

OPTICIANRY (OPTI)

OPTI 1010 - Optical Theory I (3 Credits)

This course examines the nature of light and details the behavior of light when it encounters various refractive surfaces. In addition, the course examines lens power, indices, and prisms. This course establishes the foundation for advanced ophthalmic applications.

Lecture: 3 hours

Prerequisite(s): (MATH 1200 or MATH 1700 or MATH 1179)

Corequisite(s): OPTI 1020, OPTI 1030, OPTI 1040

OPTI 1020 - Ophthalmic Laboratory I (3 Credits)

This course introduces students to terms, instruments, calculations, lenses, frames, materials, and processes to be used in the surfacing and finishing of ophthalmic prescription eyewear.

Lecture: 3 hours, Lab: 1 hour

Prerequisite(s): (MATH 1200 or MATH 1179 or MATH 1700)

Corequisite(s): OPTI 1010, OPTI 1030, OPTI 1040

OPTI 1030 - Ophthalmic Dispensing I (3 Credits)

This course introduces students to Opticianry and the procedures necessary for becoming a dispensing optician. Topics include the history of the profession, patient/client measurements, prescription analysis, ophthalmic frame and lens materials, and selection and adjustment techniques.

Lecture: 3 hours

Prerequisite(s): (MATH 1200 or MATH 1179 or MATH 1700)

Corequisite(s): OPTI 1010, OPTI 1020, OPTI 1040

OPTI 1040 - Anatomy and Physiology of the Eye (3 Credits)

This course gives opticianry students an insight into the anatomical structure of the eye and its adnexa. Students learn the function of the parts of the eye as they relate to vision and fitting of contact lenses. Learners are presented with common pathologies of the eye and ocular pharmacology.

Lecture: 3 hours

Prerequisite(s): (MATH 1200 or MATH 1179 or MATH 1700)

Corequisite(s): OPTI 1010, OPTI 1020, OPTI 1030

OPTI 1050 - Optical Theory II (3 Credits)

This continues the study of optical theory. Topics include: prism notation, and vertical imbalance. It also presents methods of correction such as vertex power, illuminance, reflection and absorption, diffraction, third order aberrations, lens tilt, anisometropia, and spectacle magnification.

Lecture: 3 hours

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s): OPTI 1060, OPTI 1070, OPTI 1080

OPTI 1060 - Ophthalmic Laboratory II (3 Credits)

This course continues the study of prescription eyewear fabrication processes. Students learn to calibrate and maintain equipment, layout and edge multi-focal lenses, tint and coat lenses, perform advanced neutralization of lenses for verification or duplication purposes.

Instruction is provided in techniques for special surfacing processes such as bicentric grinding and prism thinning.

Lecture: 3 hours, Lab: 1 hour

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s): OPTI 1050, OPTI 1070, OPTI 1080

OPTI 1070 - Ophthalmic Dispensing II (3 Credits)

This course continues an examination of lens materials, types, and fitting with a particular focus on multi-focals, progressive addition lenses, absorptive lenses, and special lens designs. Focus is on understanding and using ophthalmic instruments and devices to take patient measurements, read prescriptions, and perform frame adjustments. Governing agencies of the optical profession and legal and ethical issues are introduced.

Lecture: 3 hours

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s): OPTI 1050, OPTI 1060, OPTI 1080

OPTI 1080 - Ophthalmic Dispensing Clinical I (3 Credits)

This course is part of a three semester Dispensing Laboratory. During the three semesters, the student should learn and demonstrate competencies from the competency lists. By the end of the three experiences, students must demonstrate all listed competencies. Students may be required to demonstrate some competencies in more than one course.

Other: 90 hours

Prerequisite(s): OPTI 1010 and OPTI 1020 and OPTI 1030 and OPTI 1040

Corequisite(s): OPTI 1050, OPTI 1060, OPTI 1070

**OPTI 2010 - Ophthalmic Dispensing Clinical II
(3 Credits)**

This course is part of a three (3) semester Dispensing Laboratory. During the three semesters, students should learn and demonstrate competencies from the competency lists. By the end of the three experiences, students must demonstrate all listed competencies. Students may be required to demonstrate some competencies in more than one course.
Other: 90 hours

Prerequisite(s): OPTI 1050 and OPTI 1060 and OPTI 1070 and OPTI 1080 and OPTI 2020

Corequisite(s): OPTI 2040, OPTI 2060

**OPTI 2020 - Ophthalmic Laboratory Skills I
(3 Credits)**

This course is the skills component of OPTI 1020: Ophthalmic Laboratory I. Students will develop competencies in performing clinical laboratory skills at the introductory level under the direction and supervision of the faculty. Emphasis is placed on accuracy and attaining skills that meet acceptable professional level.
Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): OPTI 1020

**OPTI 2030 - Optical Business Management
(3 Credits)**

This course presents basic management and leadership skills necessary for a successful eye care office. The course teaches analysis, creative thinking, judgment, planning strategy, and implementation skills necessary for optical business challenges.
Lecture: 3 hours

Prerequisite(s): OPTI 2010 and OPTI 2040 and OPTI 2020 and OPTI 2060

Corequisite(s): OPTI 2050, OPTI 2070

**OPTI 2040 - Introduction to Contact Lenses
(3 Credits)**

This course includes a historical review of contact lenses as well as theory; design and optical principles. Indications and contraindications for contact lenses wear, patient evaluation, lens types and availability, and fundamental techniques and fitting philosophies are covered. The uses of the biomicroscope, keratometer, and radioscope are presented as well as patient education on care, cleaning, insertion, and removal of contact lenses.
Lecture: 3 hours

Prerequisite(s): OPTI 1050 and OPTI 1060 and OPTI 1070 and OPTI 1080 and OPTI 2020

Corequisite(s): OPTI 2010, OPTI 2060

**OPTI 2050 - Ophthalmic Dispensing Clinical III
(3 Credits)**

This course is part of a three (3) semester Dispensing Laboratory. During the three semesters, students should learn and demonstrate listed competencies. By the end of the three experiences, students must demonstrate all competencies listed. Students may be required to demonstrate some competencies in more than one course.
Other: 90 hours

Prerequisite(s): OPTI 2010 and OPTI 2020 and OPTI 2060 and OPTI 2040

Corequisite(s): OPTI 2030, OPTI 2070

**OPTI 2060 - Ophthalmic Laboratory Skills II
(3 Credits)**

This course is the clinical component of OPTI 1060: Ophthalmic Laboratory II. Students will develop competencies in performing clinical laboratory skills at the advanced level under the direction and supervision of the faculty. Emphasis is placed on accuracy and attaining skills that meet acceptable professional level.
Lecture: 2 hours, Lab: 2 hours

Prerequisite(s): OPTI 1060 and OPTI 2020

Corequisite(s): OPTI 2010, OPTI 2040

**OPTI 2070 - Contact Lens Clinical I
(3 Credits)**

This course includes a historical review of contact lenses as well as theory; design and optical principles. Indications and contraindications for contact lens wear, patient evaluation, lens types and availability, and fundamental techniques and fitting philosophies are covered. The uses of the biomicroscope, keratometer, and radioscope are presented as well as patient education on care, cleaning, insertion, and removal of contact lenses.
Other: 90 hours

Prerequisite(s): OPTI 2010 and OPTI 2020 and OPTI 2040 and OPTI 2060

Corequisite(s): OPTI 2030, OPTI 2050