1. Course Title:

General Physics
PHYS 181 – 4 Credits

EET Program Requirement
Pre-/Co-requisite: Math 172
This is a Math and Science content course under ABET Criterion 5

2. Faculty Member Information:

Instructor: Mike Jackson
Office: Room 201 Lind Hall
Phone: 509-963-2914
E-mail: jacksonm@cwu.edu

3. Course Description:

Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus.

4. Textbook and other required materials for the course:

Knight R., *Physics for Scientists and Engineers*, Addison-Wesley, 2008

5. Specific Learner and Expressive Outcomes and Assessment Strategies:

ABET Outcome Criteria #	Learner Outcomes	Assessment
	1. To demonstrate knowledge and understanding of the fundamental concepts in mechanics (kinematics and forces).	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
	2. To demonstrate an ability to effectively apply this knowledge in solving problems.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
	3. To demonstrate enhanced quantitative reasoning skills and mathematical analysis skills.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.

6. Course Topics and Schedule:

7. Grading:

Exam I 23%
Exam II 23%
Final Exam 24%
Quizzes 15%
Mastering Physics 15%

The A, A–, B+, B, B–, C+, C, C–, D+, D, D– and F grading system will be used.

8. ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and or material presented in this course are encouraged to contact me or Robert Harden, ADA Compliance Officer, Director, ADA Affairs and Students Assistance on campus at 963-2171 for additional disability related educational accommodations.

1. Course Title:

General Physics Lab
PHYS 181Lab – 1 Credits

EET Program Requirement
Pre-/Co-requisite: Math 172 and PHYS 181
This is a Math and Science content course under ABET Criterion 5

2. Faculty Member Information:

Instructor: Mike Jackson
Office: Room 201 Lind Hall
Phone: 509-963-2914
E-mail: jacksonm@cwu.edu

3. Course Description:

Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus.

4. Textbook and other required materials for the course:

Knight R., *Physics for Scientists and Engineers*, Addison-Wesley, 2008

5. Specific Learner and Expressive Outcomes and Assessment Strategies:

ABET Outcome Criteria #	Learner Outcomes	Assessment
	1. Demonstrate knowledge of key ideas associated with the topics listed in the PHYS 181 syllabus through oral and written communication.	Laboratory work, and communicate laboratory findings.
	2. Appropriately apply mathematics to analyze physical systems.	Laboratory work, and communicate laboratory findings.
	3. Demonstrate through oral and written communication proficiency and prudence in the use of the scientific method including designing labs, making hypotheses, and critiquing proposals.	Laboratory work, and communicate laboratory findings.

6. Course Topics and Schedule:

7. Grading:

Grading Specifics	**Relative Weight**
Lab notebook (due each week)	75%
Lab proposals (due every other week)	25%
Total	100%

Final Grades for the course will be calculated as follows:

A (92 - 100%)	A- (90 - 91%)	B+ (88 - 89%)	B (82 - 87%)	B- (80 - 81%)	C+ (78 - 79%
C (72 - 77%)	C- (70 - 71%)	D+ (68 - 69%)	D (62 - 67%)	D- (60 - 61%)	F (<60%)

8. ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and or material presented in this course are encouraged to contact me or Robert Harden, ADA Compliance Officer, Director, ADA Affairs and Students Assistance on campus at 963-2171 for additional disability related educational accommodations.

1. Course Title:

General Physics II
PHYS 182 – 4 Credits

EET Program Requirement
Pre-/Co-requisite: Math 173
This is a Math and Science content course under ABET Criterion 5

2. Faculty Member Information:

Instructor: Mike Jackson
Office: Room 201 Lind Hall
Phone: 509-963-2914
E-mail: jacksonm@cwu.edu

3. Course Description:

Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus.

4. Textbook and other required materials for the course:

Knight R., *Physics for Scientists and Engineers*, Addison-Wesley, 2008

5. Specific Learner and Expressive Outcomes and Assessment Strategies:

ABET Outcome Criteria #	Learner Outcomes	Assessment
	1. To demonstrate knowledge and understanding of the fundamental concepts in mechanics (kinematics and forces).	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
	2. To demonstrate an ability to effectively apply this knowledge in solving problems.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
	3. To demonstrate enhanced quantitative reasoning skills and mathematical analysis skills.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.

6. Course Topics and Schedule:

7. Grading:

Exam I 23%
Exam II 23%
Final Exam 24%
Quizzes 15%
Mastering Physics 15%

The A, A–, B+, B, B–, C+, C, C–, D+, D, D– and F grading system will be used.

8. ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and or material presented in this course are encouraged to contact me or Robert Harden, ADA Compliance Officer, Director, ADA Affairs and Students Assistance on campus at 963-2171 for additional disability related educational accommodations.

1. Course Title:

General Physics II Lab
PHYS 182Lab – 1 Credits

EET Program Requirement
Pre-/Co-requisite: Math 172 and PHYS 181
This is a Math and Science content course under ABET Criterion 5

2. Faculty Member Information:

Instructor: Mike Jackson
Office: Room 201 Lind Hall
Phone: 509-963-2914
E-mail: jacksonm@cwu.edu

3. Course Description:

Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus.

4. Textbook and other required materials for the course:

Knight R., *Physics for Scientists and Engineers*, Addison-Wesley, 2008

5. Specific Learner and Expressive Outcomes and Assessment Strategies:

ABET Outcome Criteria #	Learner Outcomes	Assessment
	1. Demonstrate knowledge of key ideas associated with the topics listed in the PHYS 182 syllabus through oral and written communication.	Laboratory work, and communicate laboratory findings.
	2. Appropriately apply mathematics to analyze physical systems.	Laboratory work, and communicate laboratory findings.
	3. Demonstrate through oral and written communication proficiency and prudence in the use of the scientific method including designing labs, making hypotheses, and critiquing proposals.	Laboratory work, and communicate laboratory findings.

6. Course Topics and Schedule:

7. Grading:

Grading Specifics	**Relative Weight**
Lab notebook (due each week)	75%
Lab proposals (due every other week)	25%
Total	100%

Final Grades for the course will be calculated as follows:

A (92 - 100%)	A- (90 - 91%)	B+ (88 - 89%)	B (82 - 87%)	B- (80 - 81%)	C+ (78 - 79%
C (72 - 77%)	C- (70 - 71%)	D+ (68 - 69%)	D (62 - 67%)	D- (60 - 61%)	F (<60%)

8. ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and or material presented in this course are encouraged to contact me or Robert Harden, ADA Compliance Officer, Director, ADA Affairs and Students Assistance on campus at 963-2171 for additional disability related educational accommodations.

1. Course Title:

General Physics III
PHYS 183 – 4 Credits

EET Program Requirement
Pre-/Co-requisite: PHYS 182
This is a Math and Science content course under ABET Criterion 5

2. Faculty Member Information:

Instructor: Mike Jackson
Office: Room 201 Lind Hall
Phone: 509-963-2914
E-mail: jacksonm@cwu.edu

3. Course Description:

Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus.

4. Textbook and other required materials for the course:

Knight R., *Physics for Scientists and Engineers*, Addison-Wesley, 2008

5. Specific Learner and Expressive Outcomes and Assessment Strategies:

ABET Outcome Criteria #	Learner Outcomes	Assessment
	1. To demonstrate knowledge and understanding of the fundamental concepts in electricity and magnetism (charge, electric field, electric potential, capacitance, resistance, magnetism, and electromagnetic induction).	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
	2. To demonstrate an ability to effectively apply this knowledge in solving problems.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.
	3. To demonstrate enhanced quantitative reasoning skills and mathematical analysis skills.	The student will complete homework assignments, a written test, laboratory work, and write reports on laboratory work.

6. Course Topics and Schedule:

7. Grading:

Exam I 23%
Exam II 23%
Final Exam 24%
Quizzes 15%

Mastering Physics 15%

The A, A–, B+, B, B–, C+, C, C–, D+, D, D– and F grading system will be used.

8. ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and or material presented in this course are encouraged to contact me or Robert Harden, ADA Compliance Officer, Director, ADA Affairs and Students Assistance on campus at 963-2171 for additional disability related educational accommodations.

1. Course Title:

General Physics III Lab
PHYS 183Lab – 1 Credits

EET Program Requirement
Pre-/Co-requisite: Math 172 and PHYS 181
This is a Math and Science content course under ABET Criterion 5

2. Faculty Member Information:

Instructor: Mike Jackson
Office: Room 201 Lind Hall
Phone: 509-963-2914
E-mail: jacksonm@cwu.edu

3. Course Description:

Topics in physics including kinematics and dynamics. Analyzing physical systems using algebra, trigonometry, and calculus.

4. Textbook and other required materials for the course:

Knight R., *Physics for Scientists and Engineers*, Addison-Wesley, 2008

5. Specific Learner and Expressive Outcomes and Assessment Strategies:

ABET Outcome Criteria #	Learner Outcomes	Assessment
	1. Demonstrate knowledge of key ideas associated with the topics listed in the PHYS 183 syllabus through oral and written communication.	Laboratory work, and communicate laboratory findings.
	2. Appropriately apply mathematics to analyze physical systems.	Laboratory work, and communicate laboratory findings.
	3. Demonstrate through oral and written communication proficiency and prudence in the use of the scientific method including designing labs, making hypotheses, and critiquing proposals.	Laboratory work, and communicate laboratory findings.

6. Course Topics and Schedule:

7. Grading:

Grading Specifics	**Relative Weight**
Lab notebook (due each week)	75%
Lab proposals (due every other week)	25%
Total	100%

Final Grades for the course will be calculated as follows:

A (92 - 100%)	A- (90 - 91%)	B+ (88 - 89%)	B (82 - 87%)	B- (80 - 81%)	C+ (78 - 79%
C (72 - 77%)	C- (70 - 71%)	D+ (68 - 69%)	D (62 - 67%)	D- (60 - 61%)	F (<60%)

8. ADA Statement:

Students who have special needs or disabilities that may affect their ability to access information and or material presented in this course are encouraged to contact me or Robert Harden, ADA Compliance Officer, Director, ADA Affairs and Students Assistance on campus at 963-2171 for additional disability related educational accommodations.