

COURSE SYLLABUS

Program: Opticianry

Effective Date: 28 June 2021

Course: OPTS 1305 Geometric Optics

3 Semester Hours

Description: This course discusses the history of optics; describes the nature of the electromagnetic spectrum and the light relationship of colors and energy levels to wavelengths; how to calculate for image size, position, nature, and orientation using the thin lens formulas; and how to calculate for and trace light rays as they pass through prisms and lenses. This course also discusses knowledge of mathematics, algebra, and trigonometry.

Context: **Prerequisites:** Acceptance into the Tri-Service Optician School.

Repeatable: This course is not repeatable for credit.

General Education: This course may satisfy general education requirements of the CAHS (math).

Design: This course is designed with a Modified Didactic format.

Outcomes: Students will be able to:

1. Discuss the history of optics.
2. Calculate for image size, position, nature, and orientation using the thin lens formulas.
3. Calculate for and trace light rays as they pass through prisms and lenses.
4. Describe the nature of the electromagnetic spectrum and the light relationship of colors and energy levels to wave lengths.
5. Discuss the theory and practice in ophthalmic lens history, lens forms, curvature, prescriptions, and optical crosses.

Assessment: Outcomes will be assessed through a variety of mechanism including:

1. Formative discussions
2. Comprehension checks
3. Summative examinations

Instruction: This course will adhere to the following **Outline of Instruction:**

- A. Student Orientation
- B. Basic Math
- C. Decimals
- D. Metric System
- E. Signed Numbers
- F. Algebra
- G. Pythagorean Theorem
- H. Tangent, Sine, and Cosine
- I. Optical Terminology
- J. Physics of Light

- K. Reflection
- L. Refraction
- M. Lens Characteristics
- N. Lens Curvature

Material: All required textbooks will be provided to students.

Schedule: The course will proceed per the following schedule:

Outcome	Topic	Evaluations
1	A	Formative discussions, Progress checks, Summative examinations
2	B - H	Formative discussions, Progress checks, Summative examinations
3	I - L	Formative discussions, Progress checks, Summative examinations
4	I - L	Formative discussions, Progress checks, Summative examinations
5	M, N	Formative discussions, Progress checks, Summative examinations

Course Policies: The following policies apply to the TOPS Campus.

Grading Policy – Letter grades with modifiers are assigned as defined below for CAHS programs.

Letter	Score	Grade Points
A	90-100	4.00
B	80-89	3.00
C	70-79	2.00
D	60-69	1.00
F	<60	0.00

All students must achieve a final cumulative average of 70% to successfully complete the course.

Definitions of abbreviations used in the grade sheets/transcripts beyond the traditional A, B, C, D, F letter grade, consist of the following:

Grade	Description
I	Incomplete. The grade of "I" is issued when the student has not completed the course requirements, such as taking the final examination, submitting required assignments or required course work, completing required hours within a practicum or internship. The grade of "I" is assigned <u>only</u> with the approval of the Dean or designated Official according to school policy. The course director must make a recommendation in writing to the Dean, or designated representative, with a copy to the Registrar, as to how and by what date the temporary "I" grade will be converted to a permanent grade. Failure to fulfill the stipulated requirements by the specified date, unless an extension is granted by the involved course director and approved by the Dean, will result in conversion of the "I" grade to a grade of "F". The temporary grade of "I" must be changed to a permanent grade prior to graduation. Per USU Instruction 6025C, a grade of "I"

	may be given with the interruption of academic duties due to temporary disability.
W	Withdrawal. The grade "W" is used when a student withdraws before the course session is complete. Per USU Instruction 6025, a grade of "W" may be given with the interruption of academic duties due to temporary disability.

Student Grievance/Appeal – The purpose for the Student Appeal Process is to provide a mechanism for objective internal review of faculty and staff actions or School Committee decisions. This Review Process may be utilized by students enrolled in courses in the College of Allied Health Sciences who believe these decisions resulted from inequitable and/or discriminatory decision-making procedures or processes. The wisdom of a decision cannot be grieved. Only the process that is believed to be inequitably applied, within the referent group, can be grieved. Implicit in this process is the need for the cooperation, openness, and good faith of all parties involved.

Students who wish to appeal a grade, may request to do so in a written letter to the Associate Dean and using the CAHS Student Grievance/Appeal form. The student will have no more than ten (10) business days to grieve or appeal a grade decision in writing. All other appeals processes are outlined in the specific program Student Evaluation and Administration Plan (SEAP). All CAHS replies to the student will be in writing, and copies of the grievance/appeal including all directly related correspondence will be maintained by the Associate Dean.

The decision of the Dean is final and cannot be appealed.

Attendance - Students are expected to be in attendance at all times. Students who miss more than 24 hours/3 class (training) days may be subject to non-academic relief. Students are required to make up any absent time, missed classroom notes, assignments, and examinations.

Uniform – Uniform of the day for all military personnel is the uniform required of each respective service.

Cell Phones – Use of a personal cell phone within the classroom is prohibited.

Lunch – All students will be afforded a reasonable opportunity for lunch as indicated in the supplemental course agenda. All students are encouraged to eat lunch.

Restrooms – Restroom breaks are provided once each hour. However, students have the latitude to take bathroom breaks as may be necessary. Selection of restrooms for usage by the student will be selected according to TOPS Policy.

Food and drink – Food allowed in the classroom at the discretion of the instructor. All drinks must be in a leak proof container.

Trash – Trash receptacles are provided at the rear of the classroom. Students will ensure trash is emptied daily or as often as needed.