

OBIO 1001D - Oral Immunology

Academic Year 2024-2025 Syllabus, Section 001, CRN 40006

Academic Year: D1

This course is academic year D1.

Instructor Information

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Course Director

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Time and Location

See Academic Schedule for course schedule.

Office Hours: Due to the unpredictability of my schedule, I do not strictly keep formal office hours. I will endeavor to make myself available on Tuesdays from 3:30-4:30 pm. However, if my door is open and I am free, feel free to stop in if you need to discuss any aspect of the course. Students may schedule appointments with the course director or with individual course instructors, by e-mail. If you have any questions regarding lecture topics, it is best to address them to the faculty member who gave the lecture after first consulting your required textbook(s).

Course Materials

RECOMMENDED TEXTS

- *Janeway's Immunobiology*, 10th edition, 2023, Kenneth Murphy, Casey Weaver, ISBN: 978-0-393-68093-5. Rutgers - George F. Smith Library of the Health Sciences

This is the main textbook for the course, but material will be taken from other sources, including the following:

- *Immunology: A Short Course*, 7th edition, 2015. Richard Coico and Geoffrey Sunshine, Wiley-Blackwell, ISBN: 978-0-470-08158-7
- *Cellular and Molecular Immunology*, 9th edition, 2018, AK. Abbas, AHH. Lichtman, S Pillai: Elsevier Saunders ISBN 9780323222754
- *Immunology*, 8th edition, 2013, David Male, Jonathan Brostoff, David B. Roth, and Ivan Roitt, Elsevier. Print Book ISBN :9780323080583; Paperback ISBN: 9780323080583

Course Description

This course is geared to provide students with an understanding of basic concepts of immunology. The course content will include immunological processes within the periodontium; immunological processes within the crevicular fluid; immunological processes within the saliva and immunological processes within the endodontium. The course will also cover neoplasia of the oral cavity, dental caries, periodontal disease, as well as immunological mediators of inflammation and pain.

Course Goals & Objectives

Goal:



The training is designed to provide current and potential dental students' knowledge of relevant concepts in immunology which would facilitate their comprehension of immunologic reactions in the oral cavity.

Objectives:

At the completion of this course students will be able to:

1. Define the anatomy and organization of the immune system.
2. Describe the cells that comprise the immune system and their major functions.
3. Distinguish between innate and adaptive immune responses and how they intersect.
4. Appreciate the strategies employed by the immune system in combating local and systemic host diseases.
5. Distinguish between the four types of hypersensitivity reaction.
6. Describe the basis of immunologic tolerance and development of autoimmune diseases.
7. Describe and distinguish between transplant rejection and graft-versus host disease.
8. Define how failure of immune surveillance leads to neoplasia, including oral neoplasia.
9. Recognize and describe immunological bases of pathologic conditions in the oral cavity and how they lead to systemic diseases.

RSDM Competencies Tested

No competencies are tested in this course.

RSDM Competencies Taught

- 1.2.1 Recognize the complexity of patient treatment and identify when referral is necessary.
- 1.3.1 Formulate a scientific inquiry and evaluate research methods.
- 1.3.2 Formulate a scientific inquiry and evaluate research methods.
- 1.4.3 Access, evaluate and integrate lay and scientific literature, clinical expertise and patient values for evidence-based practices.
- 1.6.1 Apply basic biomedical, behavioral, clinical science knowledge and critical thinking skills to patient care and management.
- 1.6.3 Apply basic biomedical, behavioral, clinical science knowledge and critical thinking skills to patient care and management.
- 1.6.4 Apply basic biomedical, behavioral, clinical science knowledge and critical thinking skills to patient care and management.
- 2.3.1 Manage a diverse patient population (age, race, ethnicity, special needs).
- 2.3.2 Manage a diverse patient population (age, race, ethnicity, special needs).
- 4.4.1 Diagnose and manage dental caries.
- 4.4.2 Diagnose and manage dental caries.
- 4.5.1 Diagnose and manage pulpal pathology.
- 4.5.2 Diagnose and manage pulpal pathology.
- 4.6.1 Diagnose and manage periodontal diseases.
- 4.6.2 Diagnose and manage periodontal diseases.
- 4.8.1 Diagnose and manage oral mucosal, temporomandibular, and osseous disorders.
- 4.8.2 Diagnose and manage oral mucosal, temporomandibular, and osseous disorders.
- 4.8.5 Diagnose and manage oral mucosal, temporomandibular, and osseous disorders.
- 4.8.6 Diagnose and manage oral mucosal, temporomandibular, and osseous disorders.
- 4.9.1 Recognize and manage oral manifestations of systemic diseases.

4.9.2 Recognize and manage oral manifestations of systemic diseases.

Course Requirements

EXAMS/ASSIGNMENTS

Course grades will be based upon two-unit examinations. Each unit will constitute 50% of the final grade. Final grade will be adjusted to give a mean numeric score of not less than 80 for the class as a whole.

Grading Scale

Letter Grade	Description	Grade Points	Numerical Score
A	Excellent	4.0	90 to 100
B+		3.5	85 to 89
B	Average	3.0	80 to 84
C+		2.5	75 to 79
C	Fair	2.0	70 to 74
D	Failure: Unacceptable	1.0	65 to 69
F	Failure: Poor	0.0	60 to 64
FR*	Failure: Repeat	0.00	59 and below

For calculation of final course grades, decimal values are rounded to the nearest whole number. For example, 89.45 would be a B+, while 89.55 would be an A.

*The FR grade is not applied to didactic courses of three (3) or less credits, nor first-year dental preclinical laboratory courses.

Examination Policies

Please review the Exam Entry/Exit Policy in the RSDM Student Handbook for RSDM policy regarding exam arrival and departure from examinations administered to the entire class at one time.

Exam Entry

- Students must be on time for the examinations. Anyone who arrives late for an exam will not be given additional time to complete the exam. For electronic examinations, this includes having a charged device as well as having exams downloaded prior to the deadline when ExamSoft is utilized.
- A student who is not present at the start of the exam will be allowed to take the exam if they arrive in the first 30 minutes of the scheduled examination time.
- A student who arrives late for the exam or begins the exam late due to failure to download the examination in the allotted period, will not be given additional time to complete the assessment and will be required to submit the exam when the scheduled time has elapsed.
- All cell phones and other devices must be silenced and stored upon entry.
- All books, coats, book bags, computers, cell phones, personal digital assistants, electronic devices, etc., are to be placed at the front of the room prior to the beginning of the examination, or, preferably, left in the student's locker.
- A student who arrives more than 30 minutes after the start of an examination, or after the first student finishes the exam and leaves the exam room, whichever comes last, will be considered absent for the exam. Excused/Unexcused status for the exam absence will be determined by the Office of Academic Affairs as detailed in the Attendance Policy.

Exam Exit

- No student will be permitted to leave the exam before 30 minutes has elapsed unless all students have completed the exam.
- Students are expected to remain in the exam room until they have completed the exam. Should a student require use of the restroom facilities on an "emergency" basis or have approved accommodations permitting regular restroom breaks during exams, the student must verify they do not have a phone or other communication device prior to exiting the testing room.
- Students must submit their completed exam prior to permanently leaving the exam room and follow any submission/sign out procedures as directed by the course director.
- No food or beverages are allowed during the exam.
- Questions are not permitted during the exam, except for inquiries into possible typographical errors.



MAKEUP EXAMINATION POLICY

Make-up unit examinations ordinarily will not be given. If an exam is missed for valid reasons as determined by the Academic Affairs Office of RSDM, a make-up exam will be given. A student will not be allowed to take a make-up exam, for illegitimate reasons for absence and will receive a 0 for the missed exam.

Students will have the opportunity to take a makeup examination if they have an excused absence from an examination (refer to Rutgers School of Dental Medicine Attendance Policies, in Students Handbook). The makeup exam is to be taken within 5 working days of returning to school. It may include multiple choice, short answer, matching, modified true-false, and/or essay questions.

Didactic Exam Review and Access

- Following the exam, the course director will review the exam item analysis following the exam and rescore any questions determined to be invalid, not reliable, or otherwise inappropriate on the item analysis. Students may ask for a question(s) to be rescored no later than three business days after the exam key is shared, exam is released, or exam review is conducted, whichever is last. The class representative may submit requests for rescoring on up to 10 percent of test questions (e.g. 10 questions of a 100 question exam) in writing, with fact-based evidence from course lectures and/or texts only.

Examinations in this course will be available for review as follows:

- secure electronic exam review via ExamSoft. Students will be permitted to view only incorrect answers.

Remediation

All students are reviewed by the Student Academic Performance Committee (SAPC) at regular intervals; remediation of failed courses is at the discretion of the SAPC and cannot be arranged with the course director without prior approval. All course remediation must be completed during the designated summer remediation period.

SAPC and Remediation policies are available for review in the Student Handbook.

Attendance/Absence Policy

The course adheres to the RSDM policy on attendance which appears in full in the RSDM Student Handbook. Students are expected to be present for all coursework. Attendance implies arriving promptly at the start of the session and remaining until its conclusion.

Students requesting an exam absence must do so in accordance with the Exam Absence policy in the Student Handbook, and should direct associated questions to the Office of Academic Affairs. Course Directors will direct all inquiries regarding exam absences to Academic Affairs.

Students must directly contact didactic course directors if requesting an excused absence from any session other than examinations. Documentation must be presented upon request to the course director in writing within 24 hours to justify any excused absences.

Any unethical/unprofessional actions related to attendance will be considered an unexcused absence and are subject to discipline as per the Code of Professional Conduct and Ethics.

Tutoring and Other Assistance

Those students who want to avail themselves of this service should contact Dr. Tsiagbe as early in the course as possible.

Tutorials and remediation will comply with the policies stated in the Student Handbooks. Dental students should comply with RSDM handbook; while SGS-N students will comply with SGS-N student handbook. Didactic tutorial service will be arranged for eligible students, at their request. Those students who want to avail themselves of this service should contact Dr. Tsiagbe as early in the course as possible.

REMEDIATION

Dental students who fail the course will be reviewed by the Student Academic Performance Committee (SAPC) of RSDM as per the above. If approved for remediation, remediation will take place during the summer as stipulated by RSDM policy. The re-examination may consist of any combination of short answer (true/false; matching; fill-in-the-blank), multiple choice, or essay.

SGS-N students with "F" grade may remediate the grade to a maximum of "C" grade, subject to approval by the Satisfactory Academic Performance (SAP) committee of SGS-N. Approval of remediation for SGS-N students is not automatic but must be requested by the student in need of remediation. Such a request must be sent to the course director. The time and format of the remediation examination will follow the same guidelines as stated for

RSDM students. The transcript of a SGS-N student approved for remediation will read F until the remediation examination is passed, at which point the grade will change to RMC.

Conduct, Ethics Professionalism Policy

This course requires students to uphold the RSDM Honor Code contained in the RSDM Predoctoral and Postgraduate Student Handbooks. It also adheres to the RSDM policy (<https://rutgersconnect.sharepoint.com/:b:/s/sdm-rsdm-academic-student-affairs/EcZQUSxVUKJEsB6Sn9nwO2YB-ODGTLGxAt4xd3EEUptIqw/?e=3iBOaT>) on professionalism fully described in the Handbook and requires maintenance of acceptable standards of professionalism. When applicable students may be evaluated using the "RSDM Professionalism Evaluation Form," available for review in the aforementioned Handbook and by clicking on this link (<https://rutgersconnect.sharepoint.com/:b:/s/sdm-rsdm-academic-student-affairs/EcZQUSxVUKJEsB6Sn9nwO2YB-ODGTLGxAt4xd3EEUptIqw/?e=3iBOaT>).

Students Requiring Accommodations

Any student who feels they need accommodations should discuss this matter with the Associate Dean of Academic Affairs, and must request accommodations through the RBHS Office of Disability Services. Students are not permitted to make arrangements for accommodations directly with the course director. Course directors will direct all student requests to the Associate Dean of Academic Affairs.

Course Meeting Schedule

#	Date	Length	Start Time	Agenda/Topic	Faculty	Format	Modality
1	03-17-25	1 hr	2:00 p.m.	Basic Principles of Immunology-Introduction	Dr. Tsiagbe	Lecture, Seminar	In Person
2	03-17-25	1 hr	3:00 p.m.	Origin of Cells of the Immune System	Dr. Tsiagbe	Lecture, Seminar	In Person
3	03-18-25	1 hr	2:00 p.m.	Functional Organization of the Immune System	Dr. Tsiagbe	Lecture, Seminar	In Person
4	03-18-25	1 hr	3:00 p.m.	Innate Immunity, Part 1	Dr. Tsiagbe	Lecture, Seminar	In Person
5	03-19-25	1 hr	11:00 a.m.	Innate Immunity, Part 2	Dr. Tsiagbe	Lecture, Seminar	In Person
6	03-19-25	1 hr	12:00 p.m.	Complement Pathways	Dr. Rohowsky-Kochan	Lecture, Seminar	In Person
7	03-21-25	1 hr	10:00 a.m.	Adaptive Immunity: Humoral Immune Response	Dr. Tsiagbe	Lecture, Seminar	In Person
8	03-21-25	1 hr	11:00 a.m.	Adaptive Immunity: T cell-mediated Immune Response	Dr. Tsiagbe	Lecture, Seminar	In Person
9	03-24-25	1 hr	2:00 p.m.	Mucosal Immunity & Oral Tolerance	Dr. Tsiagbe	Lecture, Seminar	In Person
10	03-24-25	1 hr	3:00 p.m.	Hypersensitivity Reactions, Part 1	Dr. Tsiagbe	Lecture, Seminar	In Person
11	03-26-25	1 hr	11:00 a.m.	Hypersensitivity Reactions, Part 2	Dr. Tsiagbe	Lecture, Seminar	In Person
12	03-26-25	1 hr	12:00 p.m.	Pre-Exam 1 Review	Dr. Tsiagbe	Lecture, Seminar	In Person
13	03-28-25	2 hrs	11:00 a.m.	Midterm	Dr. Tsiagbe	Assessment	In Person
14	03-28-25	30 min	2:30 p.m.	Secure Exam Review	Dr. Tsiagbe	Lecture, Seminar	In Person



15	03-31-25	1 hr	2:00 p.m.	MHC & Antigen Recognition	Dr. Tsiagbe	Lecture, Seminar	In Person
16	03-31-25	1 hr	3:00 p.m.	Tolerance & Autoimmunity	Dr. Tsiagbe	Lecture, Seminar	In Person
17	04-03-25	1 hr	1:00 p.m.	Transplantation	Dr. Tsiagbe	Lecture, Seminar	In Person
18	04-03-25	1 hr	2:00 p.m.	Immune Modulation & Vaccines	Dr. Tsiagbe	Lecture, Seminar	In Person
19	04-04-25	1 hr	10:00 a.m.	Oral Neoplasia	Dr. Tsiagbe	Lecture, Seminar	In Person
20	04-04-25	1 hr	11:00 a.m.	Review Lecture	Dr. Tsiagbe	Lecture, Seminar	In Person
21	04-07-25	1 hr	2:00 p.m.	Oral Diseases & Host Response	Dr. Fine	Lecture, Seminar	In Person
22	04-07-25	1 hr	3:00 p.m.	Dental Caries	Dr. Fine	Lecture, Seminar	In Person
23	04-09-25	1 hr	10:00 a.m.	Apical Immunology	Dr. Fine	Lecture, Seminar	In Person
24	04-09-25	1 hr	11:00 a.m.	Periodontal Disease, I	Dr. Fine	Lecture, Seminar	In Person
25	04-11-25	1 hr	10:00 a.m.	Periodontal Disease, II	Dr. Fine	Lecture, Seminar	In Person
26	04-11-25	1 hr	11:00 a.m.	Pre-Final Exam Review	Dr. Tsiagbe	Lecture, Seminar	In Person
27	04-16-25	2 hrs	11:00 a.m.	Final Exam	Dr. Tsiagbe	Assessment	In Person
28	04-16-25	30 min	4:00 p.m.	Secure Exam Review	Dr. Tsiagbe	Lecture, Seminar	In Person