

IMPORTANT: This syllabus form should be submitted to OAA (gsbs_academic_affairs@uth.tmc.edu) a week before the start of each semester.

NOTE to STUDENTS: If you need any accommodations related to attending/enrolling in this course, please contact the Graduate School's 504 Coordinator, Natalie Sirisaengtaksin, PhD. We ask that you notify GSBS in advance (preferably at least 3 days before the start of the semester) so we can make appropriate arrangements.

Term and Year: Fall 2026 Course Number and Course Title: GS06 1103 Emerging Concepts in Immunology Credit Hours: 3 credits Prerequisites: GS06 1013: Fundamental Immunology Meeting Location: MDACC, GSBS-Gallick Classroom Building/Room#: BSRB S3.8367	Program Required Course: Yes Approval Code: Yes (If yes, the Course Director or the Course Designee will provide the approval code.) Audit Permitted: Yes Classes Begin: September 2, 2026 Classes End: November 18, 2026 Final Exam Week:
Class Meeting Schedule	
Day	Time
Mon, Wed	3-5 PM
Course Director: Hind Rafei, MD Assistant Professor Department of Hematopoietic Biology and Malignancy MD Anderson Cancer Center hrafei@mdanderson.org NOTE: Office hours are available by request. Please email the directors to arrange a time to meet.	Instructors: - Shervin Assassi, MD, MS Department of Internal Medicine UTHealth Houston Shervin.Assassi@uth.tmc.edu - Rafael Casellas, PhD Dept. of Hematopoietic Biology and Malignancy MD Anderson Cancer Center RCasellas@mdanderson.org - Seyed Javad (Peyman) Moghaddam Department of Pulmonary Medicine MD Anderson Cancer Center SMoghadd@mdanderson.org - Tina Cascone, MD, PhD Dept. of Thoracic-Head & Neck Medical Oncology MD Anderson Cancer Center TCascone@mdanderson.org

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Course Description:

This course is designed to expose students to the most recent research in the field of immunology. The literature-based curriculum relies heavily on the expert opinions of the faculty lecturers to identify the most impactful and significant research in their respective fields. Students prepare presentations of original research articles in conjunction with support from the faculty, thereby providing immersion in highly specialized areas of immunology.

Textbook/Supplemental Reading Materials:

Original research articles assigned by faculty instructors, provided on Canvas.

Course Objective/s:

This course will provide an understanding of emerging concepts in immunology. From current literature, students will explore new areas of research in antigen processing, cytokines, development of T and B lymphocytes, antigen recognition by T lymphocytes, cellular activation, and cell interactions. Each student will read and critically assess selected papers in molecular and cellular immunology. Students prepare several oral presentations and gain experience leading scientific discussions in a small group setting. Papers presented in this course can be used as the basis for developing a proposal in the GSBS Scientific Writing course.

Competencies to be acquired in this course include all core competencies of the Immunology Program, with emphasis on critical thinking and presentation skills.

Specific Learning Objectives:

1. Learn about cutting-edge discoveries and techniques used in the field of immunology.
2. Learn to critically evaluate tools, experimental results, and conclusions in scientific publications.
3. Learn to identify study rationale.
4. Acquire effective presentation skills needed to describe immunological model systems and interpret data generated from experiments testing immunological concepts.
5. Develop essential skills for leading and participating in scientific discussions about immunology in a small group setting.

Student Responsibilities and Expectations:

Students enrolled in this course will be expected to perform the following activities each week.

1. Read 2-4 research papers (e.g., original research articles and optional review articles).
2. Attend twice weekly class sessions. Online sessions require video on and/or active engagement via chat.
3. Participate in and contribute to discussions during class sessions.

Students enrolled in this course will be expected to perform the following twice during the semester.

1. Prepare a slide-based presentation based upon assigned research papers.
2. Contact faculty 2 weeks in advance of presentation date to consult with instructor.
3. Present and lead discussion for assigned original research articles.

Students are expected to complete all assigned reading material (research literature and reviews) prior to class. Plagiarism and failure to properly cite scientific literature and other sources will not be tolerated and are grounds for dismissal from the course and further GSBS disciplinary action. Cheating or engaging in unethical behavior will be grounds for dismissal from the course without credit and further GSBS disciplinary action.

Grading System: **Letter Grade (A-F)**

Student Assessment and Grading Criteria: *(May include the following:)*

Percentage	Description
Presentation (50%)	a. Coverage of relevant background literature and identification of critical observations. b. Identification of critical problems and hypotheses addressed in the paper. c. Understanding of the experimental design and methods utilized. d. Presentation, interpretation and discussion of the data. e. Length and style of presentation.
Participation and/or Attendance (50%)	a. Novelty/originality of ideas expressed b. Relevance of comments to the issues being discussed c. Frequency of productive contributions to discussion

CLASS SCHEDULE

Date	Duration (Hour(s) taught by lecturer)	Lecture Topic	Lecturer/s
Monday, August 31, 2026		No class	
Wednesday, Sept. 2, 2026	2	Introduction	Dr. Hind Rafei
Monday, September 7, 2027		Holiday, no class	
Wednesday, September 9, 2026		No Class	
Monday, September 14, 2026		No class	
Wednesday, September 16, 2026		No class	
Monday, September 21, 2026	2	Autoimmunity	Dr. Shervin Assassi

Wednesday, September 23, 2026	2	In Vivo engineering	Dr. Rafael Casellas
Monday, September 28, 2026	2	Myeloid biology	Dr. Seyed Moghaddam
Wednesday, September 30, 2026	2	TLS	Dr. Tina Cascone
Monday, October 5, 2026	2	No class	
Wednesday, October 7, 2026	2	Cellular Immunotherapy for Cancer	Dr. Ranjan Upadhayay
Monday, October 12, 2026	2	Immunosenescence	Dr. Ron DePinho Dr. Shabnam Shalapour
Wednesday, October 14, 2026	2	Epigenetics in Immunity	Dr. Sangeeta Goswami
Monday, October 19, 2026	2	No class	
Wednesday, October 21, 2026	2	T cell exhaustion/dysfunction	Dr. Kristen Pauken
Monday, October 26, 2026		No class	
Wednesday, October 28, 2026	2	Platelets and Immunity	Dr. Afshar-Kharghan
Monday, November 2, 2026	2	Stromal Immune Crosstalk	Dr. Sara Zanivan
Wednesday, November 4, 2026		No class	
Monday, November 9, 2026		No class	
Wednesday, November 11, 2026	2	Microbiome and Immunometabolism	Dr. Florencia McAllister
Monday, November 16, 2026	2	Hematopoiesis	Dr. Sean Post
Wednesday, November 18, 2026	2	In vivo immune cell imaging	Dr. Ashley Makela