



## **CURRICULUM GUIDE 2019-2020**

### **PHYSICS FOR TRANSFER**

#### **Associate in Science in Physics for Transfer (ADT)**

The Student Transfer Achievement Reform Act (Senate Bill 1440, codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer,” a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Science in Physics for Transfer is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing this degree are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

Completion of the requirements for the Associate in Science in Physics for Transfer assists a student in seamlessly transferring to a California State University to engage in upper-division work towards a bachelor's degree in Physics. This associate degree will enable students to develop a strong foundation in physics. Furthermore, the theoretical knowledge and laboratory skills acquired by students in this program will also enhance their success with obtaining entry-level jobs that require two years of college-level science and math.

#### **Requirements for Associate in Science for Transfer Degree:**

- a) Complete Required Core courses with a grade of C or better.
- b) Complete CSU GE (Plan B) or IGETC for CSU (Plan C) requirements. These requirements are specified in the Ohlone College catalog.
- c) Complete 60 CSU-transferable semester units.
- d) Obtain a minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum GPA of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.
- e) Complete 27 semester units in the Physics major.
- f) Complete at least 12 units at Ohlone College.

#### **Student Learning Outcomes**

1. Build critical thinking and quantitative skills by gaining insight into the thought processes of physical approximation and physical modeling, by practicing the appropriate application of mathematics to the description of physical reality, and by searching for a physical interpretation of mathematical results.
2. Demonstrate basic experimental skills by the practice of setting up and conducting an experiment with due regards to minimizing measurement error and by the thoughtful discussion and interpretation of data.
3. Demonstrate basic communication and technical skills by working in groups on a laboratory experiment.
4. Retain information from course to course by aiming at proficiency in the correct use of all the fundamental laws and equations to solve integrated problems.

**REQUIRED CORE**

|           |                                  |          |
|-----------|----------------------------------|----------|
| MATH-101A | Calculus with Analytic Geometry  | 5        |
| MATH-101B | Calculus with Analytic Geometry  | 5        |
| MATH-101C | Calculus with Analytic Geometry  | 5        |
| PHYS-140  | Mechanics                        | 4        |
| PHYS-141  | Electricity and Magnetism        | 4        |
| PHYS-142  | Optics, Heat, and Modern Physics | <u>4</u> |

Total Required Units: 27