***Physics:*** *Associate in Science for Transfer*

*UC*

Physics explains the fundamental laws of the universe and introduces important concepts that are essential for understanding all the other branches of science such as chemistry and biology. With a strong foundation in the concepts of physics, students will be better equipped to understand the beauty and complexity of the world around them.

***Please see a Pathways Counselor:*** Transfer degrees require a minimum of 60 semester CSU transferable units or UC semester transferable units with a minimum 2.0 GPA overall. [Contact a Counselor](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.msjc.edu%2Fhub%2F&data=05%7C01%7Cmbasgall%40msjc.edu%7C00671a05705e42bdeb1608db5b3ae60f%7C5fbf5385e264415f8989a6bdac9eadd3%7C0%7C0%7C638204080773150618%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=9Ex3X%2BRrsmq8ElINt4fc52T6Qj4sUd5Z9Umr8EokHlQ%3D&reserved=0) to create an education plan customized to meet your needs.

Transfer Majors/Award Focus

* Physics, A.S.-T CSU, UC

**GE Pattern/Units**

* GE Pattern: Option C
* Total Units: 71

**Program maps** indicate the major coursework and recommended general education courses to fulfill your degree in 2 years (approximately 15 units/semester or 30 units/year). If you are a part-time student, start Semester 1 courses and follow the course sequence. Some of the courses listed may be substituted by another course. Please view these options in the official course [catalog](https://catalog.msjc.edu/instructional-programs/).

***Semester 1 14 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| a | COURSE | TITLE | UNIT |
| c | MATH-211 | Analytic Geometry and Calculus I | 4 |
| c | ENGL-101 | College Composition | 4 |
| c | BIOL-128 | History of Science | 3 |
| c | COMM-100 | Public Speaking | 3 |

***Semester 2 14 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| a | COURSE | TITLE | UNIT |
| c | MATH-212 | Analytic Geometry and Calculus II | 4 |
| c | ART-104 or  DAN-100 or  MUS-108 | World Art or  History and Appreciation of Dance or  History of Jazz and Blues | 3 |
| c | PHY-201 | Mechanics and Wave Motion | 4 |
| c | ENGL-103 | Critical Thinking and Writing | 3 |

Career Options

Engineering (B) (Nanosystems, Chemical, Electronic) (B, M, D)

Research Scientist (B, M), Physicists (M, D)

Physics Teachers, Postsecondary (D)

Find more careers: [msjc.emsicc.com](http://msjc.emsicc.com)

Required Education: B: Bachelor’s, M: Master’s; D: Doctorate

Financial Aid

Financial aid is determined by the number of credit hours you take in a semester. Maximize your financial aid by taking 12-15 units per semester.

***Summer 1 8 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| a | COURSE | TITLE | UNIT |
| c | PS-101, or  HIST-111, or  HIST-112 | Introduction to American Government and Politics,  U.S. History to 1877, or  U.S. History Since 1865 | 3 |
| c | MATH-213 | Analytic Geometry and Calculus III | 5 |

***Semester 3 16 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| a | COURSE | TITLE | UNIT |
| c | MATH-218 | Linear Algebra | 3 |
| c | ART-104 or  DAN-100 or  MUS-108 | World Art or  History and Appreciation of Dance or  History of Jazz and Blues | 3 |
| c | PHIL-101 | Introduction to Philosophy I | 3 |
| c | CSIS-113A | C++ Programming - Level 1 | 3 |
| c | PHY-202 or  PHY-203 | Electricity and Magnetism or  Optics and Modern Physics | 4 |

***Semester 4 15 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| a | COURSE | TITLE | UNIT |
| c | BIOL-150 | General Biology I | 4 |
| c | MATH-215 | Differential Equations | 4 |
| c | PHY-202 or  PHY-203 | Electricity and Magnetism or  Optics and Modern Physics | 4 |
| c | PS 103/ETHS 103,  HIST 160/ETHS 160,  LIT 240/ETHS 240,  LIT 275/ETHS 275,  or  LIT 280/ETHS 280 | Ethnic Politics in America  Black History in American Context  American Indian Literature  Latinx/Chicanx Literature  or  Multiethnic Literature | 3 |

***Summer 1 4 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| a | COURSE | TITLE | UNIT |
| c | SPAN-101 | Elementary Spanish I | 4 |

Notes***:***

## Recommended: Students should take courses the summer before the Fall start of the semester.

## Although not an IGETC requirement, MSJC may certify completion of the CSU graduation requirement in U.S. History, Constitution and American Ideals with PS-101/101H and HIST-111/111H or HIST-112/112H. Courses used to meet this requirement may also be used to satisfy IGETC Subject Area 4 requirements.

If the Student does not place into MATH-211 Analytic Geometry and Calculus I or CHEM-101 General Chemistry I, they will need to take MATH-110 Pre-Calculus and/or CHEM-100 Introduction to Chemistry in the Summer before starting this plan. Students encouraged to check with the counselor to see if Java would be preferred over C++ by transfer institution.

Work Experience

Sign up for a special project or internship opportunity. Gain [work experience](https://msjc.edu/careereducation/cwee/index.html) and earn credits.