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 Coordinators, Cheryl Spitzenberger or 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.

<table>
<tr>
<td>Term and Year: Spring 2025

Course Number and Course Title:
GS06 1013: Fundamental Immunology

Credit Hours: 3

Meeting Location: GSBS Large Classroom

Building/Room#: BSRB S3.8371

WebEx/Zoom Link: N/A</td>
<td>Program Required Course: Yes

Approval Code: No

Audit Permitted: Yes

Classes Begin: Jan. 14, 2025

Classes End: May 01, 2025

Final Exam Week: May 6, 2025</td>
</tr>
<tr>
<td colspan="2">Class Meeting Schedule
<table>
<tr><th>Day</th><th>Time</th></tr>
<tr><td>Tuesday and Thursday</td><td>9:30AM – 11:00AM</td></tr>
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</td>
</tr>
<tr>
<td>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-Directors:
Name and Degree: Kristen Pauken, PhD
Title: Assistant Professor
Department: Immunology
Institution: MDACC
Email Address: kepauken@mdanderson.org</td>
<td>Instructors:

See attached class schedule</td>
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NOTE: Office hours are available by request. Please email me to arrange a time to meet.

Teaching Assistant: (if any)

TBD
Name and Email Address

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

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

1. Read, process, and review (study) material from 1 or 2 seminal reviews relating to the week's cancer biology topic
2. Read 2 research articles (e.g., primary research)
3. Prepare for and take course quizzes based on course lectures/ readings.
4. Attend and participate at the review session
5. Participate in and contribute to course discussions during lecture, review sessions
6. Prepare for and take a final examination based on lecture and some reading material

Students are expected to complete all assigned reading material (reviews and research literature) prior to class. While you may work and discuss all course materials and assignments in groups, all writing assignments must be your own. 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 during examinations (quizzes and final) 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
First exam (30 %)	3 exams will have equal impact in the final grade including the final exam and each exam will cover related lectures only.
Second exam (30%)	3 exams will have equal impact in the final grade including the final exam and each exam will cover related lectures only.
Final exam (30 %)	3 exams will have equal impact in the final grade including the final exam and each exam will cover related lectures only.
Participation and/or Attendance (10 %)	Will have attendance taken in each lecture

CLASS SCHEDULE - Spring 2025

Date	Day	Time	Location	Topic	2025 Lecturers
1/14/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Introduction/Overview	Dr. Reuben / Dr. Pauken
1/16/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Major Techniques to Study Immunology	Dr. Haymaker
1/21/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Hematopoiesis	Dr. Wenzel
1/23/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Complement & Fc Receptors	Dr. Afshar-Kharghan
1/28/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Myeloid cell subsets	Dr. Gubin
1/30/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Cytokine Signaling	Dr. Moghaddam
2/4/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom	MHC & Ag pres	Dr. Abbas

			(BSRB S3.8371)		
2/6/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Innate Sensors/Pattern Recognition	Dr. Haymaker
2/11/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Exam 1 Review Session	TAs
2/13/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	**Exam 1**	
2/18/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	T cell receptors	Dr. Reuben
2/20/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	T cell development	Dr. Reuben
2/25/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	T cell activation and signaling	Dr. Pauken
2/27/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Helper T cell subsets and differentiation	Dr. Nurieva
3/4/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	B cell development/ Immunoglobulin	Dr. Shalapour
3/6/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	B cell activation, memory, and BCR rearrangements	Dr. Shalapour
3/11/2025	Tue			Spring Break no class	
3/13/2025	Thu			Spring Break no class	
3/18/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Tregs	Dr. DiPilato
3/20/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	NK cells/ILCs	Dr. Daher
3/25/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	iNKT	Dr. Im
3/27/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Exam 2 Review Session	TAs
4/1/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	**Exam 2**	
4/3/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Vaccines	Dr. Gubin

4/8/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Autoimmunity	Dr. Assassi
4/10/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Cancer immunotherapy	Dr. Curran
4/15/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Tolerance &Transplantation	Dr. Al-Atrash
4/17/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Microbiome	Dr. McAllister
4/22/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Neuro-immunology	Dr. Amit
4/24/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Allergy	Dr. Adachi
4/29/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Mucosal immunity	Dr. Schenkel
5/1/2025	Thu	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	Exam 3 Review session	TAs
5/6/2025	Tue	9:30AM - 11:00AM	GSBS Large Classroom (BSRB S3.8371)	**Exam 3**	

AR/jal