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 one of the Graduate School's 504 Coordinator Natalie Sirisaengtaksin. 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: 2025-2026 **Course Number and Course Title:** GS06 1013: Fundamental Immunology **Credit Hours:** 3 **Meeting Location:** GSBS Large Classroom **Building/Room#:** GSBS-S3.8371 **WebEx/Zoom Link:** N/A	**Program Required Course:** Yes **Approval Code:** No **Audit Permitted:** Yes **Classes Begin:** 01/13/2026 **Classes End:** 05/05/2026 **Final Exam Week:** 05/05/2026

Class Meeting Schedule

Day	Time
Tuesday and Thursday	9:30AM – 11:00AM

Course Director
Name and Degree: Alexandre Reuben, PhD
Title: Assistant Professor
Department: THNMO
Institution: MDACC
Email Address: areuben@mdanderson.org
Contact Number: 713-745-3014

Course Co-Director/s:
Name and Degree: Kristen Pauken, Ph.D.
Title: Assistant Professor
Department: Immunology
Institution: ***MDACC***
Email Address: kepauken@mdanderson.org

NOTE: Office hours are available by request. Please email me to arrange a time to meet.

Instructor/s

See attached schedule info

Teaching Assistant: Yes, to be selected

Course Description:
The objectives of the course are to cover a broad overview of the principles of immunology by the pioneers in the field. Extensive introductory classes are offered by experts in their respected areas. The content of lectures provides students with basic understanding of different functions of the immune systems, two major types of immune responses, the immune cell types mediating immune response, the immune responses to foreign entities and related basic concepts of immunology to clinical settings.

Textbook/Supplemental Reading Materials (if any)

- **Janeway's Immunobiology 10th edition by K. Murphy**
- **Any introductory textbook to immunology**

Course Objective/s:
Upon successful completion of this course, students will be able to relate basic principles of immunology to their biological knowledge and training background.

***Specific Learning Objectives*:**
1. Provide a broad overview of immunology encompassing each of the major areas of Immunology.
2. Prepare students working in the immunology field for more advanced classes.
3. Prepare students working outside of immunology field to be familiar with basic concepts that might be useful in their future research.
4. Give students the tools to comprehend published papers utilizing immunological principles or papers directly addressing major issues in the field.
5. Give students the latest information on the current state of the field.

Student responsibilities and expectations:
Students will be expected to attend all lectures, participate by asking questions and completing required polls, and complete 3 exams on each section of the course (innate immunity, adaptive immunity, applications and diseases). Cheating or engaging in unethical behavior during examinations 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
Midterm Exams (90 %)	3 exams will have equal impact in the final grade
Final Exam (90 %)	3 exams will have equal impact in the final grade
Participation and/or Attendance (10 %)	Attendance for every lecture and participation will weigh into this score

Class schedule - see attached

Date	Day	Topic	Lecturers
1/13/25	Tue	Introduction/Overview	Dr. Reuben / Dr. Pauken
1/15/25	Thu	Hematopoiesis	Dr. Wenzel
1/20/25	Tue	Complement & Fc Receptors	Dr. Afshar-Kharghan
1/22/25	Thu	Myeloid cell subsets	Dr. Gubin
1/27/25	Tue	Cytokine Signaling	Dr. Moghaddam
1/29/25	Thu	Innate Sensors/Pattern Recognition	Dr. Haymaker
2/3/25	Tue	MHC & Ag pres	Dr. Reuben
2/5/25	Thu	iNKT	Dr. Im
2/10/25	Tue	NK cells/ILCs	Dr. Rafei
2/12/25	Thu	Exam 1 Review Session	TAs
2/17/25	Tue	**Exam 1**	
2/19/25	Thu	T cell receptors & development	Dr. Reuben
2/24/25	Tue	T cell activation and signaling	Dr. Pauken
2/26/25	Thu	Helper T cell subsets and differentiation	Dr. Nurieva
3/3/25	Tue	Tregs	Dr. Di Pilato
3/5/25	Thu	B cell development/Immunoglobulin	Dr. McBride
3/10/25	Tue	Spring Break no class	
3/12/25	Thu	Spring Break no class	
3/17/25	Tue	B cell activation, memory, and BCR rearrangements	Dr. McBride
3/19/25	Thu	Major Immunological Methods	Dr. Haymaker
3/24/25	Tue	Exam 2 Review Session	TAs
3/26/25	Thu	**Exam 2**	
3/31/25	Tue	Vaccines & Memory	Dr. Gubin
4/2/25	Thu	Autoimmunity	Dr. Assassi
4/7/25	Tue	Cancer immunotherapy	Dr. Curran
4/9/25	Thu	Cancer immunotherapy	Dr. Curran
4/14/25	Tue	Tolerance & Transplantation	Dr. Al-Atrash
4/16/25	Thu	Microbiome	Dr. McAllister
4/21/25	Tue	Neuro-immunology	Dr. Ritzel
4/23/25	Thu	Allergy	Dr. Adachi
4/28/25	Tue	Mucosal immunity	Dr. Schenkel
4/30/25	Thu	Exam 3 Review Session	TAs
5/5/25	Tue	**Exam 3**	