu">www.wright.edu</a>	Industrial and Systems Engineering, BS
Youngstown State University	Youngstown, OH, US	<a href="http://www.ysu.edu">www.ysu.edu</a>	Industrial and Systems Engineering, BE