Temple University, Philadelphia PA.

BIOLOGY 3243: PARASITOLOGY

CONTACT INFORMATION:
- **Instructor:** Dr Uloma Opara-Osuoha
- **Email:** opara-osuoha@temple.edu

**Rooms:** Biology-Life Science rm.342 (Lec.)
& Biology-Life Science rm.125 (Lab.)

**Open / Close Dates:** Summer II, June 27th–August 8th

**Lecture Times:** MWF 11:50am-1:50pm

**Laboratory Times:** MW 8:00-11:40am

**Office Hours:** By appointment

**Credit Hours:** 4.00 credits

**Prerequisites:** Bio-1111 Introduction to Biology I
Bio-2112 Introduction to Biology II

**REQUIRED TEXT:**


Available in the Temple University Bookstore.

**CATALOGUE DESCRIPTION**: This course is designed to give a broad overview of general parasitology, with respect to types of parasites, nature of parasitism, advantages and disadvantages of parasitism. The course encompasses: Life cycle of some common parasites of man and animals, epidemiology and molecular biology of some parasites (occurrence, transmission, pathology, symptoms, diagnosis, treatment, and control); focusing on the scientific study of biological organisms living in ecologically exploitative and competitive relationships with host organisms, and the role of parasites in causing injury, disease, and environmental damage. Emphasizes on the Public health impact of these diseases would be covered. This course includes a laboratory with emphasis on the different stages of the parasites, morphological characteristics as well as vectors of some of the parasites.

**COURSE OBJECTIVES**

The objectives of this course are to: • introduce students to the basic concepts of parasitology; • expose students to the knowledge of host-parasite relationship; • give students a broad perception of epidemiology, transmission, control and treatment of parasitic diseases; • identification of parasites based on morphological characteristics; • knowledge of mechanisms of transmission; • understand the evolution of parasitic groups and the public health impact of some of these parasites in both humans and domestic animals.
COURSE LEARNING OUTCOMES / COMPETENCIES: Upon successful completion of this course, the student will be able to: • understand and explain the concept of parasitism; • understand and explain the nature of host-parasite relationship; • understand and explain epidemiology, pathogenesis, transmission, control and treatment of various human and veterinary parasites; • understand the impact of parasites on today’s world.

STUDENT RESPONSIBILITIES AND ASSESSMENT:
1. Attend class regularly and on-time
2. Prepare for all class meetings and online assignments by reading assigned materials in advance of each class
3. Take four examinations, which will include multiple choice, fill in the blank and short answer essay questions.
4. Expected to take notes in class, in addition to PowerPoints
5. Participation in class discussions, small group activities and presentations
6. Schedule a meeting with the instructor quite early in the session, especially if the student is having problem with study habits, assignments, to mention but a few.

GENERAL INSTRUCTIONS

Attendance: It is expected that every student will be in class for lectures and also participate in all laboratory exercises. Attendance records will be taken during lecture/laboratory sessions. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with the instructor, indicating the reason for the absence. An official letter may be requested. Avoid missing any class or laboratory session, since summer session has a fast-paced schedule.

Academic Integrity:
Violations of academic integrity, including dishonesty in assignments,
Examinations, or other academic performances are prohibited. You are not allowed to make copies of another person’s work and submit it as your own; that is plagiarism. All cases of academic dishonesty will be reported to the University Management for appropriate sanctions in accordance with the guidelines for handling students’ misconduct as spelt out in the Students’ Handbook.

Review the Temple University Policy on Plagiarism and Academic Cheating:

http://www.temple.edu/bulletin/Responsibilities_rights/responsibilities/responsibilities.shtm. You are responsible for following this policy for all assignments, tests and exams.

Assignments and Group Work: Students are expected to submit assignments as scheduled.

Failure to submit an assignment as at when due will earn you zero for that assignment. Only under extenuating circumstances, for which a student has notified the instructor in advance, will late submission of assignments be permitted.

Code of Conduct in Lecture Rooms and Laboratories: Students should turn off their cell phones during lectures. Students are prohibited from engaging in other activities (such as texting, watching videos, etc.) during lectures. Disrespectful and disruptive behavior will not be tolerated in this class. Laptops can only be used during the laboratory sessions; this is disruptive during lecture, unless it is allowed under special circumstances.

Food and drinks are not permitted in the laboratories.

Drop/Add & Withdrawal Deadline: See the undergraduate bulletin for information about withdrawing from the course.

1. Last day to drop/add: July 2
2. Last day to withdraw: July 18

July 4 - Independence Day holiday (no classes)
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<thead>
<tr>
<th>Week</th>
<th>Topic/Lab</th>
<th>Remarks</th>
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| 1    | General Introduction/Protozoa  
  o Basic definitions on concepts of parasitology  
  • No Lab | During the first class, the students expectation from the course will be assessed. |
| 2    | Studies of the life cycle, epidemiology, treatment and control of Protozoans:  
  o Amoebiasis, Trichomoniasis, and Giardiasis  
  o Trypanosomiasis  
  o Leishmaniasis  
  o others  
  o Vectors  
  • The Biology of Human Malaria  
  o Pathology of human malaria  
  o Vectors  
  o Antimalarial drug resistance  
  • Lab: Protozoa/vectors | Students will be expected to know the biology of these parasites and carry out suitable practicals to identify some of the protozoans and know their morphological features, and vectors. |
| 3    | Platyhelminthes, Life cycle, epidemiology, treatment and control of family  
  o Schistosomatidae  
  o Fasciolidae  
  o Dicrocoelidae  
  o Teanidae  
  o others  
  o vectors  
  • Lab: Trematodes/Cestodes  
  • Exam 1: Protozoa | Students will be expected to know the biology of these three families and carry out suitable practicals to identify some helminths/morphological features and their vectors. |
| 4    | Platyhelminthes | Students will be expected to |
| 5 | Nematodes - Studies of the life cycle, epidemiology, treatment and control of:  
  - Strongyloidiasis  
  - Dracunculiasis  
  - Onchocerciasis  
  - others  
  - Lab: Nematodes  
  - Exam 3: Nematodes  
 | Students will be expected to know the biology of these parasites and carry out suitable practicals to identify the nematodes/morphological features and vectors. |
| 6 | Parasitic Arthropods  
  - Advances in Parasitology  
  - Public health impact/presentations  
  - Lab: Parasitic Arthropods/Video Clips  
 | This is the week preceding the final examination. At this time, evaluation will be done to assess how far the students’ expectations for the course have been met.  
 Basic contributions from the world of parasitology:  
  - Anti-parasitic drug development  
  - Basic needs in parasitology  
  - Parasitic diseases that pose public health threats |
| 7 | Presentations  
  - Exam 4 |
This is a tentative schedule and may be adjusted during the semester with appropriate notification.

Disabilities:
The University provides reasonable accommodations for students with documented disabilities in lab and lecture. The student should contact the course Instructor privately to discuss the specific situation as soon as possible. Documentation from the DRS office is required. The Office of Disability Resources and Services can be reached at (215) 204-1280 or in Ritter Annex 100. Student must see them, get tested, and register well in advance of exams. In addition, new rules at the DRS require advanced notice by several days for exam accommodations. It is the responsibility of the student to adhere to the DRS schedule for registration and paperwork when requesting an exam accommodation.

Grading Policy:
The lecture grade and the laboratory grade are combined to determine your overall grade for the course. The lecture component for the course is worth 70% and the laboratory component is worth 30% (Lab exam – 10%, Lab assignments – 20%). In class assignments – 10%, 3 exams – 15% each (1 drop exam). Exam 4 – 20% (cumulative/Public health), Group Presentation -10%. No letter grades will be given on the quizzes, tests and assignments. Final letter grades will be issued at the end of class. Students can expect letter grades based on the following 100point scale.
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<tr>
<th>Score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93-100</td>
<td>A</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
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<tr>
<td>87-89</td>
<td>B+</td>
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<tr>
<td>83-86</td>
<td>B</td>
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<td>80-82</td>
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<td>75-79</td>
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<td>70-74</td>
<td>C</td>
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<td>65-69</td>
<td>C-</td>
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<tr>
<td>58-64</td>
<td>D</td>
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<tr>
<td>57-0</td>
<td>F</td>
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Actual scores will be calculated using decimal points rounded to the nearest tenths.

**Temple’ Freedom to Teach and Learn Policy:**

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed through the following link: http://policies.temple.edu/getdoc.asp?policy_no=03.70.02.

**Disclaimer:** This syllabus serves as a contract between the student and the instructor. This agreement may be changed by the instructor as deemed necessary. In good faith, both the instructor and the student agree to uphold this statement.