

Physics ADT to Physics B.A.

Title	C-ID Designation	C-ID Units	Double Counted for GE	CSUEB Course	Units
Calculus-based Physics for Scientists and Engineers: ABC	PHYS 200S	12			
OR	OR				
Calculus-based Physics for Scientists and Engineers: A	PHYS 205	4			
AND	AND				
Calculus-based Physics for Scientists and Engineers: B	PHYS 210	4			
AND	AND				
Calculus-based Physics for Scientists and Engineers: C	PHYS 215	4			
Single Variable Calculus Sequence	MATH 900S	8			
OR	OR				
Single Variable Calculus I – Early Transcendentals	MATH 210	4			
AND	AND				
Single Variable Calculus II – Early Transcendentals	MATH 220	4			
OR					
Single Variable Calculus I – Late Transcendentals	MATH 211	4			
AND	AND				
Single Variable Calculus II – Late Transcendentals	MATH 221	4			
Multivariable Calculus	MATH 230	4			
Ordinary Differential Equations	MATH 240	3			
AND	AND				
Introduction to Linear Algebra	MATH 250	3			
OR					
Differential Equations and Linear Algebra	MATH 910S	5			
Programming Concepts and Methodology I	COMP 122	3			
TOTAL MAJOR UNITS		32-33			
CSU GE Requirements		34			
Double Counting GE					
Elective					
Total Units		66			

*Can be used to fulfill CSU American Institutions or any additional major requirements

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GRADUATION REQUIREMENTS These should be fulfilled at the Community College, however if not taken at the Community College, they must be completed at CSU East Bay			
US History, Constitution & American Ideals			
First Category US-1			0-3
Second Category US-2			0-3
Third Category US-3			0-3
		Total Units	0-9
These courses must be taken at CSU East Bay			
Please note: A minimum of three courses in the Upper Division General Education pattern must have a topic/learning outcome oriented toward one of the following topic areas (overlays): Diversity (DIV) , Social Justice (SJ) , or Sustainability (S) .			
Upper Division GE/Overlay	Courses	Overlay	Units
GE-UD-Area 3			3
GE-UD-Area 4			3
GE-UD-Area 5			3
		Total Units	9
University Writing Requirement	Course	GE/Overlay	Units
UWR			
		Total Units	3
Lower Division Core	Course	GE/Overlay	Units
PHYS 230	Physical Reasoning		3
		Total Units:	3
	Course	GE/Overlay	Units
Take the following upper-division Physics courses for 15 units			
PHYS 330	Analytic Mechanics		3
PHYS 340	Statistical Mechanics and Thermodynamics		3
PHYS 350	Quantum Mechanics I		3
PHYS 450	Electromagnetism I		3
PHYS 380	Advanced Laboratory: Electronics		3
or			
PHYS 481	Advanced Laboratory: Projects		3
		Total Units:	15
Elective Courses	Course	GE/Overlay	Units
Choose a minimum of 6 units from the following:			
ASTR 108 - Astronomy of Indigenous Cultures Units: 3 ; Breadth Area: GE-5A; Diversity			
ASTR 138 - Descriptive Astronomy Units: 3 ; Breadth Area: GE-5A			
ASTR 139 - Astronomy Laboratory Units: 1 ; Breadth Area: GE-5C			
ASTR 338 - The Cosmos Units: 3 ; Breadth Area: GE-UD-5			
ASTR 339 - Stars and Galaxies Units: 3 ; Breadth Area: GE-UD-5			
CHEM 100 - Introduction to College Chemistry Units: 4 ; Breadth Area: GE-5A, GE-5C			
CHEM 110 - General Chemistry for Engineering Units: 3 ; Breadth Area: GE-5A, GE-5C			
CHEM 111 - General Chemistry I Units: 3 ; Breadth Area: GE-5A			
CHEM 111L - General Chemistry Laboratory I Units: 2 ; Breadth Area: GE-5C			
CHEM 112 - General Chemistry II Units: 3			
CHEM 112L - General Chemistry Laboratory II Units: 2			
CS 100 - Programming for Everyone Units: 3			
CS 101 - Computer Science I Units: 4			
PHYS 115 - Elementary Physics Units: 3 ; Breadth Area: GE-5A, GE-5C			
PHYS 303 - Biophysics Units: 3 ; Breadth Area: GE-UD-5			

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PHYS 351 - Quantum Mechanics II Units: 3				
PHYS 360 - Selected Topics Units: 1				
PHYS 451 - Electromagnetism II Units: 3				
PHYS 460 - Astrophysics Units: 3				
PHYS 461 - Atomic Physics Units: 3				
PHYS 462 - Solid State Physics Units: 3				
PHYS 463 - Particle Physics Units: 3				
PHYS 481 - Advanced Laboratory: Projects Units: 3 (if not taken in the core)				
PHYS 497 - Issues in Physics Units: 3				
SCI 308 - Hands-On Science Teaching Units: 1				
		Total Units:	6	
ADDITIONAL COURSE(S) to MEET 60 UNITS			GE/Overlay	Units
These courses may be additional major courses or prerequisites taken at the Community College.				
Free Elective Elective				
		Total Units	24	
		Grand Total:	60	

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FIRST SEMESTER JUNIOR YEAR			
UDGE Area 3	COURSE	OVERLAY	3
UD MAJOR	PHYS 350	QUANTUM MECHANICS I	3
UWR			3
ELECTIVE			3
ELECTIVE			3
		TOTAL:	15
SECOND SEMESTER JUNIOR YEAR			
UDGE Area 4	COURSE	OVERLAY	3
LD MAJOR	PHYS 230	PHYSICAL REASONING	3
UD MAJOR	PHYS 330	ANALYTIC MECHANICS	3
ELECTIVE			3
ELECTIVE			3
		TOTAL:	15
THIRD SEMESTER SENIOR YEAR			
UDGE Area 5	COURSE	OVERLAY	3
UD MAJOR	PHYS 450	ELECTROMAGNETISM I	3
UD MAJOR	PHYS 380/481		3
UD MAJOR	PHYS	PHYS ELECTIVE	3
ELECTIVE			3
		TOTAL:	15
FOURTH SEMESTER SENIOR YEAR			
See the ADT ADVISOR and apply for graduation through MyCSUEB by the posted deadline, available at Important Dates			
UD MAJOR	PHYS 340	STATISTICAL MECHANICS & THERMODYNAMICS	3
UD MAJOR	PHYS	PHYS ELECTIVE	3
ELECTIVE			3
ELECTIVE			3
ELECTIVE			3
		TOTAL:	15
GRAND TOTAL:			60