

# CSB/SJU PHYSICS & ENGINEERING

		PHYSICS MAJOR			ENGINEERING PHYSICS MAJOR			ENGINEERING OPTIONS
Year	Semester	Courses and credits			Courses and credits			
1	Fall	Foundations of Physics 1	PHYS 191	4	Foundations of Physics 1	PHYS 191	4	
		Calculus 1	MATH 119	4	Calculus 1	MATH 119	4	
	Spring	Foundations of Physics 2	PHYS 200	4	Foundations of Physics 2	PHYS 200	4	
		Calculus 2	MATH 120	4	Calculus 2	MATH 120	4	
2	Fall	Foundations of Physics 3	PHYS 211	4	Foundations of Physics 3	PHYS 211	4	▶
		Intermediate Physics Lab	PHYS 332	1	Intermediate Physics Lab	PHYS 332	1	
		Linear Algebra and Differential Equations	MATH 239	4	Linear Algebra and Differential Equations	MATH 239	4	
		Modern Physics	PHYS 320	4	Modern Physics	PHYS 320	4	
	Spring	Intermediate Lab	PHYS 332	1	Intermediate Lab	PHYS 332	1	
					CAD Prototyping and Testing	PHYS 255	2	
		Physical Mechanics	PHYS 339	4	Physical Mechanics	PHYS 339	4	
		Advanced Physics Lab	PHYS 370	1	Advanced Physics Lab	PHYS 370	1	
3	Fall	Multivariable Calculus	MATH 305	4	Multivariable Calculus	MATH 305	4	▶
		Advanced Lab	PHYS 370	1	Advanced Lab	PHYS 370	1	
	Spring	Electricity & Magnetism	PHYS 341	4	Problem Solving with Matlab	PHYS 355	2	
		Senior Research	PHYS 372	1	Senior Design Project	PHYS 374	1	
4	Fall	Quantum Mechanics	PHYS 346	4	Senior Thesis	PHYS 373	1	▶
		Senior Thesis	PHYS 373	1	Comprehensive Exam	PHYS 3XX	0	
	Spring	Comprehensive Exam	PHYS 3XX	0	Thermodynamics	PHYS 343	2	
		Thermodynamics	PHYS 343	2	Statistical Mechanics	PHYS 344	2	
		Statistical Mechanics	PHYS 344	2	Physics electives	PHYS 3--	4	
					Digital Electronics	PHYS 217	2	
Any Year	Any Semester	Physics electives	PHYS 3--	6	Analog Electronics	PHYS 338	2	
					General Chemistry	CHEM 125	4	
					Chemistry Lab	CHEM 201	1	

**Pre-Engineering (2/2)**  
Transfer to Engineering school for B.S. in Engineering

**Dual Degree (3/2)**  
Transfer to Engineering school (WU-STL or elsewhere) for B.S. in Engineering + B.A. in Engineering Physics from CSB/SJU

**Engineering (4/0 or 4/2)**  
Job in engineering, or graduate school for M.S. or Ph.D. in Engineering after CSBSJU degree in Physics or Engineering Physics

Physics: 44
Mathematics: 16
Physics Major - Total credits: 60

Physics: 42
Mathematics: 16
Chemistry: 5
Engineering Physics Major - Total credits: 63

Physics Elective Courses (2 credits each)
Fortran and C++ for Scientists (322), Optics (367), Experimental Optics (357), Nuclear Physics (363), Applied Nuclear Physics (353), Elementary Particle Physics (365), Advanced Electronics (358), Topics in Applied Physics (360), Topics in Modern Physics (362), Relativity (366), Astrophysics (364), Space Physics (368)