

Physics

Warriors on the Way to STEM

WOW2STEM

Modesto Junior College

Majoring in Physics at Stanislaus State leads to careers in diverse fields requiring understanding of the basic principles which underlie all of the sciences and engineering. This includes physics, astronomy, energy and the environment, and optical communications. This is the degree program for students going on to graduate studies in physics or engineering.

What can I do with a degree in Physics?

Graduates from the Physics program can follow career paths in industry, commerce and teaching. Possible fields include semiconductors, optics, and optoelectronics and engineering. Students with a BS degree in Physics frequently pursue graduate degrees in physics, astronomy, mechanical or electrical engineering.

How can I participate in WOW2STEM?

- Meet with a STEM counselor each semester at your community college.
- Follow a student educational plan (SEP) as outlined by a STEM counselor.
- Attend presentations and workshops throughout the year.
- Follow application dates and deadlines as directed by the Transfer Advisor and Stanislaus State.

For more information you may contact:

Elizabeth Monroe, Transfer Specialist
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www.csustan.edu/STEM-success



Joseph is a Junior at Stanislaus State. Joseph began his academic career as a first time freshman after graduating from high school. He chose to attend because of the golf team and the beauty of the campus. He had dreams of becoming a golfer. Joseph is a Physics major, soon to be double major in Math. In Spring 2014, Joseph participated in research which involved superconductors.

Physics B.A. Roadmap

Prerequisites to Lower-Division Courses	Lower-Division Courses at Modesto Junior College	Major Course Requirements at Stanislaus State
MATH 171	PHYS 101 & PHYS 121 OR PHYS 101 & PHYS 102	Upper-Division Major Course Requirements: PHYS 3010 - Introduction to Mathematics Physics I (3 units) PHYS 3100 - Classical Mechanics (4 units) PHYS 3320 - Electricity and Magnetism I (3 units) PHYS 3520 - Modern Physics and Quantum Mechanics (3 units) PHYS 4102 - Experimental Physics (2 units) PHYS 4250 - Analog and Digital Electronics (4 units) Electives (6 units)
PHYS 101 & MATH 172	PHYS 102 & PHYS 103 OR PHYS 103 & PHYS 113	
MATH 90	CHEM 101 (General Chemistry 1)	
CHEM 101	CHEM 102 (General Chemistry 2)	
MATH 161 & MATH 162	MATH 171 (Calculus: First Course)	
MATH 171	MATH 172 (Calculus: Second Course)	
MATH 172	MATH 173 (Calculus: Third Course)	
CSCI 270	CSCI 271 (Problem Solving & Programming 1)	

Physics B.S. Roadmap

Prerequisites to Lower-Division Courses	Lower-Division Courses at Modesto Junior College	Major Course Requirements at Stanislaus State
MATH 171	PHYS 101 & PHYS 121 OR PHYS 101 & PHYS 102	Upper-Division Major Course Requirements: PHYS 3010 - Introduction to Mathematics Physics I (3 units) PHYS 3100 - Classical Mechanics (4 units) PHYS 3320 - Electricity and Magnetism I (3 units) PHYS 3520 - Modern Physics and Quantum Mechanics (3 units) PHYS 4102 - Experimental Physics (2 units) PHYS 4250 - Analog and Digital Electronics (4 units) PHYS 4510 - Quantum Mechanics (3 units) PHYS 4530 - Thermal and Statistical Physics (4 units) Electives (9 units)
PHYS 101 & MATH 172	PHYS 102 & PHYS 103 OR PHYS 103 & PHYS 113	
MATH 90	CHEM 101 (General Chemistry 1)	
CHEM 101	CHEM 102 (General Chemistry 2)	
MATH 161 & MATH 162	MATH 171 (Calculus: First Course)	
MATH 171	MATH 172 (Calculus: Second Course)	
MATH 172	MATH 173 (Calculus: Third Course)	

For all degree requirements, visit www.csustan.edu/roadmaps

Associate Degree

Name: _____

Major: _____ Date: _____

Student ID#: _____

To complete the associate breadth requirement, you must select courses that fulfill the unit requirements of the following areas:			
Area A: English Language, Communication, and Critical Thinking (9 units total)			
Complete one course in each category			
A1 Oral Communication (3 units)	Completed	In Progress	Planned
COMM 100, 102, 110			
A2 Written Communication (3 units)	Completed	In Progress	Planned
ENGL 100, 101			
A3 Critical Thinking (3 units)	Completed	In Progress	Planned
COMM 104, 107			
CSCI 203			
ENGL 103			
PHILO 103, 105, 107			
READ 184			
Area B: Scientific Inquiry and Quantitative (9 units total)			
B1 Physical Science (3 units)	Completed	In Progress	Planned
ASTR 160, 160-151*			
CHEM 101*, 102*, 112*, 113*, 122*, 123*, 142, 143*, 144*, 150, 150-164*			
EASCI 161*, 162*			
GEOG 101			
GEOL 160, 161*, 165, 166*			
METEO 161*			
NR 200*			
PHSCI 180*			
PHYS 101*, 102*, 103*, 142*, 143*, 160, 165*, 180*			
B2 Life Science (3 units)	Completed	In Progress	Planned
ANAT 125*			
ANSC 200			
ANTHR 101, 110*			
BIO 101*, 111*, 114*, 115, 116*, 140*, 145*			
BOT 101*, 110*			
ENSCI 108			
MICRO 101*			
PHYSO 101*			
PLSC 200			
PSYCH 103			
ZOOL 101*			
B3 Laboratory Activity (3 units)	Completed	In Progress	Planned
Take one course from B1 or B2 with a laboratory, indicated by an asterisk (*).			
B4 Mathematics/Quantitative Reasoning (3 units)	Completed	In Progress	Planned
CSCI 204			
MATH 101, 105, 106, 111, 130, 134, 138, 161, 162, 171, 172, 173, 174, 191, 193			
PSYCH 121			
Area C: Arts and Humanities (9 units total)			
C1 Arts (3 units)	Completed	In Progress	Planned
ART 102, 120, 140, 151, 160, 162, 163, 164, 165, 168, 169, 170			
CMPGR 202			
COMM 120, 123, 132			
DANCE 102			
ENGL 161			

MUSG 101, 102, 111			
MUST 121, 122, 123, 124			
SOCSC 154			
THETR 100, 123, 160, 161			
C2 Humanities (3 units)	Completed	In Progress	Planned
ANTHR 104			
ENGL 102, 105, 106, 111, 112, 114, 116, 131, 132, 135, 136, 137, 138, 151, 156, 157, 162, 163, 168, 169, 171, 172, 173, 174, 175, 179			
FREN 101, 102			
GERM 101			
HIST 104, 105, 106, 107			
HUMAN 101, 105, 106, 110, 130, 140			
ITAL 101			
PHILO 101, 111, 113, 115, 120, 121, 123, 135, 140			
SIGN 125, 126, 127			
SPAN 101, 102, 103, 109, 110, 112, 173			
Area D: Social Sciences (9 units total)	Completed	In Progress	Planned
ADJU 201, 203, 234			
AGEC 210			
AGGE 146			
ANTHR 101, 102, 104, 130, 140, 150			
CLDDV 103, 109, 262			
COMM 103, 130, 132			
ECON 101, 102, 115			
ENSCI 110			
FAMLF 131			
GEOG 102, 104, 105, 110			
HE 114			
HIST 101, 102, 104, 105, 106, 107, 115, 116, 125, 129, 145, 154, 155			
KIN 103			
PHILO 130			
POLSC 101, 102, 110, 120, 130, 131, 140, 165, 180			
PSYCH 101, 104, 105, 111			
SIGN 119			
SOCIO 101, 102, 125, 150, 154, 156			
SOCSC 105, 130			
Area E: Lifelong Understanding and Self-Development (3 units)	Completed	In Progress	Planned
ADJU 217			
CLDDV 103			
COLSK 100			
FAMLF 131			
FDNTR 219			
HE 110, 111, 115			
HUMSR 118			
PSYCH 110, 118, 130, 141			
Area F: Ethnic Studies (3 units)	Completed	In Progress	Planned
ETHS 101			
ETHS 102			
US History, Constitution and American Ideals (6 units)			
Group 1 (3 units)	Completed	In Progress	Planned
ECON 115			
HIST 101, 102, 115, 116, 154, 155			
Group 2 (3 units)	Completed	In Progress	Planned
POLSC 101, 102, 120			
Additional Major Prerequisites			
	Completed	In Progress	Planned
