

Semester:

Dept: Physics and Mathematics

Degree: BS Phys, AA Math

- PHY141: General Physics I
- PHY141L: Introduction to Measurement I
- PHY142: General Physics II
- PHY142L: Introduction to Measurement II
- PHY241: General Physics III
- PHY241L: Introduction to Measurement III
- PHY242: Modern Physics
- PHY251/L: Electronics
- PHY312: Dynamics
- PHY321: Advanced Experimental Physics I
- PHY322: Advanced Experimental Physics II
- PHY416: Quantum Mechanics
- PHY432: Electromagnetism
- PHY4YY: Advanced Research Proposal
- PHY492: Advanced Research Projects
- PHY 4XX: Senior Seminar

6 credit hours of PHY numbered >300

- MAT 151: Calculus and Analytic Geometry I
  - MAT 152: Calculus and Analytic Geometry II
  - MAT 201: Calculus and Analytic Geometry III
  - MAT 202: Differential Equations
  - MAT 2XX: Linear Algebra
  - MAT 3XX: Partial Differential Equations
- 3 credit hours of MAT numbered >231

CHE 111, 113: General Chemistry I, II

SELECTED PROGRAM OUTCOMES																	
Principles and Foundations of Classical and Modern Physics (Including Basic Examples)			Ability to Generalize and Extend Theories for Complex Applications			Methods and Techniques of Experimental Physics including Error Analysis			Problem Solving Techniques and Skills			Technical Communication Skills			Relationship between Physics and other Sciences and with Society		
[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)
E	I	T	I	I		E	I	P	I	IE	T	E	I	W	I	E	
E	E	WP				E	I	P	I	IE	P	E	I	W			
E	E	T	I	I	T				E	ER	T				I	E	
E	E	WP				E	E	P	I	ER	P	E	E	W			
E	R	T	I	I	T				E	R	T				I	E	
E	R	WP				E	R	P	I	R	P	E	E	W			
E	R	T	E	I	T				E	R	T	I	I	O	E	R	WO
E	R	TPO	E	R	P	E	A	P	E	A	TP	E	E	W			
E	A	T	E	R	T				E	A	T	I	R				
E	A	P	E	A	WP	E	A	P	E	A	P	E	R	P			
E	A	P	E	A	WP	E	A	P	E	A	P	E	R	P			
E	A	T	E	A	T				I	A	T	I	A		I	I	
E	A	T	E	A	T				I	A	T	I	A				
I	A		E	A	PO	I	A	P	I	A	P	E	A	WO			
I	A		E	A	PO	I	A	P	I	A	P	E	A	WO			
I	A		I	A	WO							E	A	WO			
E	A	T	E	RA	T				I	A	T						
									I	I	T				I	E	
									I	E	T				I	E	
									I	E	T				I	E	
									I	R	T				I	R	
			E	R	T				E	A	T	I	R				
			E	A	WP	E	A	P	E	A	P	I	R	O			
			I	A					I	A							
I	I	T							I	I	T				E	R	T

Semester:

Dept: Physics and Mathematics

Degree: BA Phys for Engineers,  
AA Math

- PHY141: General Physics I
- PHY141L: Introduction to Measurement I
- PHY142: General Physics II
- PHY142L: Introduction to Measurement II
- PHY241: General Physics III
- PHY241L: Introduction to Measurement III
- PHY242: Modern Physics
- PHY251/L: Electronics
- PHY311: Statics
- PHY312: Dynamics
- PHY321: Advanced Experimental Physics I
- PHY322: Advanced Experimental Physics II

- MAT 151: Calculus and Analytic Geometry I
- MAT 152: Calculus and Analytic Geometry II
- MAT 201: Calculus and Analytic Geometry III
- MAT 202: Differential Equations
- MAT 2XX: Linear Algebra
- MAT 3XX: Partial Differential Equations
- 3 credit hours of either MAT 3YY or 303

CHE 111, 113: General Chemistry I, II

SELECTED PROGRAM OUTCOMES																	
Principles and Foundations of Classical and Modern Physics (Including Basic Examples)			Ability to Generalize and Extend Theories for Complex Applications			Methods and Techniques of Experimental Physics including Error Analysis			Problem Solving Techniques and Skills			Technical Communication Skills			Relationship between Physics and other Sciences and with Society		
[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)	[1] Outcome Statement (E,I)	[2] Level (I, R, A)	[3] Demonstrate (T, W, P, O)
E	I	T	I	I					E	IE	T				I	E	
E	E	WP				E	I	P	I	IE	P	E	I	W			
E	E	T	I	I	T				E	ER	T				I	E	
E	E	WP				E	E	P	I	ER	P	E	E	W			
E	R	T	I	I	T				E	R	T				I	E	
E	R	WP				E	R	P	I	R	P	E	E	W			
E	R	T	E	I	T				E	R	T	I	I	O	E	R	WO
E	R	TPO	E	R	P	E	A	P	E	A	TP	E	E	W			
E	A	T	E	R	T				E	A	T	I	R				
E	A	P	E	A	WP	E	A	P	E	A	P	E	R	P			
E	A	P	E	A	WP	E	A	P	E	A	P	E	R	P			
									I	I	T				I	E	
									I	E	T				I	E	
									I	E	T				I	E	
									I	R	T				I	R	
			I	R	T				E	A	T				I	R	
			I	R	T				E	A	T	I	R	O	I	R	
			I	A					I	A							
									I	I	T				E	R	T



**[1] OUTCOME STATEMENT:**

The program outcome is **(E) EXPLICITLY or (I) IMPLICITLY** stated in the course syllabus as being one of learning outcomes for this course.

**[2] LEVEL OF CONTENT DELIVERY:**

**(I) INTRODUCES-** Students are not expected to be familiar with the content or skill at the collegiate or graduate level. Instruction and learning activities focus on basic knowledge, skills, and/or competencies and an entry-level complexity.

**(E) EMPHASIZES-** Students are expected to possess a basic knowledge and familiarity with the content or skills at the collegiate or graduate level. Instruction and learning concentrates on enhancing and strengthening knowledge, skills, and expanding complexity.

**(R) REINFORCES-** Students are expected to possess a strong foundation in the knowledge, skill, or competency at the collegiate or graduate level. Instructional and learning activities continue to build upon previous competencies and increased complexity.

**(A) APPLIES-** Students are expected to possess an advanced level of knowledge, skill, or competency at the collegiate or graduate level. Instructional and learning activities focus on the use of the content or skills in multiple contexts and at multiple levels of complexity.

**[3] ASSESSMENT/DEMONSTRATION OF LEARNING:**

Students are asked to demonstrate their learning on the outcome through tests **(T)**, written work **(W)**, oral discussion/Presentation **(O)**, and/or projects **(P)** and are provided with formal feedback.