



School of Pharmacy
Required Course Syllabus
P1 Maymester, Campbell 211
Monday – Friday, 9:00 AM – 12:00 PM, Skills Practicum (injection lab – TBD)

Course #PHAR 6201/Track: PCPI
Immunology and Immunizations
Maymester (May 16 – May 28, 2022)
(IPE = 0, IPPE = 2)

Online

Course Coordinator: Mary L. Chavez, Pharm.D., FAACP
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Additional Faculty

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Virtual Office Hours

Office hours will be based on appointments through Blackboard Collaborate Ultra, which may be requested via e-mail at least 48 business hours in advance. The coordinator will accommodate students as time permits. Questions related to the course in general should be directed to the coordinator, whereas content/topic-specific questions should be directed to the instructor for the lecture.

Course Description

This course will provide basic knowledge of the human immune system and the means through which the mechanisms of immunity act in response to infection. Students will be introduced to the innate and adaptive immune response to infection, injury, and disease. Students will be responsible for understanding how immunizations work in the body, which immunizations to recommend during a patient profile review, and how to manage adverse reactions. Additionally, students will complete a certification course to become certified providers of immunizations.

Pharmacists' Patient Care Process (PPCP)

Students will use the Pharmacist's Patient Care Process throughout class to **collect, assess, plan, implement, and follow-up with patients**. **Collaboration** and **communication** between students during team based learning exercises using PPCP will be applied. Students are expected to understand and apply the APhA Immunization Services Resource guide for pharmacists.

Students will use *Applying the Pharmacist's Patient Care Process to Immunization Services*.



<http://pharmacylibrary.com/doi/book/10.21019/9781582122564>

Course Learning Objectives

1. Describe the basic principles of immunology, associated microbes as well the organs and cells involved in immune responses. Explain the significance and scientific rationale for immunizations.
2. Describe innate and acquired immune responses, as well as differences and regulatory relationship. Explain adverse immune responses, and consequences of failed immune responses.
3. Describe antibody structure, antigen binding, and recognition processes.
4. Describe epidemiology, clinical presentation of specific immune-based diseases.
5. Describe regulatory aspects, health and immune-disease prevention strategies.
6. Engage in professional and effective communication with regards to immune-based diseases. Apply motivational interviewing techniques to increase immunization uptake and adherence to series vaccines.
7. Interpret vaccine schedules and public health benefits and controversies as they pertain to immunizations.
8. Develop skills to immunize and respond to adverse events as they pertain to vaccine administration earn a certificate (APhA Pharmacy Based IMZ Program).

Course Objectives	CAPE Outcomes	PCOA	Learning Activities	Assessment
1. Describe the basic principles of immunology, associated microbes as well the organs and cells involved in immune responses. Explain the significance and scientific rationale for immunizations.	1.1 2.3.1	1.3.1 Structure, function, and characteristics of microorganisms: microbe classification, structure, metabolism, genetics 1.3.2 Pathogenic microorganisms of humans 1.4.1 innate and adaptive immunity 4.5.3 Identify the role of immunizations in disease prevention and health promotion	Lecture, Pre-class Readings	QUIZ, EXAM
2. Describe innate and acquired immune responses, as well as differences and regulatory relationship. Explain adverse immune responses and consequences of failed immune responses.	1.1	1.4.1 Innate and adaptive immunity 1.4.1 Innate and adaptive immunity 1.4.2 Principles of antibody actions 1.4.3 Hypersensitivity and types of reactions	Lecture, Pre-class Readings	QUIZ, EXAM
3. Describe antibody structure, antigen binding, and recognition processes.	1.1	1.4.1 Innate and adaptive immunity 1.4.2 Principles of antibody actions	Lecture, Pre-class Readings	QUIZ, EXAM
4. Describe epidemiology, clinical presentation of specific immune-based diseases.	1.1	4.7.6 Apply evidence-based decision making to patient care	Lecture, Pre-class Readings	QUIZ, EXAM
5. Describe regulatory aspects, health and immune-disease prevention strategies and understand vaccine protocols and development.	1.1	3.5.1 Pharmacy Law and Regulatory Affairs 4.1.6 Evidence based practice	Lecture, Pre-class Readings	QUIZ, EXAM
6. Engage in professional and effective communication with regards to immune-based diseases. Apply motivational interviewing techniques to increase immunization uptake and adherence to series vaccines.	1.1, 3.3.1	3.9.2 Principles of Behavior Modification	Lecture, Pre-class Readings	QUIZ, EXAM
7. Interpret vaccine schedules and public health benefits and controversies as they pertain to immunizations.	1.1.1 2.1.1	3.9.2 Principles of Behavior Modification 3.7.2 Ethical Decision Making	Lecture, Pre-class Readings	QUIZ, EXAM
8. Develop skills to immunize and respond to adverse events as they pertain to vaccine administration earn a certificate (Alpha Pharmacy Based IMZ Program).	1.1	2.7.1 Sterile and Non-sterile compounding 4.5.3 Identify the role of immunizations in disease prevention and health promotion 4.6.1 Describe techniques for obtaining a comprehensive patient history 4.7.6 Apply evidence-based decision making to patient care	Lecture, Pre-class Readings	EXAM, Skills Based Learning

Detailed Course Meetings & Location

Monday – Friday (In person, classroom at Campbell Building)

The majority of the course will be held in person, which will not have asynchronous records. The students should attend the class and participate in the discussion and group activities. We strongly encourage the student to take precautions and all necessary measures to keep social distance and prevent infection during the pandemic.

In a major disruption (e.g., Covid-19, H1N1 epidemic, or subzero weather), be prepared to maintain course progress via other means (e.g., Internet, our Blackboard course shell, etc.) and check your email (especially your UTEP miners account) regularly.

Online Platform/Blackboard:

Accessing Course Content on Blackboard: All lectures, handouts, and course material will be located in Blackboard. Log into My UTEP.edu and click on the Blackboard link to access the online course for PHAR 6201. The course is individualized and students may access lectures/handouts, as course instructors make them available. Except in cases of a UTEP network being “down” or “offline,” you are ultimately responsible to ensure that your computer is connected to the internet and that any issues are addressed prior to class and/or assessments.

Online Assessment Requirements:

This course requires the use of ExamSoft® (or CORE ELMS®). Students are responsible for creating their online login within the first week of class. If you cannot access your online account, please contact the Technology Implementation Manager (TIM) to resolve this issue. Students are responsible for ensuring they have access to the online assessment system. Assessments (e.g., assignments, quizzes, and exams) may be disseminated before the due date. This requires students to download the assessment using an internet connection. It is the student’s responsibility to maintain access to a reliable internet connection (with the rare exception of when UTEP’s systems are down).

CAPE Educational Outcomes

The Center for the Advancement of Pharmacy Education (CAPE) has defined educational outcomes to guide the PharmD curriculum (see AACP CAPE Outcomes). The content of this course will cover the following CAPE educational outcomes.

Level of Assessment: 1 – Introduce 2 – Reinforce 3 – Apply

	CAPE Outcomes	Level of Assessment
1.1	Learner (Learner) Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.	1
2.1	Patient Centered Care Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).	1
2.3	Health and Wellness (Promoter) Describe systematic preventive care, using risk assessment, risk reduction, screening, education, and immunizations.	1
3.3	Patient Advocacy (Advocate)	1

Empower Patients to take responsibility for, and control of, their health.
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Expectations of Students during Course

Student participation in class discussion is an essential component of the learning process. Students are expected to complete all assignments before class to be sufficiently prepared to make a meaningful contribution to the class dialogue. The content covered in this course provides the foundation needed to be successful. To achieve the learning outcomes for this course, student must come to class prepared, be on time, be engaged and attentive and spend adequate time working through assignments. All students involved in group work and interdisciplinary instruction are expected to equally contribute and provide professional courtesy to their classmates regarding timelines and communication.

Methods of Instruction/Learning

The learning outcomes in this course will be achieved via:

1. Outside Preparation Students are expected to read, review, view, and listen to all material prior to coming to class.
 2. In-class onl Lectures Students are expected to attend class and be interactive members of the class
 3. Skill-based Assignment/Activity All students are expected to participate in skill-based learning activities and must have active contribution to team assignments.
 4. Case Discussions / SOAP Notes/Documentation – Students will be expected to complete all cases, participate in their discussion and share their SOAP notes provides practice opportunities for course ability outcomes and allows students to practice evaluating and assessing patient cases, make therapeutic recommendations and document patient interactions.
 5. Mock Patient Interview- provides practice in interview skills and practice integrating clinical information.
 6. Exams/Quizzes – allows students to demonstrate the course ability outcomes and instructors to provide necessary feedback.
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COURSE REQUIREMENTS:

Required Resources / Text:

- Cellular and Molecular Immunology 9th Edition. 2018. Abul K. et al. Elsevier, Inc.: Philadelphia, Available online at UTEP Library resources at:
<https://ebookcentral.proquest.com/lib/utep/detail.action?docID=5553754&query=Cellular+and+Molecular+Immunology>
- Clinical Immunology: Principles and Practice. (5th ed.) 2019. Rich RR, et al. Elsevier Ltd, ISBN 978-0-0720-6896-6. Available online at UTEP Library resources at:
<https://www.sciencedirect.com/science/article/pii/B9780702068966001009>
- APhA's Pharmacy-Based Immunization Delivery certificate training program.
[immunization \(pharmacist.com\)](http://immunization.pharmacist.com)

Recommended Resources:

- Immunology: a Short Course. 7th edition. Coico R. Sunshine G. John Wiley & Sons, Inc.: Hoboken, NJ. 2015. Online UTEP library resource at <https://ebookcentral.proquest.com/lib/utep/detail.action?pq-origsite=primo&docID=1936429>

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Laptop Computer

- Students are expected to bring laptop computers to the online class each day for participation in on-line exercises or assessments. It is the responsibility of the students to make sure that the laptops are in working condition and meets the University and School of Pharmacy IT requirements. (See SOP Student Handbook). Students are not allowed to have their laptops open in class unless allowed to do so by the instructor.

Cell Phone Policy

- All cell phones must be placed on silent prior to entering the classroom. Students may not cause disruptions or be distracted by the use of a cell phone during class. An instructor may ask a student to leave the classroom if a student is found to be disruptive and / or forgets to silence their phones.

Recording Devices

- Students may only use a recording device with the permission of the instructor on the day of the lecture. Distribution of student-generated recordings (regardless of format) is prohibited without the written and signed permission of the presenter and students identifiable on the recording.

Food Policy

- Students are allowed to bring a light snack and a drink into class for the skills portion of the course.

Evaluation and Grading Policy

Course point distribution will be as follows:

Type of Assessment	Total Points	% Course Grade
Exam #1	20	20
Exam #2	20	20
Final Exam	35	35
Immunization Certificate & Pre- and Post-Exams	25	25
IPPE (2 hours) (Case studies and Immunization Skills)		Pass/Fail

Assignment of grades:

A = 90 – 100% (Satisfactory)
B = 80 – 89% (Satisfactory)
C = 70 – 79%(Satisfactory)
D = 60-69% (Unsatisfactory)
F = < 60% (Unsatisfactory)

All Assessments will be administered via Exam Soft®, unless noted otherwise.

It is the responsibility of the **student** to monitor their progress during the course and see that they are maintaining the required competency level. Students should seek advice and assistance from the course facilitator as soon as the student encounters any difficulty in the course.

Professionalism: Students will be evaluated on class attendance, participation, and completion of activities.

Quizzes and Exams: There is a total of **two exams** and one comprehensive final exam in the course. The quizzes will consist of True/False and Multiple-choice Questions. Each **exam (1 & 2)** will be worth 20% (40% total for two exams) of the course grade. The final exam (35% of total grade) will be comprehensive and will include material from the immunology course content. The immunization portion of the course is worth 25% of the grade. **Exams 1 & 2 will be a mix of group problem solving (12 points) and individual ExamSoft assessment (8 points).**

Class attendance: All students are expected to attend class on time and be actively engaged. Student participation will be monitored daily.

Assignments: All assignments on the syllabus are expected to be completed by the beginning of class and full participation is expected of all students.

Immunization Certificate: Students must receive their immunization certificate in order to pass the class. The APhA certificate program requires a pretest, a live component, a skills test, and post exam. The immunization certificate is required for the student to be able to administer immunizations. **Students are required to attend all portions of the APhA on-line synchronous lectures (Dr. Chavez's presentations). Attendance is a requirement by APhA and absence will prevent a student from receiving their immunization certification.**

Missed Quizzes / Exams / Assignments Policy

Students must complete quizzes based assignments and on previous lectures. A quiz may cover more than one lecture topic but the quiz will still be weighted equally with all other weekly quizzes. There will be no make-up for missed quizzes. Students who miss a quiz will receive a zero for that week's

quiz grade. If a student enters the classroom after the quiz has started, no additional time will be allotted to take complete the quiz. If you are not physically in class at the time the quiz is administered, you are not permitted to take the quiz.

NO make-up examinations or quizzes will be given for an UNEXCUSED ABSENCE. NO make-up pop quizzes will be given. NO late assignments will be accepted for an UNEXCUSED ABSENCE.

Remediation Policies:

Student must participate in all assignments to be eligible for remediation. Other important factors are also considered. See student handbook for details.

Technical Assistance

Checking computer requirements and ensuring that all software up to date is essential for students to access course content. **Supported browsers include** – 1) For a PC: FireFox, Internet Explorer (Do NOT use IE7), and Chrome, 2) For a Mac: Safari, Firefox, and Chrome. To enhance browser performance, students should clear the browser cache and allow pop-ups. In addition to testing the web browser, check to ensure that the computer has an updated version of Java (go to <http://java.com>, click on “Do I have Java”, click on “Verify Java Version,” update Java if needed). Additional browser plug-ins may also be needed to view some content that your instructor may share on the learning management system. Common plug-ins include: Adobe Reader, Flash Player, Windows Media Player, QuickTime. When creating documents, slide presentations, spreadsheets, etc., be sure to use Microsoft Office or a compatible program, (see 10 Free MS Word Alternatives). The UTEP Technology Support Services (3rd floor, UTEP Library) can also provide students with any applications, compatibility packs, patches, and updates that may be needed.

Students working off campus may need to set up a Virtual Private Network (VPN) on their computer to access UTEP resources for this class (i.e. Library). The link below provides information in setting up a VPN connection depending on the operating system. Students may contact the Help Desk for assistance (See Technical Assistance information). <http://admin.utep.edu/Default.aspx?tabid=58534>

If technical problems are experienced with the course, students should contact the UTEP Helpdesk during: Monday– Friday: 8AM – 5PM. If calling within UTEP: 915.747.4357. If calling from outside UTEP: 915.747.5257. For more information, please visit <http://helpdesk.utep.edu>. For help with Blackboard: <http://admin.utep.edu/Default.aspx?tabid=74094>

In order for UTEP to provide a stable learning environment, Thursdays from 12:00-6:00am MST are reserved for minor preventive maintenance. This maintenance window is scheduled during the lowest usage time for the system. Blackboard may or may not be available during this time, depending on whether maintenance is necessary. Whenever possible, this time will be utilized to

perform all minor maintenance. Unscheduled outages occur rarely, but they do happen. In the event of an unscheduled outage, Technology Support Services will confer with appropriate student and faculty networks to provide appropriate notifications to those affected.

Students can also visit an on-campus lab such as the ATLAS lab located within the Undergraduate Learning Center (UGLC building) for additional technical assistance. In addition to the various campus computer labs (ATLAS in UGLC or LACIT in Liberal Arts for example), Technology Support Services provides workstations for student use. To learn more, please visit <http://admin.utep.edu/Default.aspx?tabid=74174>.

Attendance and Classroom Behavior

The attendance policy for the School of Pharmacy is outlined in the Student Handbook. It is expected that students should demonstrate their commitment to the profession and respect for faculty, guest speakers, and colleagues by attending all classes and arriving to class on time prepared for the day's lesson(s).

Attendance will be taken by roll-calling, sign-in sheet, pop quizzes, or any other means deemed appropriate by the course instructors. The course facilitator may deduct up two points from overall course grade for every unexcused absence.

If a student has an excused absence, they should immediately notify the course coordinator(s) and instructor(s) as well as the preceptor and Director of Experiential Education for the IPPE component of this course. To secure approval for an absence related to travel for professional meetings or for events that fall outside of the criteria outlined in the Student Handbook, please refer to the Handbook for more information regarding required documentation for submission to the Office of Student Affairs.

Attendance for the APhA immunization live on-line section is mandatory.

Exam Day Policy

Students must arrive on time for examinations. Students arriving after any student(s) has/have completed the exam and have left the ILC may not be allowed to sit for the exam, and may receive a score of zero. No allowances will be made for an exam being missed, other than documented illness or emergency. The student must contact the course facilitator for confirmation prior to the exam. If permission is granted to delay the exam, it is the student's responsibility to contact the course facilitator to arrange for an alternative exam time. In this event, the nature of the make-up will be at the discretion of the course coordinator (oral, written, increased weighting on the final, etc.). An unexcused absence from an exam may result in a grade of "zero" for that exam.

Attendance and Classroom Behavior

It is expected that students should demonstrate their commitment to the profession and respect for faculty, guest speakers, and colleagues by attending all classes and arriving to class on time prepared for the day's lesson(s). Students are responsible for the information covered during the live sessions, which may be included on quizzes and exams. Any student who arrives to class after the speaker has started lecture will be considered absent for that day.

If you have an excused absence, you should immediately notify the course coordinator and instructor. The doctor's note or any other form in support of the excused absence should be provided to the course coordinator as soon as possible.

Unique Dress Policy for Course: If there are any specific or unique dress requirements for your course and/or activities within your course, this should be described here and be communicated to students during the course orientation session.

Students should expect to wear short sleeve shirts on the day of immunization certification. Access to the upper arm (deltoid region) will be necessary to participate in the certification.

Exam Day Policy

Students must arrive on time for examinations. Students arriving after any student(s) has/have completed the exam and have left the ILC may not be allowed to sit for the exam, and may receive a score of zero. No allowances will be made for an exam being missed, other than documented illness or emergency. The student must contact the course coordinator for confirmation prior to the exam. If permission is granted to delay the exam, it is the student's responsibility to contact the course coordinator to arrange for an alternative exam time. In this event, the nature of the make-up will be at the discretion of the course coordinator (oral, written, increased weighting on the final, etc.). An unexcused absence from an exam may result in a grade of "zero" for that exam and will result in an extra 5% deduction of the total overall course.

UTEP and SOP Policy for Academic Integrity

Any student who commits an act of academic dishonesty is subject to discipline. The instructor is required to report all suspected academic dishonesty to the UTEP Office of Student Conduct and Conflict Resolution. Please refer to the Student Handbook for SOP guidance on academic integrity (*see Table of Contents for Curriculum and Classroom Policies: Academic Integrity*).

Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, and any act designed to give unfair advantage to a student or the attempt to commit such acts.

Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP), and available in the Office of the Dean of Students and on the homepage of the Dean of Students at www.utep.edu/dos, may result in sanctions ranging from disciplinary probation, to a failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others. (For more information, see: <http://sa.utep.edu/osccr/academic-integrity/>)

Professionalism and Professional Conduct

While enrolled at the University, a student neither loses the rights nor escapes the responsibilities of citizenship. Thus, UTEP and the SOP value professionalism and expect all students to not only acquire but also maintain the highest standards of professional attitudes and behaviors in their interactions with their fellow classmates, staff, faculty, colleagues and their patients, as described in the Student Handbook and as per UTEP's student conduct policies (see <http://sa.utep.edu/osccr/student-conduct/> & <http://admin.utep.edu/Default.aspx?tabid=73922> for further information). Any student who engages in conduct that is prohibited by the Board of Regents' Rules and Regulations, University or SOP rules or by federal, state, or local law is subject to discipline whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct. Please refer to the Student Handbook for specific expectations regarding professional conduct in the SOP (*see Table of Contents for Academic Progression: Good Standing: Professional*).

UTEP and SOP Policy for Special Accommodations (ADA)

"If you have or suspect a disability and need classroom accommodations, you should contact the Center for Accommodations and Support Services (CASS) at 747-5148." You can also e-mail the office at cass@utep.edu or go by their office in Union Building East (Room 106). For additional information, visit the CASS website at <http://sa.utep.edu/cass/>

General Statement about Course Policy

The syllabus is subject to change to meet course needs, especially if there are unexpected disruptions or changes in class size, resources, etc. The most updated syllabus can be found on the course Blackboard shell. It is your responsibility to review the syllabus periodically for updates.

Additional Information

Campus Concealed Carry:
Effective August 1, 2016.

<http://sa.utep.edu/campuscarry/>

Civility Statement:

You are expected to follow basic standards of courtesy (<http://admin.utep.edu/Default.aspx?tabid=73922>) and may be dismissed from class for blatant or sustained disruptive behavior

Cell Phone Policy (Optional for Faculty to adapt or not)

All cell phones must be turned off before the beginning of the class. If a student forgets to turn it off, he/she will have to leave the classroom and may only return with the instructor's permission.

Student Support:

UTEP provides a variety of resources for those in need (e.g., if you feel overwhelmed, stressed or dealing with a crisis):

- UTEP's Counseling Center (free counseling to all students): 747-5302, which after-hours goes to a crisis line
- Mental Health Crisis Line: 779-1800
- National Suicide Prevention Hotline: 1-800-273-8255
- Veterans Crisis Line: 1-800-273-8255
- NAMI (National Alliance Against Mental Illness) of El Paso: 534-5478
- <http://caringeducators.tumblr.com/survival>

Title IX:

Title IX of the Education Amendments of 1972 (Title IX), prohibit discrimination on the basis of sex in education programs or activities operated by recipients of Federal financial assistance. Sexual harassment of students, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. Sexual violence refers to physical sexual acts perpetrated against a person's will or where a person is incapable of giving consent due to the victim's use of drugs or alcohol. An individual also may be unable to give consent due to an intellectual or other disability. A number of different acts fall into the category of sexual violence, including rape, sexual assault, sexual battery, sexual coercion, stalking, and relationship violence. All such acts of sexual violence are forms of sexual harassment covered under Title IX.

In accordance with Title IX of the Education Amendments of 1972, UTEP does not discriminate on the basis of sex in the operation of its educational programs and activities. This commitment to non-discrimination applies to both employment in and admission to such programs and activities. [Link to full text at <http://admin.utep.edu/Default.aspx?tabid=68750>]

PHAR6201: Course Calendar and Topic Outline
Immunology and Immunizations
May 18th – May 30th, 2020

Day	Date	Time	Content	Required Reading* and Assignments	Faculty
1	Monday May 16, 2022	9:00am- 11:50am	Course Orientation Introduction to immunology and microbes; Innate immunity and adaptive immunity and their regulatory relationship	<ul style="list-style-type: none"> • Read: Properties and Overview of Immune Responses (Cellular & Molecular Immunology, 9th edition, Chapter 1) • Read: Cells and Tissues of the Immune System, (Cellular & Molecular Immunology, 9th edition, Chapter 2) • Read: Leukocyte migration into tissues (Cellular & Molecular Immunology, 9th edition, Chapter 3) • Read: Innate Immunity (Cellular & Molecular Immunology, 9th edition, Chapter 4) • Discuss: The role of the immune system in infection(s) • Begin the pre-work for the APhA Immunization Certificate 	Qin
2	Tuesday, May 17 2022	9:00am- 11:50am	Principles of Antibody Actions, MHC, B-cell and T-cell Immunity	<ul style="list-style-type: none"> • Read: Antibodies and Antigens Cellular & Molecular Immunology, 9th edition, Chapter 5) • Read: Major Histocompatibility Complex Molecules and Antigen Presentation to T Lymphocytes (Cellular & Molecular Immunology, 9th edition, Chapter 6) 	Qin
3	Wednesday, May 18, 2022	9:00am- 11:50am		<ul style="list-style-type: none"> • Exam #1 • Read: Immune Receptors and Signal Transduction (Cellular & Molecular Immunology, 9th edition, Chapter 7) • Read: Lymphocyte Development and Antigen Receptor Gene Rearrangement ((Cellular & Molecular Immunology, 9th edition, Chapter 8) • Read: Activation of T Lymphocytes ((Cellular & Molecular Immunology, 9th edition, Chapter 9) 	Qin
4	Thursday, May 19, 2020	9:00am- 11:50am	Immune Responses	<ul style="list-style-type: none"> • Read: Differentiation and Function of CD4+ Effector T Cells (Cellular & Molecular Immunology, 9th edition, Chapter 10) • Read: Differentiation and Function of CD8+ Effector T Cells ((Cellular & Molecular Immunology, 9th edition, Chapter 11) • Read: B cell activation and antibody production (Cellular & Molecular Immunology, 9th edition, Chapter 12) • Read: Effector mechanisms of humoral immunity (Cellular & Molecular Immunology, 9th edition, Chapter 13) • Complete: APhA Pre-Work is due on TUESDAY, May 22nd, 2018 	Qin

5	Friday, May 20, 2020		Failure of Immune Responses Hypersensitivity Reactions	<ul style="list-style-type: none"> • Read: Immunity to microbes (Cellular & Molecular Immunology, 9th edition, Chapter 16) • Read: Hypersensitivity disorder (Cellular & Molecular Immunology, 9th edition, Chapter 19) • Read: Allergy (Cellular & Molecular Immunology, 9th edition, Chapter 20) 	Qin
6	Monday, May 23, 2022	8 hours out of class		<ul style="list-style-type: none"> • Complete APhA Pre-work: Print APhA EXAM RESULTS • CERTIFICATE MUST BE PRESENTED FOR ENTRY INTO IMMUNIZATION PORTION OF CLASS (complete by Sunday May 24) • • 	
7	Tuesday, May 24, 2021	9:00am-10am 10am-11:50am	Welcome, Clinical Review	<ul style="list-style-type: none"> • Exam #2 • APhA program material Synchronous – STUDENTS MUST BE PRESENT PER APhA 	Chavez/Smith
8	Wednesday, May 25, 2020	9:00am-11:50am	Clinical Review	<ul style="list-style-type: none"> • Watch: CDC “An Overview of VAERS” (10 minutes, 36 seconds) https://www.youtube.com/watch?v=a9bXB3R2qP8 • APhA program material Synchronous – STUDENTS MUST BE PRESENT PER APhA 	Chavez/Smith
9	Thursday, May 26, 2020	9:00am-11:50am	Case Studies and Applications Immunization Certification Skills Assessment	<ul style="list-style-type: none"> • Read: Texas Administration Code Title 22, Part 15, Chapter 295, Rule 295.15 at: https://texreg.sos.state.tx.us/public/readtac\$ext.TacPage?sl=T&app=9&p_dir=P&p_rloc=181554&p_tloc=&p_ploc=1&pg=2&p_tac=&ti=22&pt=15&ch=295&rl=16 • APhA program material - Synchronous – STUDENTS MUST BE PRESENT PER APhA • Course Evaluation 	Chavez/Smith
10	Friday, May 27, Various Sections		APhA Skills Lab	<ul style="list-style-type: none"> • LIVE APhA IMMUNIZATION Skills portion of program 	Chavez Navarrete Smith
10	Saturday, May 27, 2020	9:00am-11:45am	Final Exam	<ul style="list-style-type: none"> • Comprehensive exam over immunology content 	Qin
	9:00-11:45a,		APhA online	<ul style="list-style-type: none"> • Completion of Post-Exam APhA immunization exam and course evaluation 	