*St. Mary Catholic Central*

# *Physics*

***2019– 2020***

**Instructor:** Mrs. Alissa Myers amyers@smccmonroe.com

**Class Website:** www.mrsmyersphysics.weebly.com

**Textbook:** Physics Principles and Problems (Glencoe – McGraw Hill) Copyright 2013

**Course Description:** This course is designed to offer a basic foundation in classical theoretical physics.  It is important in future course work in engineering and other science related fields.  Physics deals with the inter-relationships between matter, energy, and force.  Mechanics, dynamics, and statics are covered in great depth.  Subsequent topics include: wave properties, thermodynamics, sound, and optics.  Mathematics and laboratory experiments are an integral part of this course.

**Course Outcomes:** Upon successful completion of this course, the student will be able to explain and discuss both verbally and in written language the physics concepts listed in the course content, as well as their relevance to everyday events. The student will be able to use algebra and trigonometry to set up mathematical descriptions of physical systems and to use these mathematical descriptions to make predictions and calculate unknown quantities. Lastly, the student will be able to set up laboratory equipment safely and efficiently, plan and carry out experimental procedures, identify possible sources of error, implement techniques that enhance precision, interpret data, and report verbally and in written language the experimental data, results, and conclusions.

**Course Content**:

Chapter 1 A Physics Toolkit

Chapter 2 Representing Motion

Chapter 3 Accelerated Motion

Chapter 4 Forces in One Dimension

Chapter 5 Forces in Two Dimensions

Chapter 6 Motion in Two Dimensions

Chapter 7 Gravitation

Chapter 8 Rotational Motion

Chapter 9 Momentum and Its Conservation

Chapter 10 Energy, Work, and Machines

Chapter 11 Energy and Its Conservation

Chapter 12 Thermal Energy

Chapter 13 States of Matter

Chapter 14 Vibration and Waves

Chapter 15 Sound

Chapter 16 Fundamentals of Light

**Instructional Methods:** This class is a combination of lecture with example problems and discussion and practice through lab work, seatwork, board work, and homework assignments.

**Classroom Policies and Procedures:**

## Tardiness

1. You must be quietly sitting in your assigned seat BEFORE the bell rings – or else you will be marked tardy.

**Absences**

1. If you are absent it is your responsibility to find out what you missed – check the class website, ask a classmate, or ask me.
2. You have one day for each day absent to make up missed work.
3. If a quiz/test is missed, it is your responsibility to make arrangements for make-up (before school, after school, or study hall

**Classroom Management**

1. Be RESPECTFUL!
2. Raise your hand if you have something to say.
3. Restroom may only be used if it is an emergency.
4. No food, drinks, or backpacks.
5. Any disciplinary action that must be taken will follow the SMCC Behavior Rubric.

## Homework

1. Homework will be assigned daily and will be due the following day at the beginning of class.
2. **The original problem and ALL work must be neatly shown in PENCIL for each problem – just answers will NOT be accepted for credit.**
3. Homework Heading

**Name**

**Date**

**Assignment**

1. Grading homework:
   1. All book work must be done in your notebook/binder. Be prepared to put these problems on the board the next day for a participation grade.
   2. All worksheets will be collected for a grade based on effort and completion. (EX: 5/5 for all problems completed and all work shown).
2. DO YOUR HOMEWORK – it is how you learn!
   1. If you are unprepared for board work – you will lose participation points.
   2. If you turn worksheets in late, you will be given half credit (EX: 2.5/5)
3. Any absent or late homework must be turned in to the MRS. MYERS’ BOX.
4. If you do not understand – GET HELP! I am here to help you ☺
5. Homework can be picked up or passed back from your class’s homework box at any time

**Supplies** \*BRING EVERYDAY! PLEASE BE PREPARED FOR CLASS!

1. iPad – to be used for textbook, note taking, and supplemental materials
2. Notebook or 3-Ring Binder
3. Loose leaf paper
4. Pencils
5. Red pens
6. Scientific Calculator

## Cheating

1. DO YOUR OWN WORK!
2. If you are caught cheating, you will receive a ZERO on that assignment/test/quiz. You will also be written up.

## Grading

1. See Student Handbook for the grading scale.
2. Quarter Grades

Tests 60%

Homework/Labs 20%

Quizzes 10%

Participation 10%

**Senior Exam Exemptions**: 95% Semester Average.