

# CSB/SJU PHYSICS & ENGINEERING OPTIONS

YEAR	Semester	PHYSICS & APPLIED PHYSICS & PRE-ENGINEERING	
1	Fall	Foundations of Physics I Calculus I	(PHYS 191 = 4 credits) (MATH 119 = 4 credits)
	Spring	Foundations of Physics 2 Calculus 2	(PHYS 200 = 4 credits) (MATH 120 = 4 credits)
2	Fall	Foundations of Physics 3 Intermediate Lab Linear Algebra	(PHYS 211 = 4 credits) (PHYS 332 = 1 credit) (MATH 239 = 4 credits)
	Spring	Modern Physics Intermediate Lab Differential Equations	(PHYS 320 = 4 credits) (PHYS 332 = 1 credit) (MATH 337 = 4 credits)

**PRE-ENGINEERING (2/2)**

Transfer to Engineering school for Bachelor of Science degree in Engineering

3	Fall	Mechanics Advanced Lab Multivariable Calculus	(PHYS 339 = 4 credits) (PHYS 370 = 1 credit) (MATH 305 = 4 credits)
	Spring	Electricity & Magnetism Advanced Lab Fourier Analysis or Complex Variables	(PHYS 341 = 4 credits) (PHYS 370 = 1 credit) (MATH 341 or 348 = 4 credits)

**DUAL-DEGREE (3/2)**

Transfer to Engineering school for B.S. in Engineering + B.A. in Applied Physics from CSB/SJU

		PHYSICS - 68 Credits Total	APPLIED PHYSICS – 71 Credits Total
Any Year	Any Semester Offered	Electives (PHYS 3xx = 6 credits) (see list below)	Electronics (PHYS 217 & 338 = 4 credits) General Chemistry (CHEM 125+201 = 5 cr) Electives (PHYS 3xx = 6 credits)
4	Fall	Quantum Mechanics (PHYS 346 = 4 credits) Senior Research (PHYS 372 = 1 credit)	Senior Research (PHYS 372 = 1 credit)
	Spring	Thermodynamics (PHYS 343 = 2 credits) Statistical Mechanics (PHYS 344 = 2 credits) Senior Thesis (PHYS 373 = 1 credit) Comprehensive Exam (PHYS XXX = 0 credit)	Thermodynamics (PHYS 343 = 2 credits) Senior Thesis (PHYS 373 = 1 credit) Comprehensive Exam (PHYS XXX = 0 credit)

**ENGINEERING (4/2, 4/0)**

After B.A. in Physics or Applied Physics from CSB/SJU, Graduate school or jobs in Engineering

2-CREDIT ELECTIVE COURSES:
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)