

**PHYSICS ADT TO CSU EAST BAY PHYSICS BA CHECKLIST/ROADMAP**

<b>ADT PHYSICS B.S. – 60 Sem. Units</b>	<b>Sem. Units</b>	<b>Community College Courses</b>
<b>CSUGE or IGETC</b>	<b>39</b>	<i>CSU general education certification requires completion of all requirements in Areas A through E, approximately 39 units</i>
<b>AREA D REQUIREMENT:</b> <a href="#">US History, Constitution &amp; American Ideals Code Requirement</a>	3-9	<b>US-1:</b> <b>US-2:</b> <b>US-3:</b>
<a href="#">Diversity/Social Justice/Sustainability</a> <i>Can be fulfilled in area C or D</i>	3-9	<b>DIV:</b> <b>SJ:</b> <b>SUS:</b>
<b>Second Composition (Comp II) Can be fulfilled with A3</b> Any Composition course with ENGL 100 as a prerequisite	3	
<i>The following areas are for the CID TMC/Courses and matching Community College Courses</i>		
<b>Major Core (C-ID)</b>	<b>24</b>	<b>Community College Courses</b>
PHYS 205 - Calculus-Based Physics for Scientists and Engineers: A (4)	Counted in GE	
PHYS 210 - Calculus-Based Physics for Scientists and Engineers: B (4)	4	
PHYS 215 - Calculus-Based Physics for Scientists and Engineers: C (4)	4	
MATH 210 - Single Variable Calculus I – Early Transcendentals (4)	Counted in GE	
MATH 220 - Single Variable Calculus II – Early Transcendentals (4)	4	
MATH 230 - Multivariable Calculus (4)	4	
<b>Total Units ADT *PHYSICS*</b>	<b>60</b>	

**PLEASE NOTE:** This page assumes Semester Units.

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<b>CSUEB: B.A. PHYSICS</b> <i>Complete Degree in 60 Semester Units</i>	<b>Semester UNITS</b>	<b>NOTES</b>
<b>GRADUATION REQUIREMENTS</b> <i>These should be fulfilled at the Community College, however if not taken at the Community College, they must be completed at CSU East Bay</i>		
<b>US History, Constitution &amp; American Ideals</b>	<b>0-9</b>	
1) First Category US-1	0-3	
2) Second Category US-2	0-3	
3) Third Category US-3	0-3	
<b>These courses must be taken at CSU East Bay</b>		
<b>Upper Division GE</b> <i>See catalog</i>	<b>9</b>	<b>CSUEB COURSES</b>
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): <b>Diversity, Social Justice, or Sustainability.</b>		
Area B6 Upper Division Science course	3	<b>Course:</b> <b>OVERLAY:</b>
Area C4 Upper Division Humanities course	3	<b>Course:</b> <b>OVERLAY:</b>
Area D4 Upper Division Social Sciences course	3	<b>Course:</b> <b>OVERLAY:</b>
<b>Lower Division Core</b>	<b>6</b>	
MATH 210 - Linear Algebra with Differential Equations Units: 3	3	
PHYS 230 – Physical Reasoning	3	
<b>Upper Division Core</b>	<b>18</b>	
PHYS 330 - Analytic Mechanics Units: 3	3	
PHYS 340 - Statistical Mechanics and Thermodynamics Units: 3	3	
PHYS 350 - Quantum Mechanics I Units: 3	3	
PHYS 380 - Advanced Laboratory I: Electronics Units: 3	3	
PHYS 381 - Advanced Laboratory II: Experimental Methods Units: 3	3	
PHYS 450 - Electromagnetism I Units: 3	3	
<b>Electives</b> <b>Choose a minimum of 6 units from the following:</b>	<b>6+</b>	
CHEM 100 - Introduction to College Chemistry 3		G.E./G.R. Area: B1, B3
CHEM 110 - General Chemistry for Engineering Units: 3		G.E./G.R. Area: B1, B3
CHEM 111 - General Chemistry I Units: 5		G.E./G.R. Area: B1, B3
CHEM 112 - General Chemistry II Units: 5		
CS 100 - Programming for Everyone Units: 3		
CS 101 - Computer Science I Units: 4		
PHYS 104 - Musical Acoustics Units: 4		G.E./G.R. Area: B1, B3
PHYS 105 - How Things Work Units: 3		G.E./G.R. Area: B1
PHYS 106 - Physics for Future Leaders Units: 3		G.E./G.R. Area: B1; Sustainability
PHYS 107 - Science of Energy Units: 3		G.E./G.R. Area: B1; Sustainability

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PHYS 108 - Astronomy of Ancient Cultures Units: 3		G.E./G.R. Area: B1; Diversity
PHYS 115 - Elementary Physics Units: 3		G.E./G.R. Area: B1, B3
PHYS 138 - Descriptive Astronomy Units: 3		G.E./G.R. Area: B1
PHYS 139 - Astronomy Laboratory Units: 1		G.E./G.R. Area: B3
PHYS 303 - Biophysics Units: 3		G.E./G.R. Area: B6
PHYS 337 - Extrasolar Planets Units: 3		G.E./G.R. Area: B6
PHYS 338 - The Cosmos Units: 3		G.E./G.R. Area: B6
PHYS 339 - Stars and Galaxies Units: 3		G.E./G.R. Area: B6
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 480 - Advanced Laboratory III: Modeling, Design, and Analysis Units: 3		
PHYS 481 - Advanced Laboratory IV: Projects Units: 3		
PHYS 497 - Issues in Physics Units: 3		
SCI 308 - Hands-On Science Teaching Units: 1		
<b>ADDITIONAL COURSE to reach 60 Units</b>	<b>21</b>	<i>These courses may be additional Major Courses or prerequisites not taken at the Community College</i>
<i>If needed</i>		
<b>Total Semester Units at CSUEB</b>	<b>60</b>	<b>60</b>

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<b>FIRST SEMESTER JUNIOR YEAR</b>			
<b>Register to take the University Writing Skills Requirement</b>			
UDGE B6	COURSE	OVERLAY	3
LD MAJOR	MATH 210	LINEAR ALGEBRA WITH DIFFERENTIAL EQUATIONS	3
UD MAJOR	PHYS 350	QUANTUM MECHANICS I	3
ELECTIVE			3
ELECTIVE			3
<b>TOTAL:</b>			<b>15</b>
<b>SECOND SEMESTER JUNIOR YEAR</b>			
<b>TAKE THE UNIVERSITY WRITING SKILLS TEST</b>			
UDGE D4	COURSE	OVERLAY	3
LD MAJOR	PHYS 230	Physical Reasoning	3
UD MAJOR	PHYS 330	ANALYTIC MECHANICS	3
ELECTIVE			3
ELECTIVE			3
<b>TOTAL:</b>			<b>15</b>
<b>THIRD SEMESTER SENIOR YEAR</b>			
<b>Verify that you have completed the University Writing Skills Requirement. Check your MyCSUEB "Degree Audit Report" (DAR) and email any discrepancies to The ADT ADVISER.</b>			
UDGE C4	COURSE	OVERLAY	3
UD MAJOR	PHYS 450	ELECTROMAGNETISM I	3
UD MAJOR	PHYS 380	ADVANCED LABORATORY I: ELECTRONICS	3
UD MAJOR	PHYS	PHYS ELECTIVE	3
ELECTIVE			3
<b>TOTAL:</b>			<b>15</b>
<b>FOURTH SEMESTER SENIOR YEAR</b>			
<b>See the ADT ADVISER and apply for graduation through MyCSUEB by the posted deadline, available at Important Dates</b>			
UD MAJOR	PHYS 381	ADVANCED LABORATORY II: EXPERIMENTAL METHODS	3
UD MAJOR	PHYS 340	STATISTICAL MECHANICS & THERMODYNAMICS	3
UD MAJOR	PHYS	PHYS ELECTIVE	3
ELECTIVE			3
ELECTIVE			3
<b>TOTAL:</b>			<b>15</b>
<b>GRAND TOTAL:</b>			<b>60</b>