

DERM 601: Skin Biology and Skin Diseases

Credits: 3

Meeting Time and Location

Monday, Wednesday, Friday; 3:30-4:20 pm

Course Attribute: Graduate

Instructional Mode: In-person

Specify how Credit Hours are met by the Course

This course will be offered for 3 credits. The credit standard for this course is met by an expectation of a total of 135 hours of student engagement with the course learning activities (at least 45 hours per credit), which include classroom instruction, reviewing asynchronous didactic content online, and group discussions. Regular and substantive student-instructor interaction is a key component of this course.

50 minutes of regularly scheduled lectures, seminars and journal clubs. A total of 20 in-class lectures, 10 seminars (from instructors/experts; online or in-person) or journal club sessions, and 15 discussion sessions (classical topics, hot topics, and ongoing research). Three activities each week for about 15 weeks. For each classroom activity, there will be approximately 2 hours of additional outside learning activities, including reading scientific literature, studying background biological topics, reviewing outside lecture materials, writing, problem sets, and other student work outside the classroom.

Regular and Substantive Student-Instructor Interaction

This course will provide regular substantive interaction in the following ways:

1. Participation in regularly scheduled learning sessions which provide direct instruction from course faculty through weekly in-person lectures and seminars
2. Provide personalized comments (in any medium) for an individual student's assignment or exam
3. Course instructors will be available to provide information about the content of the course at any time via email or during office hours by appointment.
4. Course instructors will moderate Friday group discussions regarding the content presented in each week's skin biology or skin disease subject

Course Directors

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Primary Faculty:



Nihal Ahmad, PhD
Vijayasaradhi Setaluri, PhD
Hao Chang, PhD

Additional Faculty

Alexander Birbrair, PhD
Jose Ayuso Dominguez, PhD
Clinical faculty to be determined.

Teaching Assistants

Karla Anaya Aldrete, kanayaaldrere@dermatology.wisc.edu

Instructor/s Availability

Students will have frequent interactions with one or more instructors as well as the course directors. Instructors will be available via email anytime during the course offering. Office hours by appointment. Office hours will be conducted remotely. Occasional exceptions may be made following physical distancing and health recommendations at the discretion of your instructor. Course Director will be available via office hours and email any time during the course offering.

Course Description

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

(BIOLOGY/BOTANY/ZOOLOGY151 or BIOLOGY/ZOOLOGY 101), (CHEM 104, CHEM 109 or BIOCHEM 501), or graduate/professional standing

Course Schedule

See attached.

Course Learning Outcomes

After taking this course, students should be able to:

1. Learn and demonstrate advanced knowledge of the fundamentals of skin biology.
2. Demonstrate knowledge of cutaneous disorders and diseases.
3. Demonstrate advanced knowledge of innovation, technology, and regulations in the field of Skin Biology.
4. Enhance communication and presentation skills related to evaluating and sharing scientific knowledge.
5. Design experiments applicable to one's own research.



6. Demonstrate critical understanding of skin biology that helps ongoing or future research projects and/or career development. (Graduate students only)
7. Lead journal club discussions. (Graduate students only)

Grading

The course directors will assume responsibility for grading each student's performance. Final grades will be assigned with the following breakdown:

- Exams (100 points each, 300 points in total)
- Seminars/Journal Club Participation (100 points total)
- Discussion Participation (10 points per discussion, 150 points in total)
- Discussion Quizzes (10 points each/120 points total for graduate students; 5 points each/60 points total for undergraduate students)
- Journal Club Facilitation – graduate students only (100 points)

The course director has the authority to adjust how the final grades are calculated. Should any changes be made to the grading method, the syllabus will be updated, and students will be notified.

The exams will be open book, and students will be graded on the following scale:

A	93-100%
AB	88-92%
B	83-87%
BC	78-82%
C	70-77%
D	60-69%
F-	0-59%

Discussion Participation Evaluation:

10 points are available per discussion.

10 points = good contributor, contributions in class reflect satisfactory preparation and substantive ideas

8 points = adequate contributor, occasional contributions in class which reflect satisfactory preparation

5 points = non-participant, present for discussion but offers no contributions

Digital Instructional Tools

Canvas will be used in the course. It is strongly suggested that students explore and become familiar not only with Canvas' site navigation but with content and resources available for the course.

Discussion Sessions (in-person or remote)

Journal Club sessions will review scientific literature and collaborative discussions will be led by graduate students. Discussion sessions will begin with a short quiz about the topics covered in that week's lectures, seminar, and/or journal club. The class will then review the questions and discuss classic and hot topics in dermatology, as well as ongoing research.



Required Textbook, Software & Other Course Materials

Most of the readings from this class are found in the scientific literature; there is no assigned textbook(s). Professors can (and do) require that journal articles relevant to their lectures be read, both for in-class discussions and take-home assignments. Many of these articles are provided on the course's Canvas website; the rest can be accessed via PubMed, which you have access to as a student here at UW.

Campus provides students with [technology guidelines and recommendations](#) for instruction. Students should consult these resources prior to the start of the semester.

Representative List of Readings

Readings from this class are available in the scientific literature; there is no assigned textbook(s). Professors may require that journal articles relevant to their lectures be read, both for in-class discussions and take-home assignments. Many of these articles will be provided on the course's website; the rest can be accessed via PubMed, which will be accessible to students. It is expected that students in this course have a basic understanding of chemistry/biochemistry, biology/molecular biology, pharmacology, and physiology. The following sources are recommended for further background knowledge on these topics:

1. Biochemistry (J. Berg), 9th Edition, MACMILLAN; 9th Edition, 2019 edition.
2. Lehninger Principles of Biochemistry (D.L. Nelson), 8th Edition, W. H. Freeman; Eighth edition (January 22, 2021)
3. Molecular Biology of the Cell (B. Alberts), 6th Edition, W. W. Norton & Company; Sixth edition (November 18, 2014)

Students may refer to the following book for additional guidance on core concepts discussed in this course:

1. The Biology of the Skin by Dr. R. K. Freinkel (Editor), D.T. Woodley (Editor); CRC Press; 1st edition (March 15, 2001)

Homework & Other Assignments

Journal Club sessions will review scientific literature which will be assigned ahead of time. The students will be expected to read the literature and come prepared for discussing it in the class. The Monday and Wednesday activities will form the basis of the Friday discussion session, for which the students will be expected to prepare. Participation in the discussions will be critical for students, especially graduate students. The assignments will be submitted via electronic means (*online, Canvas, Dropbox, instructor mailbox, etc.*)

Campus Spaces for Virtual Learning & Testing

Dedicated on-campus spaces with high-speed internet are available for students to [reserve](#) for any exam/quiz taken during the semester. Computers can also be requested.

Exams

Exams are open-book and will not be proctored. Exams will take place after week five, week ten and week fifteen.

Privacy of Student Information & Digital Tools: Teaching & Learning Analytics & Proctoring Statement

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully reviews and vets all campus-supported digital tools used to support teaching and learning, to help support success through [learning analytics](#), and to enable proctoring capabilities. UW-



Madison takes necessary steps to ensure that the providers of such tools prioritize proper handling of sensitive data in alignment with FERPA, industry standards and best practices.

Under the Family Educational Rights and Privacy Act (FERPA which protects the privacy of student education records), student consent is not required for the university to share with school officials those student education records necessary for carrying out those university functions in which they have legitimate educational interest. 34 CFR 99.31(a)(1)(i)(B). FERPA specifically allows universities to designate vendors such as digital tool providers as school officials, and accordingly to share with them personally identifiable information from student education records if they perform appropriate services for the university and are subject to all applicable requirements governing the use, disclosure and protection of student data.

Privacy of Student Records & the Use of Audio Recorded Lectures

See information about [privacy of student records and the usage of audio-recorded lectures](#).

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Useful Links

- [University Health Services](#)
- [Undergraduate Academic Advising and Career Services](#)
- [Office of the Registrar](#)
- [Office of Student Financial Aid](#)
- [Dean of Students Office](#)

Digital Course Evaluation (AEFIS)

UW-Madison now uses an online course evaluation survey tool, [AEFIS](#). In most instances, you will receive an official email two weeks prior to the end of the semester when your course evaluation is available. You will receive a link to log into the course evaluation with your NetID where you can complete the evaluation and submit it, anonymously. Your participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.

Students' Rules, [Rights & Responsibilities](#)

During the global COVID-19 pandemic, we must prioritize our collective health and safety to keep ourselves, our campus, and our community safe. As a university community, we must work together to prevent the spread of the virus and to promote the collective health and welfare of our campus and surrounding community.

UW-Madison [Badger Pledge](#)

[Campus Guidance on the use of Face Coverings](#)



Face coverings must be [correctly worn](#) on campus at all times and in all places (both outside and inside), except by students in their assigned residence hall rooms; by employees when alone in a private, unshared lab or office; when traveling alone in a private vehicle; and when exercising outside in a way that maintains 6 feet of distance from other people.

Students with disabilities or medical conditions who are unable to wear a face covering should contact the [McBurney Disability Resource Center](#) or their Access Consultant if they are already affiliated. Students requesting an accommodation unrelated to disability or medical condition, should contact the Dean of Students Office.

Students who choose not to wear a face covering may not attend in-person classes, unless they are approved for an accommodation or exemption. All other students not wearing a face covering will be asked to put one on or leave the classroom. Students who refuse to wear face coverings appropriately or adhere to other stated requirements will be reported to the [Office of Student Conduct and Community Standards](#) and will not be allowed to return to the classroom until they agree to comply with the face covering policy. An instructor may cancel or suspend a course in-person meeting if a person is in the classroom without an approved face covering in position over their nose and mouth and refuses to immediately comply.

Quarantine or Isolation Due to COVID-19

Students should continually monitor themselves for COVID-19 symptoms and get [tested](#) for the virus if they have symptoms or have been in close contact with someone with COVID-19. Student should reach out to instructors as soon as possible if they become ill or need to isolate or quarantine, in order to make alternate plans for how to proceed with the course. Students are strongly encouraged to communicate with their Instructor concerning their illness and the anticipated extent of their absence from the course (either in- person or remote). The instructor will work with the student to provide alternative ways to complete the course work.

Diversity & Inclusion Statement

[Diversity](#) is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

Academic Integrity Statement

Instructors should discuss academic integrity with students early and often. For suggested ways to engage students in these discussions, see the College of Letters and Science [Remote Teaching Toolkit](#).

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.

Accommodations for Students with Disabilities Statement

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison



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policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: [McBurney Disability Resource Center](#))

Academic Calendar & Religious Observances

See: <https://secfac.wisc.edu/academic-calendar/#religious-observances>