Nature of Work:

Mathematics is one of the oldest and most basic sciences. Most important scientific discoveries about our world involve mathematics in some way. Mathematicians engage in a range of activities including educating, modeling and solving real world problems, and discovering new mathematics. Students with mathematics degrees from Walla Walla University go into a wide variety of occupations. While many go into secondary education, others find that the mathematics major is excellent preparation for professional schools such as law, medical, or veterinary school. Still others go on to graduate school in mathematics, engineering, or statistics, with eventual careers working in industry, teaching in colleges or universities, or conducting research. Some of our majors enter the workplace immediately after graduation, working in business, software development, at engineering firms or healthcare providers, or even in law enforcement.

Professional Training:

Students select mathematics as a major because they enjoy studying logical systems and solving interesting problems. Mathematics majors need creativity and the ability to communicate clearly both verbally and in writing. The B.A. degree is more general than the B.S. degree in that it includes a foreign language and a minor, but requires fewer mathematics and science courses. Students planning to teach at the secondary level will need to take additional education courses as a part of their undergraduate program. Students who wish to work in applied mathematics or statistics often go on to earn a master’s degree before entering the workforce. A Ph.D. degree is ordinarily required if one wishes to go into mathematical research. Mathematical research involves creating new mathematics, improving existing mathematics, or developing new applications of mathematics for scientific or business problems. Most researchers are also college or university professors, but some work for government agencies or private industry.

Job Outlook:

According to the Bureau of Labor Statistics (BLS), “[e]mployment of math occupations is projected to grow 28 percent from 2014 to 2024, which will result in about 42,900 new jobs.” Mathematicians will particularly be needed for data analysis and information security analysis in business operations. (See www.bls.gov)

Earnings:

In their May 2016 salary survey, the Bureau of Labor Statistics reports the median annual wage for mathematicians as $105,810; $80,500 for statisticians; and $100,610 for actuaries. (See www.bls.gov)
The chart below details one suggested path a student may take to complete a bachelor’s degree in Mathematics. Classes that are offered with multiple sections are listed in each quarter they are available. Cognates, general studies courses, and electives should be taken to complete 192 credit hours to complete a Bachelor of Science in Mathematics.

See the Undergraduate Bulletin for complete requirements.

### Freshman

**Autumn**
- MATH 181 Calculus I .............................................. 4
- Foreign Language ........................................ 4

**Winter**
- MATH 281 Calculus II .................................................... 4
- Foreign Language ........................................ 4

**Spring**
- MATH 282 Calculus III .................................................. 4
- Foreign Language ........................................ 4

### Sophomore

**Autumn**
- MATH 283 Calculus IV ........................................... 4
- MATH 289 Intro to Linear Algebra ......................... 3
- MATH 312 Ordinary Differential Equations ........... 4

**Winter**
- MATH 283 Calculus IV ................................................... 4
- MATH 250 Discrete Mathematics ................................ 4
- MATH 312 Ordinary Differential Equations ........... 4

**Spring**
- MATH 283 Calculus IV .................................................. 4
- MATH 312 Ordinary Differential Equations ........... 4
- MATH 289 Intro to Linear Algebra ......................... 3

### Junior

**+MATH 461 Abstract Algebra I ......................... 4**
**MATH 397 Junior Mathematics Seminar I .................... 0**

**Senior**

- MATH 451 Real Analysis I .............................................. 4
- MATH 496 Senior Mathematics Seminar I .................... 1
- MATH 497 Senior Mathematics Seminar II .................. 1

Math electives must include either MATH 452 or MATH 462 and at least 8 upper division hours.

Individuals seeking teaching certification should contact the School of Education and Psychology. Additional mathematics courses required for teaching certification are:

- Data Analysis (MATH 215)
- Probability and Statistics (MATH 315)
- Survey of Geometries in their Historical Contexts (MATH 321)
- Real Analysis II (MATH 452)
- Methods of Teaching Mathematics (MEDU 395)

A total of 192 credits is required for the Bachelor of Science in Mathematics.