

Occupational Profile



Actuaries

DOES THIS DESCRIBE YOU?

Work Interests involve descriptive categories (compatible with Holland's Model) attributed to success in this career:

- **Conventional** – Enjoy following set procedures and routines developed through higher authority; includes working with data and details more than with ideas.
- **Investigative** – Involves working with ideas requiring an extensive amount of research, fact finding, problem solving, and thought analysis.
- **Enterprising**— Involves starting up and carrying out projects; often leading people and making business decisions that sometimes require risk.

Work Styles depict worker characteristics conducive for this career:

- **Analytical Thinking**
- **Integrity**
- **Attention to Detail**
- **Dependability**
- **Achievement/Effort**

Work Values are associated with aspects of work that provide satisfaction in this career:

- **Achievement** – Sense of accomplishment; results oriented.
- **Independence** – Autonomy; working on your own.
- **Working Conditions** – Job security; good working conditions.

Aptitudes reflect an ability to acquire skills and knowledge for success in this career:

- **Mathematical Reasoning**
- **Number Facility**
- **Deductive Reasoning**
- **Inductive Reasoning**
- **Oral Expression**

OVERVIEW

Analyze statistical data, such as mortality, accident, sickness, disability, and retirement rates and construct probability tables to forecast risk and liability for payment of future benefits. May ascertain insurance rates required and cash reserves necessary to ensure payment of future benefits. Belongs to the Finance and Insurance career cluster and Insurance Services career pathway.

SKILLS & KNOWLEDGE NEEDED

Basic Skills:

- Mathematics
- Critical Thinking
- Judgment and Decision Making
- Complex Problem Solving
- Reading Comprehension

Technology Skills:

- Analytical or Scientific Software
- Data Base User Interface and Query Software
- Financial Analysis Software
- Object or Component Oriented Development Software
- Spreadsheet Software

Knowledge:

- Mathematics
- Economics and Accounting
- Computers and Electronics
- English Language
- Law and Government

ESTIMATED & PROJECTED EMPLOYMENT

Occupational Title	2014 Estimated Employment	2024 Projected Employment	2014-24 Employment Change	Annual Growth Rate (%)	Total Annual Openings
Total, All Occupations	1,795,100	1,949,240	154,140	0.9	58,145
Computer & Mathematical Occupations	33,550	39,630	6,080	1.8	1,140
Actuaries	525	680	155	3.0	30

Source: <https://www.iowaworkforcedevelopment.gov/occupational-projections>

2017 WAGE & SALARY (\$)

Occupational Title	Mean Wage	Mean Salary	Entry Wage	Entry Salary	Exp Wage	Exp Salary
Total All Occupations	20.93	43,539	10.09	20,991	26.35	54,813
Computer & Mathematical Occupations	35.88	74,629	21.29	44,287	43.17	89,800
Actuaries	47.05	97,871	29.58	61,519	55.79	116,047

Source: <https://www.iowaworkforcedevelopment.gov/occupational-employment-and-wages>

EDUCATION & TRAINING

Education	Work Experience	Job Training
Bachelor's Degree	None	Long-Term On-The-Job

A bachelor's degree is required for most actuary positions with a strong background in mathematics, statistics, or other analytical program. Licenses, certificates, and/or commissions may be required.

Sources: <https://www.iowaworkforcedevelopment.gov/occupational-projections>, https://www.bls.gov/emp/ep_education_training_system.htm, and <https://www.iowaworkforcedevelopment.gov/iowa-licensed-occupations>

NATIONAL CAREER READINESS CERTIFICATE (NCRC)

Skill	Median Skill Level	Minimum Skill Level	Maximum Skill Level
Applied Mathematics	7	7	7
Locating Information	6	6	6
Reading for Information	7	7	7
Applied Technology	n.a.	n.a.	n.a.
Business Writing	4	4	5
Workplace Observation	3	2	3
Listening for Understanding	2	2	4

An ACT assessment-based credential issued in determining essential work skills needed for employment success across industries and occupations. The greater the score, the greater the skill level (Bronze = 3, Silver = 4, Gold = 5, Platinum = 6 & higher). Source: <http://www.act.org/content/act/en/products-and-services/workkeys-for-employers/assessments.html>

PRIMARY INDUSTRY SECTORS

(Where are Actuaries Employed?)

Insurance Carriers and Related

Self Employed

Credit Intermediation

State Government

Source: <https://www.iowaworkforcedevelopment.gov/occupational-projections>

ADDITIONAL SOURCES:

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