## MATHEMATICS (B.A.)

The Bachelor of Arts (B.A.) curriculum provides students with a solid foundation in mathematics, while allowing them to combine the study of mathematics with an in-depth study of another field. For example, students can acquire excellent credentials for medical school by combining their B.A. in Mathematics with at least two years of chemistry and at least one year each of biology and physics. Additionally, the B.A. in Mathematics provides strong credentials for law school as well as for graduate school in mathematics.

Mathematics majors complete a minimum of 120 credits to earn a bachelor's degree: 49-51 credits of core courses (https:// catalog.salve.edu/undergraduate/curriculum-degree-programs/), 16-25 elective credits, and 53 credits of major courses.

Students seeking the degree of Bachelor of Arts in Mathematics are required to take the following courses:

| Code | Title | Credits |
| :--- | :--- | ---: |
| MTH-173 | Discrete Mathematics | 3 |
| MTH-195 | Calculus I | 4 |
| MTH-196 | Calculus II | 4 |
| MTH-203 | Calculus III | 4 |
| MTH-211 | Linear Algebra | 3 |
| MTH-213 | Differential Equations | 3 |
| MTH-315 | Geometry | 3 |
| MTH-411 | Analysis I | 3 |
| MTH-412 | Analysis II | 3 |
| MTH-421 | Abstract Algebra | 3 |
| MTH-490 | Senior Seminar Capstone | 3 |
| STA-341 | Statistical Theory I | 3 |
| STA-342 | Statistical Theory II | 3 |
| CSC-103 | Computer Programming I | 3 |
| Science core requirement | 4 |  |
| PHY-205 | Principles of Physics I | 4 |
| PHY-206 | Principles of Physics II | 53 |

## GPA requirement

To remain in the Mathematics major program, a student must maintain an average of C in all required courses for the Mathematics major, with no grade less than C - in any of the Mathematics major foundational courses, which consist of:

| Code | Title | Credits |
| :--- | :--- | ---: |
| MTH-173 | Discrete Mathematics | 3 |
| MTH-195 | Calculus I | 4 |
| MTH-196 | Calculus II | 4 |
| MTH-203 | Calculus III | 4 |
| MTH-211 | Linear Algebra | 3 |

Degree Plan for Mathematics (B.A.) (Starting in an even year)

| Course | Title | Credits |
| :---: | :---: | :---: |
| First Year |  |  |
| Fall |  |  |
| UNV-101 <br> \& FYT-101 | University Seminar and First Year Studio | 4 |
| MTH-195 | Calculus I | 4 |
| CSC-103 | Computer Programming I | 3 |
| Core Course |  | 3 |
|  | Credits | 14 |
| Spring |  |  |
| Core Course |  | 3 |
| Core Course |  | 3 |
| UNV-102 | University Seminar II | 3 |
| MTH-196 | Calculus II | 4 |
| MTH-173 | Discrete Mathematics | 3 |
|  | Credits | 16 |
| Second Year |  |  |
| Fall |  |  |
| RTS-225 <br> or PHL-225 | The Quest for the Ultimate: Dialogue with Global Religious Traditions ${ }^{1}$ or Quest for the Good Life | 3 |
| MTH-203 | Calculus III | 4 |
| MTH-211 | Linear Algebra | 3 |
| PHY-205 | Principles of Physics I | 4 |
|  | Credits | 14 |
| Spring |  |  |
| RTS-225 <br> or PHL-225 | The Quest for the Ultimate: Dialogue with Global Religious Traditions ${ }^{1}$ or Quest for the Good Life | 3 |
| MTH-213 | Differential Equations | 3 |
| PHY-206 | Principles of Physics II | 4 |
| Core Course |  | 3 |
| Core Course |  | 3 |
|  | Credits | 16 |
| Third Year |  |  |
| Fall |  |  |
| MTH-315 | Geometry | 3 |
| MTH-411 | Analysis I | 3 |
| Core Course |  | 3 |
| Core Course |  | 3 |
| Core Course |  | 3 |
|  | Credits | 15 |
| Spring |  |  |
| MTH-412 | Analysis II | 3 |
| Core Course |  | 3 |
| Core Course |  | 3 |
| Core Course |  | 3 |
| Core Course |  | 3 |
|  | Credits | 15 |
| Fourth Year |  |  |
| Fall |  |  |
| STA-341 | Statistical Theory I | 3 |
| MTH-421 | Abstract Algebra | 3 |
| MTH-490 | Senior Seminar Capstone | 3 |
| Elective |  | 3 |
| Elective |  | 3 |
|  | Credits | 15 |
| Spring |  |  |
| STA-342 | Statistical Theory II | 3 |
| Elective |  | 3 |


| Elective |  | 3 |
| :--- | :--- | ---: |
| Elective |  | 3 |
| Elective | Credits | 3 |
|  | Total Credits | $\mathbf{1 5}$ |
|  |  | $\mathbf{1 2 0}$ |

1 One each semester.
Degree Plan for Mathematics (B.A.) (Starting in an odd year)

| Course | Title | Credits |
| :--- | :--- | ---: |
| First Year |  |  |
| Fall | University Seminar |  |
| UNV-101 | and First Year Studio | 4 |
| \& FYT-101 | Calculus I |  |
| MTH-195 | Computer Programming I | 4 |
| CSC-103 |  | 3 |
| Core Course | Credits | $\mathbf{1 4}$ |
|  |  | 3 |
| Spring |  | 3 |
| Core Course | University Seminar II | 3 |
| Core Course | Calculus II | 4 |
| UNV-102 | Discrete Mathematics | 3 |
| MTH-196 | Credits | $\mathbf{1 6}$ |
| MTH-173 |  |  |
|  |  |  |

Second Year
Fall

| RTS-225 <br> or PHL-225 | The Quest for the Ultimate: Dialogue with Global <br> Religious Traditions ${ }^{1}$ <br> or Quest for the Good Life | 3 |
| :--- | :--- | ---: |
| MTH-203 | Calculus III | 4 |
| MTH-211 | Linear Algebra | 3 |
| PHY-205 | Principles of Physics I | 4 |
|  | Credits | $\mathbf{1 4}$ |

## Spring

RTS-225 The Quest for the Ultimate: Dialogue with Global 3

## or PHL-225

|  | or Quest for the Good Life |  |
| :--- | :--- | :---: |
| MTH-213 | Differential Equations | 3 |
| PHY-206 | Principles of Physics II | 4 |
| Core Course |  | 3 |
| Core Course |  | 3 |
|  | Credits | $\mathbf{1 6}$ |

## Third Year

Fall

| STA-341 | Statistical Theory I | 3 |
| :--- | :--- | ---: |
| MTH-421 | Abstract Algebra | 3 |
| Core Course |  | 3 |
| Core Course | 3 |  |
| Core Course | Credits | 3 |
|  | $\mathbf{1 5}$ |  |


| Spring |  |  |
| :--- | :--- | ---: |
| Core Course |  | 3 |
| Core Course | Statistical Theory II | 3 |
| Core Course | 3 |  |
| STA-342 | Credits | $\mathbf{3}$ |
| Core Course | $\mathbf{3}$ |  |
|  | $\mathbf{1 5}$ |  |


| Fourth Year |  |  |
| :--- | :--- | ---: |
| Fall | Analysis I | 3 |
| MTH-411 | Geometry | 3 |
| MTH-315 | Senior Seminar Capstone | 3 |
| MTH-490 |  | 3 |
| Elective | Credits | 3 |
| Elective |  | $\mathbf{1 5}$ |
|  |  | 3 |
| Spring | Analysis II | 3 |
| Elective |  | 3 |
| Elective | Credits | 3 |
| MTH-412 | Total Credits | $\mathbf{3}$ |
| Elective |  | $\mathbf{1 5}$ |
|  | $\mathbf{1 2 0}$ |  |
|  |  |  |
| One each semester. |  |  |

