

# DERMATOLOGY (DERM)

## DERM 601 – SKIN BIOLOGY AND SKIN DISEASES

3 credits.

Introduction to basic science principles of skin biology and skin diseases (biochemistry, molecular biology, genetics, etc.). Provides a strong base and training to future scientists, physicians, and industrial leaders in skin sciences and skin care, as well as drug and device development.

**Requisites:** (ZOOLOGY/BIOLOGY/BOTANY 151 or ZOOLOGY/BIOLOGY 101), (CHEM 104, CHEM 109 or BIOCHEM 501), or graduate/professional standing

**Course Designation:** Breadth – Biological Sci. Counts toward the Natural Sci req

Level – Advanced

L&S Credit – Counts as Liberal Arts and Science credit in L&S

Grad 50% – Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Fall 2023

**Learning Outcomes:** 1. Learn and demonstrate advanced knowledge of the fundamentals of skin biology. Audience: Both Grad Undergrad

2. Demonstrate knowledge of cutaneous disorders and diseases. Audience: Both Grad Undergrad

3. Demonstrate advanced knowledge of innovation, technology, and regulations in the field of skin biology. Audience: Both Grad Undergrad

4. Enhance communication and presentation skills related to evaluating and sharing scientific knowledge. Audience: Both Grad Undergrad

5. Design experiments applicable to one's own research. Audience: Both Grad Undergrad

6. Demonstrate critical understanding of skin biology that helps ongoing or future research projects and/or career development. Audience: Graduate

7. Lead journal club discussions. Audience: Graduate

## DERM 904 – SCIENCE OF CUTANEOUS DISEASE

2 credits.

The practice of Dermatology encompasses diseases of the skin, mucosal surfaces, hair and nails. The scientific specialty integrates cellular and molecular biology, immunology, microbiology, and physiology to support patient care decisions. Learn basic science principles of normal and abnormal cutaneous functioning, building on the principles introduced in the MED SC-M 774. These core concepts will be applied through interactions with patients in the clinical setting, building foundational basic science knowledge to diagnose and treat dermatologic diseases.

**Requisites:** MED SC-M 810, 811, 812, and 813

**Course Designation:** Grad 50% – Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**Learning Outcomes:** 1. Describe the process of normal keratinization and cellular factors that lead to disorders of keratinization Audience: Graduate

2. Explain the immunologic mechanisms underlying inflammatory dermatoses, including atopic dermatitis, allergic contact dermatitis, psoriasis, immunobullous disease, urticarial and acne vulgaris Audience: Graduate

3. Describe the cellular mechanisms of cutaneous malignancies, including non melanoma skin cancer, melanoma and cutaneous lymphoma Audience: Graduate

4. Explain normal hair and nail physiology Audience: Graduate

5. Identify key histologic features of normal skin Audience: Graduate

6. Recognize histologic patterns of cutaneous disease and explain the cellular mechanisms underlying these changes Audience: Graduate

7. Explain the mechanism of action of various dermatology medications and vaccines in the treatment and prevention of cutaneous diseases Audience: Graduate

8. Critically appraise primary literature as it relates to the etiology and/or treatment of skin diseases Audience: Graduate

**DERM 910 – INDEPENDENT READING AND RESEARCH IN DERMATOLOGY**

2-8 credits.

Independent research under the direct supervision of Dermatology faculty. Each student's research project is individualized to meet student research goals within the context of faculty research needs.

**Requisites:** Graduate/professional standing

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2024

**Learning Outcomes:** 1. Engage in clinical research through an apprenticeship-style learning experience with a research mentor. Audience: Graduate

2. Formulate a hypothesis (or specific study objective if project does not involve hypothesis testing). Audience: Graduate

3. Conduct a thorough literature review of the specific research question. Audience: Graduate

4. Develop skills in research design by writing or contributing to a research proposal. Audience: Graduate

5. Develop skills in the analysis of research data. Audience: Graduate

6. Select and apply statistical methodologies appropriate for the proposed analyses. Audience: Graduate

7. Interpret results correctly and in context of previous findings from literature review. Audience: Graduate

8. Develop a plan for disseminating the results of the research project. Audience: Graduate

9. Improve verbal and written communication skills by preparing findings for presentation. Audience: Graduate

**DERM 919 – INDIVIDUALIZED CLINICAL ELECTIVE IN DERMATOLOGY**

2-4 credits.

Experience blends medical and procedural dermatology, dermatopathology and basic science topics. Advance patient care skills through exposure to a broad array of common and complex cutaneous diseases, formulation of basic differential diagnoses and treatment plans, and performance of common diagnostic procedures. Experience via rotations through general adult and pediatric dermatology clinics, as well as specialty clinics. Opportunities may arise for participation in inpatient dermatology consults. All clinical activities will be completed under the direct supervision of attending physicians and residents. Participate in additional educational activities, including faculty lectures, Grand Rounds conference, and reading or on-line assignments. Additional patient care related learning activities may be assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, attending physician, and clinical site.

**Requisites:** Graduate/professional standing

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2024

**Learning Outcomes:** 1. Perform a hypothesis driven history and complete a targeted exam. Audience: Graduate

10. Review, interpret and present current literature to support patient care. Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders and procedures. Audience: Graduate

2. Describe clinical findings using accurate descriptive terminology. Audience: Graduate

3. List the features of common dermatologic disorders and recognize them in the clinical setting. Audience: Graduate

4. Formulate differential diagnosis for common skin diseases. Audience: Graduate

5. List the steps for performing office-based tests, including potassium hydroxide (KOH) examination and scabies prep. Audience: Graduate

6. Formulate a basic treatment plan for common dermatologic disorders, including selecting the appropriate strength of topical steroids. Audience: Graduate

7. Counsel patients on principles of photoprotection, signs of skin cancer, side effects of topical steroids and appropriate use of oral antibiotics in the care of dermatology patients. Audience: Graduate

8. Use clinical and histologic evidence, adapt and justify the working diagnosis. Audience: Graduate

9. Complete written documentation in a comprehensive, concise, accurate and timely manner. Audience: Graduate

**DERM 953 – DERMATOLOGY ELECTIVE**

2-4 credits.

Experience blends medical and procedural dermatology, dermatopathology and basic science topics. Advance patient care skills through exposure to a broad array of common and complex cutaneous diseases, formulation of basic differential diagnoses and treatment plans, and performance of common diagnostic procedures. Experience via rotations through general adult and pediatric dermatology clinics, as well as specialty clinics. Opportunities may arise for participation in inpatient dermatology consults. All clinical activities will be completed under the direct supervision of attending physicians and residents. Participate in additional educational activities, including faculty lectures, Grand Rounds conference, and reading or on-line assignments. Additional patient care related learning activities may be assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, attending physician, and clinical site.

**Requisites:** Graduate/professional standing

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2024

**Learning Outcomes:** 1. Perform a hypothesis driven history and complete a targeted exam. Audience: Graduate

10. Review, interpret and present current literature to support patient care. Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures. Audience: Graduate

2. Describe clinical findings using accurate descriptive terminology. Audience: Graduate

3. List the features of common dermatologic disorders and recognize them in the clinical setting. Audience: Graduate

4. Formulate differential diagnosis for common differential diagnosis Audience: Graduate

5. List the steps for performing office-based tests, including potassium hydroxide (KOH) examination and scabies prep. Audience: Graduate

6. Formulate a basic treatment plan for common dermatologic disorders, including selecting the appropriate strength of topical steroids. Audience: Graduate

7. Counsel patients on principles of photoprotection, signs of skin cancer, side effects of topical steroids and appropriate use of oral antibiotics in the care of dermatology patients Audience: Graduate

8. Using clinical and histologic evidence, adapt and justify the working diagnosis. Audience: Graduate

9. Complete written documentation in a comprehensive, concise, accurate and timely manner. Audience: Graduate

**DERM 954 – AMBULATORY DERMATOLOGY ELECTIVE**

2-4 credits.

Outpatient dermatology experience provides exposure to a typical private practice where patients present with a broad array of problems. Learn to diagnose, treat, and/or appropriately refer common dermatologic conditions and to be aware of cutaneous manifestations of serious and significant systemic disease.

**Requisites:** Graduate/professional standing

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** Yes, unlimited number of completions

**Learning Outcomes:** 1. Accurately describe skin lesions including morphology, configuration and distribution. Audience: Graduate

2. Recognize cutaneous manifestations of systemic diseases. Audience: Graduate

3. Demonstrate familiarity with common diagnostic and therapeutic procedures used in dermatology, including cryotherapy, shave and punch skin biopsy, potassium hydroxide mounts, scabies oil mounts, Tzanck smear, and dermoscopy. Audience: Graduate

4. Describe 1st and 2nd lines of therapy for common and important lesions and eruptions. Audience: Graduate

5. Identify risk factors for melanoma and non-melanoma skin cancers. Audience: Graduate

6. Perform supervised full-body skin exams for high-risk patients. Audience: Graduate

7. Demonstrate ability to write appropriate clinical notes and communicate effectively with the health care team. Audience: Graduate

8. Identify clinical situations in which a dermatologist should be consulted and other clinical situations which may be managed in a primary care clinic without referral. Audience: Graduate

**DERM 955 – PUBLIC HEALTH IN DERMATOLOGY SELECTIVE**

2 credits.

Explore the difficulties and opportunities available in improving public health in the specialized field of dermatology. Topics and readings have been developed with public health experts from around the country, and include discussions surrounding skin cancer screening and overdiagnosis, as well as dermatologic challenges in LGBTQ+, skin of color, rural, and inmate communities.

**Requisites:** MED SC-M 810, 811, 812, and 813

**Course Designation:** Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

**Last Taught:** Spring 2024

**Learning Outcomes:** 1. Apply the social ecological model framework to examine factors that influence dermatologic health outcomes Audience: Graduate

2. Identify and discuss principles of screening and surveillance of skin cancer, and relate this to screening and surveillance of other medical conditions Audience: Graduate

3. Examine equity issues in dermatology with respect to diverse communities, including: rural vs. urban, LGBTQ+, skin of color, and inmate populations Audience: Graduate

4. Critically appraise medical literature focused on dermatologic public health Audience: Graduate

5. Respectfully engage with community organizations around the topic of dermatology Audience: Graduate

6. Communicate public health-oriented dermatology messaging to a variety of audiences Audience: Graduate