



Select Course Descriptions – NSU Courses with Surgical and Laser Correlates

5103 General Pharmacology

General principles of drug action and specific systemic treatment. Mechanisms of action and therapeutic guidelines for: autonomic drugs, anti-infective agents including those used for prophylaxis pre- and post-operatively, anti-inflammatory agents, agents used in the treatment of allergy, major drugs acting on the CNS, cardiovascular, kidney, and endocrine systems, agents used for local or infiltrative anesthesia and analgesia relevant to office-based procedures, antiseptic agents and common over-the-counter drugs. Adverse side effects and drug interaction of commonly prescribed pharmaceuticals.

4126 Geometric and Physical Optics

Imaging of light: ray tracing through optical systems; aberrations and optical systems design. Physics of light: sources, spectra, scatter, polarization, refraction, reflection, absorption, interference, diffraction. Theory behind diagnostic and therapeutic ophthalmic lasers. Lecture and laboratory.

4271 Interpersonal Communications

Interpersonal and interprofessional relationships. Creating and enhancing a professional image; communicating with patients; interpreting patient complaints and concerns; enhancement of patient understanding and compliance; interviewing and history taking techniques; referrals; surgical co-management; dealing with difficult patients.

5203 Ocular Pharmacology

Principles of ocular pharmacology and medical treatment, clinical administration of oral, topical, and injectable drugs and utilization of diagnostic agents in the clinical/surgical care of the eye and adnexa. Principles and specific management and treatment of ocular disease, trauma, anterior segment surgery, and laser treatment/surgery by systemic, local, and topical therapy, including antisepsis. Clinician responsibility in the treatment and management of ocular and systemic complications of pharmaceutical use.

4133 Clinical Immunology and Microbiology

A study of the cellular and biochemical aspects of the human immune system and the immune response to infectious disease. Abnormal immune responses will be discussed. Lectures will also cover microbial aspects of infectious diseases (including postoperative infections) caused by bacteria, viruses, fungi and parasites, with emphasis on pathogenic mechanisms, host-pathogen interaction and antimicrobial therapy.

7101 Systemic Therapy in Ocular Disease and Trauma

Basic systemic therapy in ocular disease. Clinical indications, dosage, drug interactions, and common complications of enteral and parenteral medications utilized in ocular disease. Management of surgical post-operative complications with systemic medications.

7132 Differential Diagnosis of Ocular Disease and Trauma

A review of ocular disease, including eyelid lesions, and trauma with emphasis on clinical presentation, adjunctive testing, differential diagnosis as well as treatment with oral agents, topical agents, office-based surgical procedures and therapeutic lasers.

6223 Strabismus and Amblyopia

Basic principles of strabismus and amblyopia. This will include the symptoms, signs, diagnosis, test administration, test data analysis and therapy with lenses/prisms, vision therapy, and surgical options including procedures, referral criteria and outcomes. Lecture and laboratory.

5183 Optometric Clinical Methods III

This course emphasizes instrumentation and procedures for the detection, diagnosis, and management of pathological conditions. Includes introduction to office-based surgical procedures. Credit will not be awarded for Optometry 5183 until the pre-clinical examination has been completed successfully. Lecture and laboratory.

4213 The Human Nervous System

Structure and function of the central, peripheral, and autonomic nervous systems including anatomic correlates to periocular sensory anesthesia. Particular emphasis is placed on the anatomy and physiology of the visual system as it applies to the processing of visual information. Lecture and laboratory.

6081 Optometric Case Studies I

Case presentation and a discussion of selected topics in optometric clinical care including optometric surgical and laser procedures by faculty, students, and invited speakers. Current literature will be explored which applies to the subjects under discussion.

6251 Optometric Case Studies II

Case presentation and a discussion of selected topics including optometric surgical and laser procedures in optometric clinical care by faculty, students, and invited speakers. Current literature will be explored which applies to the subjects under discussion.

7081 Optometric Case Studies III

Case presentation and a discussion of selected topics in optometric clinical care including optometric surgical and laser procedures by faculty, students, and invited speakers. Current literature will be explored which applies to the subjects under discussion.

7171 Optometric Case Studies IV

Case presentations and discussions of selected topics in optometric clinical care including optometric surgical and laser procedures by faculty, students, and invited speakers. Current literature will be explored which applies to the subjects under discussion.

5273 Ocular Disease I: Cataracts, Corneal, and External Ocular Disease

Epidemiology, pathophysiology, differential diagnosis, management, and treatment of cataract, corneal and external ocular diseases, including disorders of the crystalline lens, eyelids, lacrimal system, conjunctiva, cornea, sclera and episclera. Includes cataract pre-operative and post-operative care as well as indications for treatment of posterior capsular haze with the Nd:YAG laser. Also includes instruction of office-based surgical procedures for the treatment and relief of ocular abnormalities.

5291 Clinical Practice I

Performance of clinical procedures and observation with case discussion. Optometric examinations conducted under the supervision of clinical faculty within clinical and hospital settings. Includes observing and assisting faculty, residents and upper class students with office-based ~~minor~~ surgical procedures, including anterior segment laser procedures.

6093 Clinical Practice II

Clinical practice under supervision of clinical faculty in the screening, examination, diagnosis, treatment and management of vision conditions and other health problems. Optometric examinations conducted under the supervision of clinical faculty within clinical and hospital settings. Includes performance of office based surgical procedures, including anterior segment laser procedures.

6195 Clinical Practice III

Clinical practice under supervision of clinical faculty in the screening, examination, diagnosis, treatment, and management of vision conditions and other health problems. Optometric examinations conducted under the supervision of clinical faculty within clinical and hospital settings. Includes performance of office based surgical procedures, including anterior segment laser procedures.

6295 Clinical Practice IV

Clinical practice under supervision of clinical faculty in the screening, examination, diagnosis, treatment and management of vision conditions and other health problems. Optometric examinations conducted under the supervision of clinical faculty within clinical and hospital settings. Includes performance of office-based surgical procedures, including anterior segment laser procedures.

7095 Clinical Practice V

Clinical practice under supervision of clinical faculty in the screening, examination, diagnosis, treatment and management of vision conditions and other health problems. Optometric examinations conducted under the supervision of clinical faculty within clinical and hospital settings. Includes performance of office-based surgical procedures, biopsy and anterior segment laser procedures.

7196 Clinical Practice VI

Clinical practice under supervision of clinical faculty in the screening, examination, diagnosis, treatment, and management of vision conditions and other health problems. Optometric examinations conducted under the supervision of clinical faculty within clinical and hospital settings. Includes performance of office-based surgical procedures, biopsy and anterior segment laser procedures.

7293 Clinical Practice VII

Clinical practice under supervision of clinical faculty in the screening, examination, diagnosis, treatment, and management of vision conditions and other health problems in on- and off-campus clinics. Optometric examinations conducted under the supervision of clinical and adjunct faculty within clinical, private practice and hospital settings. Includes performance of office-based surgical procedures, biopsy and anterior segment laser procedures.

6231 Optometric Clinical Methods IV

Course topics covered include instrumentation and technical skills necessary for surgical procedures performed in the primary eye care setting. Includes OSHA regulations pertaining to blood borne pathogens. Included techniques are: asepsis, iv injections, fluorescein angiography, management of anaphylaxis, wound management, basic suturing, and in-office ~~minor~~ surgical procedures. The course discusses the indications for, alternatives to, and risk/benefits of all techniques, as well as the management of complications. The course includes lecture and hands-on participation.

4264 Ocular Anatomy and Physiology

Gross and microscopic anatomy of the orbit and its contents including the globe, muscles, bone structure, blood and nerve supplies; embryology, histology, anatomy and physiology of the eye including the chemical composition, metabolic activities; physiological functions of the various tissues of the eye and related structures including sensory and motor innervation of the face and biomechanics of the eyelid as relevant to office-based eyelid surgical procedures. Lecture and laboratory.