

Virginia Western Community College

SDV 101

Orientation to Science

Prerequisites

None.

Course Description

Introduces students to the skills that are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center, counseling and advising, listening, test taking, and study skills; and topical areas that are applicable to their particular discipline.

Semester Credits: 2

Lecture Hours: 2

Required Materials

None.

Course Outcomes

At the completion of this course, the student should be able to:

VWCC Required Outcomes:

- **Budgeting and financial resource management:** The student will be able to create and follow a basic budgeting process and understand the basics of resource management.
- **Academic Career Plan:** The student will be able to plan and structure an academic career plan that best suits their needs.
- **College Policies and Resources:** The student will be able to navigate the available VWCC resources and policies.
- **Academic Skills:** The student will identify the skills necessary to be successful in his/her academic program.
- **Life Management:** The student will demonstrate understanding of life management and help student borrowers understand how to manage their debt and repay their loans
- **Social/Interpersonal:** The student will demonstrate understanding of social interactions.
- **Wellness:** The student will demonstrate understanding of healthy life decisions

Science Specific Outcomes:

- Define the following terms: matter, measurement, accuracy, precision, qualitative, quantitative.
- Recall the metric units to measure mass, volume, length, pressure, temperature, pH and density.
- Make both quantitative and qualitative measurements.
- Explain the importance of the use of units when making and recording measurements.
- Use dimensional analysis (also called factor-label method) and successfully convert among metric units and among metric and standard units.
- Define significant digits.
- Apply the rules of significant digits to basic mathematical operations.
- List and define the steps of the scientific method.
- Construct a data table.
- Perform statistical analyses.
- Weigh evidence and decide if generalizations or conclusions based on the given data are warranted.
- Graph data using spreadsheet software (i.e. Excel.)
- Collaborate with other students to research a science career as assigned by the instructor.
- Work within a group to present the results of their career research to the class.

Topical Description

<u>Subject</u>	<u>Topics</u>
Orientation and Scientific Method	Orientation College Services Success Strategies for Science Courses The Scientific Method Variables in Experiments End of Course Presentation on Career
Measurements and Numbers	Define Terms: measurement, accuracy, precision, qualitative, quantitative Significant Figures Metric Units and Conversions Graphing and Graph Interpretation Graphing using Excel Logarithms
Data Generation Analysis and Significance	Data Collection Interpretation of Data Significance Statistical Analysis Random vs. Systematic Error
Scientific Literacy	Reading Journal Articles Reading for Context Introduction to Information Resources available in Brown Library
Career Exploration	Opportunities for Careers in Science <ul style="list-style-type: none"> • Academia • Government • Industry • Other

Communication Skills

Written Communication

Oral Communication

Presentation Skills

Group Dynamics

Research

Opportunity for collaboration of students on group presentation

Presentation

Groups will present information regarding career investigation
Written paper submitted

Notes to Instructors

None.

[ADA Statement \(PDF\)](#)

[Title IX Statement \(PDF\)](#)