

01:146:328 Human Parasitology

Spring semester 2025, January 21 to May 14, 2025

Tue & Fri 8:30 am to 9:50 am, Tillett 232, in person

Instructor: Dunne Fong, B424 Nelson Bio Labs, Rutgers University, 604 Allison Rd, Piscataway, NJ 08854-8082. Office phone 848 445 5268; Fax 732 445 5870; Email: fong@biology.rutgers.edu

Office Hours: Tuesdays 12.30-1.30 pm or by appointment

Course Learning Goals: Understand the life cycles of parasites and means of control, with these areas of concentration: (1) Molecular cell biology of human parasites: protozoa and helminthes; (2) Relations between human parasites and COVID-19; (3) Targeting neglected tropical diseases (NTDs).

CBN Departmental Learning Goals:

1. Master factual and conceptual knowledge in cell biology and neuroscience that will provide a solid foundation for success in advanced training and professional careers.
2. Develop an ability to summarize, integrate and organize information.
3. Use scientific reasoning to evaluate the potential for current research and new discoveries to improve our understanding of cell biology and neuroscience and its relevance to human health and to our society.

Textbook: D. Fong & M. M. Chan (2022) *Human Parasites: from Organisms to Molecular Biology*, ISBN 978-981-123-626-6 (hardcopy), 978-981-123-627-3 (ebook) World Scientific. [If feasible, please read the chapter before attending class.]

Additional Course Materials: Original articles, papers and reviews, will be posted on the Canvas course site for interested students. [These are for references only.]

Technical/ Technology Requirements:

A laptop with internet access for accessing course materials and taking online exams.

Technology challenges:

Please visit the Rutgers Student Tech Guide page for resources available to all students. If you do not have the appropriate technology for financial reasons, please email Dean of Students deanofstudents@echo.rutgers.edu or complete the contact form for assistance. If you are facing other financial hardships, please visit the Office of Financial Aid at <https://financialaid.rutgers.edu/>.

Course Grade: Course grades will be based on 3 non-cumulative 80 min exams. The third exam will be taken during the final exam period. These exams will consist of multiple-choice questions that require an understanding of the basic biology of parasitic organisms in addition to the ability to apply critical thinking to problems in parasitology.

Class Schedule:

Tue Jan 21 COVID-19; parasites and neglected tropical diseases (NTDs) (Chapter 1)
Fri Jan 24 Parasite evolution (Chapter 2)
Tue Jan 28 Parasite immunity (Chapter 3)
Fri Jan 31 Parasite classification (Chapter 4)
Tue Feb 4 Trypanosomiasis (Chapter 5)
Fri Feb 7 Leishmaniasis (Chapter 5)
Tue Feb 11 Giardiasis, trichomoniasis (Chapter 6)
Fri Feb 14 Amoebiasis (Chapter 7)
Tue Feb 18 Balantidiasis, Blastocystis infections (Chapter 8) / Review
Fri Feb 21 **Exam 1** (Chapters 1 to 8)
Tue Feb 25 Malaria I (Chapter 9)
Fri Feb 28 Malaria II (Chapter 9)
Tue Mar 4 Babesiosis, toxoplasmosis, other apicomplexans (Chapter 10)
Fri Mar 7 Trematodes (Chapter 11)
Tue Mar 11 Schistosomiasis (Chapter 12)
Fri Mar 14 Fascioliasis, clonorchiasis, paragonimiasis (Chapter 13)
Tue Mar 18 NO CLASS, SPRING BREAK
Fri Mar 21 NO CLASS, SPRING BREAK
Tue Mar 25 Cestodes (Chapter 14)
Fri Mar 28 Taeniasis, diphyllbothriasis, hymenolepiasis (Chapter 15)
Tue Apr 1 Juvenile tapeworms (Chapter 16) / Review
Fri Apr 4 **Exam 2** (Chapters 9 to 16)
Tue Apr 8 Nematodes (Chapter 17)
Fri Apr 11 Lymphatic filariasis (Chapter 18)
Tue Apr 15 Loiasis, onchocerciasis, dracunculiasis (Chapter 19)
Fri Apr 18 Soil-transmitted helminthes (Chapter 20)
Tue Apr 22 Strongyloidiasis, trichinellosis, enterobiasis (Chapter 21)
Fri Apr 25 Juvenile nematodes (Chapter 22)
Tue Apr 29 Arthropods (Chapter 23)
Fri May 2 Outlook of NTDs and parasitic diseases (Chapter 24) / Course comments
TBA **Exam 3** (Chapters 17 to 24)

Exam policies:

Students who require special accommodations must make arrangements at least one week in advance with the instructor. These accommodations will be given only if approved by the Office of Disability Services.

Exams cannot be rescheduled or retaken. Individual exceptions for rescheduling will possibly be made only in cases of documented serious, long-term illness or family emergency or for Rutgers approved activities. Only one makeup exam may be taken during the semester.

Grading Scale:

A:	89.5% - 100%
B+:	84.5% - 89.4%
B:	79.5% - 84.4%
C+:	64.5% - 79.4%
C:	49.5% - 64.4%
D:	39.5% - 49.4%
F:	< 39.5%

University Policies:

Course Closed?

If this course is closed, please use the appropriate form to add your name to the wait list at <https://biology.rutgers.edu/> (at the bottom of this website). If you have any questions, please contact the Division of Life Science - Office of Undergraduate Instruction at b112@dls.rutgers.edu, access the OUGI virtual front desk at <https://biology.rutgers.edu/40-biological-sciences/advising/478-ougi-front-desk> or visit the undergraduate instruction office at Nelson Labs B112, Busch Campus.

Academic Integrity Policy:

Rutgers University takes academic dishonesty very seriously. By enrolling in this course, you assume responsibility for familiarizing yourself with the Academic Integrity Policy and the possible penalties (including suspension and expulsion) for violating the policy (<http://academicintegrity.rutgers.edu/academic-integrity-policy>). As per the policy, all suspected violations will be reported to the Office of Student Conduct. Academic dishonesty includes (but is not limited to):

- *Cheating*
- *Plagiarism*
- *Aiding others in committing a violation or allowing others to use your work*
- *Failure to cite sources correctly*
- *Fabrication*
- *Using another person's ideas or words without attribution, including re-using a previous assignment*
- *Unauthorized collaboration*
- *Sabotaging another student's work*

If you are ever in doubt, consult your instructor.

Student-Wellness Services:

Just In Case Web App

<http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884

17 Senior Street, New Brunswick, NJ 08901

www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Crisis Intervention:

<http://health.rutgers.edu/medical-counseling-services/counseling/crisis-intervention>

Report a Concern: <http://health.rutgers.edu/do-something-to-help>

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181

3 Bartlett Street, New Brunswick, NJ 08901

www.vpva.rutgers.edu

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800

Lucy Stone Hall, Suite A145, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854

<https://ods.rutgers.edu>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555

<http://www.scarletlisteners.com>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.

A list of Rutgers support for students

- Student Success Essentials: <https://success.rutgers.edu>
- Student Support Services: <https://www.rutgers.edu/academics/student-support>
- The Learning Centers: <https://rlc.rutgers.edu/>
- Rutgers Libraries: <https://www.libraries.rutgers.edu/>
- Bias Incident Reporting: <https://studentaffairs.rutgers.edu/bias-incident-reporting>
- Dean of Students – Student Support Office:
<https://success.rutgers.edu/resource/dean-students-student-support-office>
- Office of Veteran and Military Programs and Services:
<https://veterans.rutgers.edu>
- Student Health Services: <http://health.rutgers.edu/>
- Counseling, Alcohol and Other Drug Assistance Program & Psychiatric Services (CAPS): <http://health.rutgers.edu/medical-counseling-services/counseling/>
- UWill: free immediate access to teletherapy; you can choose a therapist based on your preferences including issue, gender, language, ethnicity.
<http://health.rutgers.edu/uwill/>
- Office for Violence Prevention and Victim Assistance: www.vpva.rutgers.edu/
- Office of Disability Services: <https://ods.rutgers.edu/>
- Basic Needs Assistance (food, housing, and other essentials):
<https://ruoffcampus.rutgers.edu/basic-needs>
- Rutgers Student Food Pantry: <https://ruoffcampus.rutgers.edu/food-pantry>

** All information is subject to change at the discretion of the instructor.