

**IMPORTANT:** This syllabus form should be submitted to OAA ([gsbs\\_academic\\_affairs@uth.tmc.edu](mailto: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 Spitzengerger 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.

<p><b>Term and Year: Fall 2021</b></p> <p>Course Number and Course Title: <b>GS06 1103: Emerging Concepts in Immunology</b></p> <p>Credit Hours: <b>3 hours</b></p> <p>Meeting Location: <b>Online at beginning of semester</b></p> <p>Building/Room#: <b>McGovern Medical School Building MSB B.620 (if/when in person sessions can be held)</b></p> <p>WebEx/Zoom Link: Webex Meeting 1208 30 6436 <a href="https://uthealth.webex.com/uthealth/j.php?MTID=md7d0a777c3b51bfb91d4300ee8e50ced">https://uthealth.webex.com/uthealth/j.php?MTID=md7d0a777c3b51bfb91d4300ee8e50ced</a></p>	<p>Program Required Course: <b>Yes</b></p> <p>Approval Code: <b>Yes</b> <b>(If yes, the Course Director or the Course Designee will provide the approval code.)</b></p> <p>Audit Permitted: <b>Yes</b></p> <p>Classes Begin: <b>Tues, Aug 31</b></p> <p>Classes End: <b>Tues, Nov 23</b></p> <p>Final Exam Week: <b>No exam</b></p>						
<p><b>Class Meeting Schedule</b></p>							
<table border="1"> <thead> <tr> <th data-bbox="110 1148 808 1186">Day</th> <th data-bbox="808 1148 1498 1186">Time</th> </tr> </thead> <tbody> <tr> <td data-bbox="110 1186 808 1224">Tuesday</td> <td data-bbox="808 1186 1498 1224">3-5 PM</td> </tr> <tr> <td data-bbox="110 1224 808 1266">Thursday</td> <td data-bbox="808 1224 1498 1266">3-5 PM</td> </tr> </tbody> </table>		Day	Time	Tuesday	3-5 PM	Thursday	3-5 PM
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<p><b>Course Director</b></p> <p>Name and Degree: <b>Pamela Wenzel, PhD</b></p> <p>Title: <b>Associate Professor</b></p> <p>Department: <b>Integrative Biology &amp; Pharmacology</b></p> <p>Institution: <i>UTH</i></p> <p>Email Address: <a href="mailto:Pamela.L.Wenzel@uth.tmc.edu">Pamela.L.Wenzel@uth.tmc.edu</a></p> <p>Contact Number: <b>713-500-3472</b></p>	<p><b>Course Instructors</b></p> <p><b>1. Pamela Wenzel, Ph.D.</b> UTHealth Integrative Biology &amp; Pharmacology <a href="mailto:Pamela.L.Wenzel@uth.tmc.edu">Pamela.L.Wenzel@uth.tmc.edu</a></p> <p><b>2. Jeffrey Actor, Ph.D.</b> UTHealth Pathology and Laboratory Medicine <a href="mailto:Jeffrey.K.Actor@uth.tmc.edu">Jeffrey.K.Actor@uth.tmc.edu</a></p> <p><b>3. Vahid Afshar-Kharghan, M.D.</b> MDACC Pulmonary Medicine <a href="mailto:vakharghan@mdanderson.org">vakharghan@mdanderson.org</a></p> <p><b>4. Melissa Aldrich, Ph.D.</b> UTHealth Institute of Molecular Medicine <a href="mailto:Melissa.B.Aldrich@uth.tmc.edu">Melissa.B.Aldrich@uth.tmc.edu</a></p>						

**Course Co-Director/s:**

None

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

**Teaching Assistant:**

None

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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 (if any)**

- Original research articles assigned by faculty instructors

**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 a minimum of 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:)

Homework ( %)	
Quiz ( %)	
Presentation ( <b>50%</b> )	<ul style="list-style-type: none"> <li>a. Coverage of relevant background literature and identification of critical observations</li> <li>b. Identification of critical problems and hypotheses addressed in the paper</li> <li>c. Understanding of the experimental design and methods utilized</li> <li>d. Presentation, interpretation and discussion of the data</li> <li>e. Length and style of presentation</li> </ul>
Midterm Exams ( %)	
Final Exam ( %)	
Workshop or Breakout-Session ( %)	
Participation and/or Attendance ( <b>50%</b> )	<ul style="list-style-type: none"> <li>a. Novelty/originality of ideas expressed</li> <li>b. Relevance of comments to the issues being discussed</li> <li>c. Frequency of productive contributions to discussion</li> </ul>

## CLASS SCHEDULE

Day/Date	Duration (Hr)	Lecture Topic	Lecturer/s
Tues Aug 31	2	Introduction	Pamela Wenzel
Tues Sept 7	2	Hematopoiesis	Pamela Wenzel
Thurs Sept 9	2	MHC, Antigen Presentation	Gregory Lizee
Tues Sept 14	2	Metabolic Regulation of T Cell Function	Shao-Cong Sun
Thurs Sept 16	2	Myeloid Cells and Tumorigenesis	Seyed Moghaddam

Tues Sept 21	2	CD1 Restricted T Cells and Diseases	Jin Seon Im
Thurs Sept 23	2	Cellular Immunotherapy for Cancer	Qing Ma
Tues Sept 28		Open	Open
Thurs Sept 30	2	Tumor Microenvironment	Florencia McAllister
Tues Oct 5	2	Monoclonal Antibodies	Laura Bover
Thurs Oct 7	2	Complement	Vahid Afshar-Kharghan
Tues Oct 12		Open	Open
Thurs Oct 14	2	Inflammation and Innate Immunity	Jeffrey Actor
Tues Oct 19	2	Lymphatic tumor immunity	Melissa Aldrich
Tues Oct 26	2	Bystander T cells	Alexandre Reuben
Tues Nov 2	2	Checkpoint Blockade	Michael Curran
Thurs Nov 4	2	Host immunity in lung/COVID-19	Scott Evans
Tues Nov 9	2	Abnormal BCR Signaling	R. Eric Davis
Thurs Nov 11	2	HSC and B Cell Development	Momoko Yoshimoto
Tues Nov 16	2	Autoimmunity	Shervin Assassi
Thurs Nov 18	2	Vaccine and Adjuvants	Jagannadha Sastry
Tues Nov 23	2	B Cells in Immunotherapy	Tina Cascone

*jal/04.21*