

Food Scientists

Occupational Profile



OVERVIEW

Use chemistry, microbiology, engineering, and other sciences to study the principles underlying the processing and deterioration of foods; analyze food content to determine levels of vitamins, fat, sugar, and protein; discover new food sources; research ways to make processed foods safe, palatable, and healthful; and applies food science knowledge to determine best ways to process, package, preserve, store and distribute food. Belongs to the Agriculture, Food and Natural Resources career cluster and Food Products and Processing Systems career pathway.

SKILLS & KNOWLEDGE NEEDED

Basic Skills:

- Reading Comprehension
- Active Listening
- Writing
- Critical Thinking
- Active Learning

Technology Skills:

- Analytical or Scientific Software
- Data Base User Interface and Query Software
- Enterprise Resource Planning Software
- Office Suite Software
- Spreadsheet Software

Knowledge:

- Production and Processing
- Chemistry
- Food Production
- Biology
- English Language

DOES THIS DESCRIBE YOU?

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

- **Investigative** – Involves working with ideas requiring an extensive amount of research, fact finding, problem solving, and thought analysis.
- **Realistic** – Involves work activities that include practical, hands-on problems and solutions; often dealing with plants, animals, and real-world materials like wood, tools, and machinery.
- **Conventional** – Enjoy following set procedures and routines developed through higher authority; includes working with data and details more than with ideas.

Work Styles depict worker characteristics conducive for this career:

- **Integrity**
- **Attention to Detail**
- **Dependability**
- **Analytical Thinking**
- **Cooperation**

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

- **Achievement** – Sense of accomplishment; results oriented.
- **Support**—Management backing.
- **Recognition** – Advancement potential.

Aptitudes reflect a person's ability to acquire skills and knowledge. The following aptitudes are important for success in the career:

- **Inductive Reasoning**
- **Oral Comprehension**
- **Problem Sensitivity**
- **Written Comprehension**
- **Category Flexibility**

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
Life, Physical, & Social Science Occupations	12,830	14,060	1,230	1.0	525
Food Scientists & Technologists	525	550	25	0.5	20

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
Life, Physical, & Social Science Occupations	29.01	60,339	17.49	36,383	34.77	72,317
Food Scientists & Technologists	31.38	65,277	21.60	44,930	36.27	75,450

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

EDUCATION & TRAINING

Education	Work Experience	Job Training
Bachelor's Degree	None	None

Many employers desire applicants possessing a bachelor's degree in a related field, such as agricultural science, biology, chemistry, physics, or engineering. Advanced degrees are required for research positions.

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

NATIONAL CAREER READINESS CERTIFICATE (NCRC)

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

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 Food Scientists Employed?)

Food Mfg
Crop Production
Management of Companies
Animal Production

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

ADDITIONAL SOURCES:

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