

Northeastern State University
College of Optometry
Tahlequah, OK
Summer, 2006

INSTRUCTOR:

Thomas O. Salmon, O.D., Ph.D., Associate Professor. Office: Optometry B05
Office Hours: Refer to the summer schedule to see when Dr. Salmon is in, and call for an appointment.

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Course web page: <http://arapaho.nsuok.edu/~salmonto/Env/Env.html>

COURSE TITLE AND NUMBER:

OPT 6051 - Environmental Vision (1 credit hour)

CLASS DAYS AND TIMES:

Lectures will meet in the Optometry auditorium (Room 104) at the times show below.

Tuesday, May 15	8:00-9:20	Introduction; Laser safety	lecture
Thursday, May 17	8:00-9:20+	UV effects, protection	lecture
Monday, May 21	8:00-9:20+	Eye protection	lecture, videos
Tuesday, May 22	9:40-12:00	Sports vision; Driving	lecture, videos
Thursday, May 24	9:40-12:00	Eye care in aviation	special guest
Tuesday, May 29	9:40-12:00	Computer vision I	lecture, videos
Thursday, June 14	9:40-12:00	Computer vision II	lecture, videos

PREREQUISITES:

The student must be a third year optometry student in good standing who has taken and passed the following courses:

- OPT 4126 Geometric and Physical Optics
- OPT 5223 Ophthalmic Optics II
- OPT 5134 Vision Science II: Sensory Aspects

CATALOG DESCRIPTION OF COURSE:

The role of the optometrist in assessing and caring for the occupational and recreational visual needs of the patient.

COURSE PURPOSE:

This course will introduce you to vision problems that are related to the work or recreational environment. By understanding the basic principles of environmental vision, you will be better prepared to care for your patients. Practicing optometrists often feel inadequately prepared to

care for patients with problems such as computer vision syndrome; yet these are so common that they must be addressed in your education. This course is more pragmatic and clinically oriented than your previous vision science courses, which were more theoretical.

EXPECTED COURSE OUTCOMES:

Upon completion of this course you should be able to:

- 1) Provide better eye care for your patients who experience the problems we will study
- 2) Know which references to turn to for information about environmental vision issues
- 3) Be able to apply the basic principles of environmental in this course to new vision problems that may not have been specifically covered in this course.

INSTRUCTIONAL MATERIALS:

Required textbooks:

Sheedy JE, Shaw-McMinn PG. *Diagnosing and Treating Computer-Related Vision Problems*. Butterworth Heinemann, Burlington, MA, 2003.

Printed lecture notes.

Other textbooks:

Pitts DB, Kleinstein RN. *Environmental Vision*. Butterworth-Heinemann, Boston, 1993.

Pitts DG, Chou, BR. Prescription of Absorptive Lenses, Ch. 25 in *Borish's Clinical Refraction*, Butterworth Heineman Elsevier, Philadelphia, 2006.

Sliney D, Wolbarsht W. *Safety with Lasers and Other Optical Sources*. Plenum Press, NY, 1980.

<http://www.doctorergo.com>

Newcomb RD, Marshall EC. *Public Health and Community Optometry*. Butterworths, Boston, 1990.

Carlson, NJ. *Sports Vision Guidebook*, Volumes I-V. AOA, 1984-.

Loran DFC, MacEwen CJ. *Sports Vision*. Butterworth-Heineman, Boston, 1995

American National Standards Institute (ANSI) booklets:

ANSI Z136.1- 2007 Safe Use of Lasers

ANSI Z136.3- 2005 Safe Use of Lasers in Health Care Facilities

ANSI Z80.3 - 1997 Ophthalmics—Nonprescription Sunglasses and Fashion Eyewear

ANSI Z87.1 - 2003 Practice for Occupational and Educational Eye and Face Protection

ANSI Z87.1 - 1989 Practice for Occupational and Educational Eye and Face Protection

Salmon T. Laser Safety with the Shack-Hartmann Wavefront Sensor, Appendix H in *Corneal Contribution to the Wavefront Aberration of the Eye*. PhD dissertation, Indiana University, 1999.

This reference is available as a free PDF document that can be downloaded from the following web site: <http://arapaho.nsuok.edu/~salmonto/Dissertation/Dissertation.html>

Video tapes borrowed from the AOA Library (1-800-365-2219 Ext. 117 Ellen or Linda 104)

In the Blink of an Eye (VT409)

Eye Protection – See the Whole Picture (VT507)

Eye Protection in Sports (VT231)

The Visual Edge (VT229)

Your Practice and Computer Vision Syndrome (VT458)

INSTRUCTIONAL PROCEDURES:

This class will meet for seven lectures to study the topics listed in the schedule above. Some lectures will include videotapes, and one guest lecture is scheduled. Printed lecture notes will be produced by SITE, and will also be available as downloadable PDF files at the Dr. Salmon's web site. The instructional material will be contained in the lectures, videos, guest lecture, lectures notes and required textbook. You may wish to study the topics in greater detail by referring to the additional references. Be sure to check the Environmental Vision page for new course information. (<http://arapaho.nsuok.edu/~salmonto/Env/Env.html>)

STUDENT PERFORMANCE ACTIVITIES:

- 1) Attendance at all lectures is mandatory (see below). If you cannot attend one of the lectures, contact Dr. Salmon for a substitute assignment.
- 2) During the lectures, you are expected to listen attentively and interactively so you can make the most of the learning opportunity.

STUDENT EVALUATION:

The course grade will be computed based on attendance. Each class missed will reduce your attendance grade by one letter grade. Coordinate with Dr. Salmon for special assignments to make up for any classes missed. Academic dishonesty (cheating) is unacceptable in any course in this college.

ADA COMPLIANCE:

If any member of the class feels he has a disability and needs special accommodations of any nature whatsoever, the instructors will work with you and the University's Office of Student Affairs to provide reasonable accommodations to ensure that you have a fair opportunity to perform in this class. Please advise the instructors of such a disability and the desired accommodations at the first class attended.

INCLEMENT WEATHER/DISASTER POLICY: Refer to the syllabus for Vision Science II and III.