



## PHYS 2901

**Division:** Natural Science and Mathematics

**Department:** Physics

**Course:** PHYS 2901

**Title:** Sophomore Capstone

**Catalog Description:**

This capstone course for students majoring in the sciences, mathematics, or engineering is intended to broaden their scientific horizons, acquaint them with various educational and career opportunities in their fields, and actively prepare them for transfer to a four-year college or university. Repeatable for credit.

**General Education Requirements:** N/A

**Semesters Offered:** Fall, Spring

**Credit/Time Requirement:** Credit: .5; Lecture: 1; Lab: 0

**Clock/Hour Requirements:** 0

**Offered for Non-Credit:** No

**Credit/Clock Comments:** Repeatable for credit.

**Prerequisites:** most of a lower division preparation in a Science, Math, or Engineering major, see course instructor

**Justification:**

This capstone course is intended as a continuation of what students started in StartSmart. Students will be evaluated on the electronic educational portfolio begun in Start Smart.

This course is intended to provide science majors help with further educational and career decisions.

The seminar portion of this course is intended to be a parallel university experience. This portion of the course is intended to broaden students' outlook and exposure to diverse scientific topics. Other institutions in Utah offer similar undergraduate (at the freshman and sophomore levels) seminar courses in fields like engineering, math, and physics.

**Student Learning Outcomes:**

Students will learn about a wide variety of science and math topics by attending the weekly seminar.

Students will give a scientific or mathematical presentation demonstrating skills acquired at Snow College.

Students will add to their electronic educational portfolio, and learn to use it for future opportunities.

Students will discuss their educational and professional future with a discipline-specific adviser at another college or university.

## Various Scientific and Mathematical Topics

Presentations at the weekly division seminar are given by Snow College faculty, students, and visiting presenters.

## Professional presentations

Each student will give a presentation on a scientific or mathematical topic for the division seminar.

## Electronic Educational Portfolio

Each student will update the electronic portfolio which should contain educational artifacts, reflective exercises, and evidence that the students have met Snow College outcomes appropriate to their degree.

## Preparing to transfer to a 4-year institution

Students will contact advisors at a 4-year transfer institution to discuss articulation and their future educational plans.

## **General Education Outcomes:**

7) Apply scientific reasoning to a variety of contexts.

Students will be exposed to a wide variety of science and mathematical topics as they attend the weekly division seminar. Students will prepare and deliver a presentation on a topic of their choice at the division seminar. Students will receive feedback on their presentation from those in attendance.

## **Key Performance Indicators:**

The final grade will be based on the following category weightings (percentages are approximate):

50% Attendance at the NS Division seminar (one absence can be made up by attending another instructor approved scientific event)

10% Presentation at the NS Division seminar

30% Educational Portfolio

10% Contacting advisors at transfer institutions

Students will meet with the instructor at the beginning of the semester to determine an individualized course of study.

## **Representative Text and/or Supplies:**

**Optimum Class Size:** 12

**Maximum Class Size:** 20

**Signatures:**

I hereby submit this course syllabus:

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Ted Olson, , Professor

I hereby find this course consistent with the goals and resources of the Physics Department:

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Ted Olson, , Professor, Chair

I hereby find this course consistent with the goals and resources of the Natural Science and Mathematics Division:

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Dan Black, EdD, Associate Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

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Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

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Michelle Olsen, MLS, Campus Librarian (Richfield Campus)