DE LA SALLE UNIVERSITY
**College of Science**

Department of Biology

**PARALEC (PARASITOLOGY)**

*Prerequisite : GENERAL ZOOLOGY*

**Instructor** : **Dr. Mary Jane Cruz-Flores**/ **Dr. Sung-Tae Hong** (Visiting Professor)

**Contact details**:Email: m**ary.jane.flores@dlsu.edu.ph**

**Consultation Hours**: WF 0800-1200H C**lass Sched. & Rm.**: F 1245-1545, L319

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| **Course Description** |
| PARALEC (PARASITOLOGY lecture) is a 3-unit lecture course that covers the study of different groups of endoparasites and ectoparasites ranging from protozoan to helminths, including the concept and mechanisms involved in parasitism, types and host-parasite interaction/relationship. Its emphasis is on parasites that are of medical and veterinary importance.  |

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| **Learning Outcomes** |
| On the completion of this course, the student is expected to present the following learning outcomes in line with the Expected Lasallian Graduate Attributes (ELGA).

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| **ELGA** | **Learning Outcomes** |
| Critical and Creative ThinkerEffective CommunicatorLifelong LearnerService-Driven Citizen | On completion of the course, the student is expected to understand the basic principles and concepts of parasitism and host-parasite interactions/relationships, and appreciate the significance of parasitology in light of the endemicity of many zoonotic animal and human parasites in the country and their transmission strategies, and impact on human development.To stimulate and foster a sense of excitement in Parasitology as an approach to understanding living organisms. |

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| **Final Course Output** |
| As evidence of attaining the above learning outcomes, the student is required to submit the following during the indicated dates of the term.

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| **Learning Outcomes** | **Required Output** | **Due Date** |
| On completion of the course, the student is expected to understand the basic principles and concepts of parasitism and host-parasite interactions/relationships, and appreciate the significance of parasitology in light of the endemicity of many zoonotic animal and human parasites in the country and their transmission strategies, and impact on human development.To stimulate and foster a sense of excitement in Parasitology as an approach to understanding living organisms. | **Group Projects and Presentations:**- Review/Critique of assigned NTD Journal  Articles (Philippine based research published  2013-2019)- Reporting/Ppt. Presentation of journal article  review; Focus Group Discussion- Health Promotion video (campaign/advocacy material) for the prevention and control of selected Neglected Tropical Parasitic Diseases  **Individual Output :** **-**Parasite in Focus – Article Review about latest (published 2016-2019) development/ updates on a parasite of choice (submission of paper and sharing including recommendations in class)-Summary/Reaction Paper on Visiting Professor’s lecture series | Weeks 8-10Weeks 12-13Weeks 4-7Week 10 |

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| **Rubric for assessment** |
| Group Presentation/Project

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| **Criteria** | **Experts****(3.5 – 4.0)** | **Team Players****(2.5-5.4)** | **Laid Back****(1.5-2.4)** | **Spacemen****(1.0-1.4)** |
| **Set Objectives** | Objectives were set from the start of the presentation, and were reviewed at the end if it were achieved.Moreover, the group highlighted the significance of the report to their course. | Objectives were set from the start of the presentation, and were reviewed at the end if it were achieved. | Objectives were set from the start of the presentation, but were not reviewed at the end if it were achieved. | No objectives were set from the start of the presentation. |
| **Content of presentation** | New information were learned from the presentation, and were easy to understand. Moreover, the presentation was concise. | New information were learned from the presentation, and were easy to understand. | New information were learned from the presentation, but were hard to understand. | No new information were learned from the presentation. |
| **Overall performance of the Group** | The presenters did not read from the slides, and made sure everyone in class understood the information they were sharing.Moreover, they were very enthusiastic and knowledgeable of their report. | The presenters did not read from the slides and made sure everyone in class understood the information they were sharing. | The presenters did not read from the slides, and made no attempt to assess if everyone in class understood the information they were sharing. | The presenters read from the slides, and made no attempt to assess if everyone in class understood the information they were sharing |
| **Multimedia** | The report was creatively and uniquely presented, with the aid of the computer. Moreover, it kept everyone attentive. | The report was creatively and uniquely presented with the aid of the computer. | The report was ordinary and very standard, but was aided by the computer. | The report was dull and boring. |

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| **Additional Requirements** |
| * Active individual participation in classroom discussions and insights on answers to questions in examinations with emphasis on analysis of very specific infections/diseases affecting humans and livestock in the country.
* Pass all written examinations (midterm and final exams). NO make-up long and final exams will be given.
* Submission of outputs, such as, article review/critique and reaction papers, promotional videos, focus group discussion, and reporting.
* Should not incur an absence or more than 20% of the required number of meetings for the entire trimester.
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| **Grading System** |
| Exams (Midterm and Final Exams) 50%Group Projects and Presentations (Journal Article  Review/Reporting/FGD, Health Promotion video  30%Individual Outputs (Parasite in Focus, Visiting Prof’s requirement/s) 20 % **TOTAL: 100%****Passing Grade : 60%** | **Scale :**92 – 100% 4.0 86 - 90% 3.5 80 - 85% 3.0 75 - 79% 2.5 70 - 74% 2.0 65 - 69% 1.5 60 - 64% 1.0 <60% |
| **Learning Plan** |
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| **Learning Outcome** | **Topics** | **Weeks** | **Learning Activities** |
| On completion of the course, the student is expected to deepen their understanding in the basic concepts of immunity including the basic components, regulatory mechanisms and self and non-self recognition in order to contribute in alleviating infectious diseases in his/her community by gaining familiarity with the components/properties of natural and acquired immunity, including humoral and cell-mediatedand immunity; and to understand disorders of immunity and principles underlying such clinical conditions. | Introduction to Basic Principles and Concepts of Parasitism | 1-2 | Lecture |
| Parasitic Protozoans1. Alveolata (Ciliates and Apicomplexans)
2. Amoebozoa
3. Discricristates (Parabasalans and Kinetoplastida)
 | 3-4 | LectureGroup Discussion |
| Parasitic Platyhelminthes 1. Symbiotic Turbellaria
2. Monogeneans
3. Cestodes
4. Trematoda
 | 5-6  | Lecture Group Discussion |
| **Special Topics in Parasitology****Neglected Tropical Diseases (Soil-transmitted Helminths and Food-borne Helminthiasis (c/o Dr. Sung-Tae Hong)** | **7** | **Lecture****Group Discussion** |
| **Midterm Exam** | 8 |  |
| Parasitic Helminths 1. Nematodes
2. Pentastomidans
3. Acanthocephalans
 | 8-9 | Lecture Group Discussion |
| Parasitic Arthropods1. Mosquitoes, Lice & Fleas
2. Acarines and others
 | 10 |  LectureGroup Discussion |
| Diagnosis of Helminth Infections  | 11 | LectureGroup Discussion  |
| Promotional video/jingle advertising control and prevention of Neglected Tropical Parasitic Diseases  | 12-13 | Group Presentation |
|  |  **Final Examination** | 14 |  |

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| **References/Online Resources** |
| Belizario Jr., V.Y. and De Leon, W.U. (2015). *Medical Parasitology in the Philippines*. 3rd Ed. The University of the  Philippines Press Diliman, Quezon City. 540pp.Roberts, L.S., Janovy Jr., J. and S. Nadler. (2013). *Foundations of Parasitology*. McGraw-Hill International Edition.Roberts, L. Janovy, J. (2008). *Foundations of Parasitology*. McGraw-Hill Science. 728pp.Belizario V. & de Leon W. (eds). (2004). *Philippine Textbook of Medical Parasitology*. The Publications Programs,  Information, Publication and Public Affairs Office. University of the Philippines, Manila. Fayer R. (1997). *Cryptosporidium* and Cryptosporidiosis. CRC Press LLC, USA. Peters, W. and H.M. Gilles. (1995). *Tropical Medicine and Parasitology*.Mosby-WolfeCox, F.E.G. (1993). *Modern Parasitology*. Blackwell Science.Bush, A., Fernandez, J. et al. (2001). *Parasitism*. Cambridge. Asian Parasitology. (2005). Series Monograph Volumes 1-6. The Federation of Asian Parasitologists, Department  of Infection and Host Defense, Chiba University Graduate School of Medicine, Japan. FAP Journal Ltd. Arizono N, Yil Chai J, Nawa Y & Takahashi Y (eds). Vol. 1: Food-Borne Helminthiasis in Asia. 318 pp.Ito A, Wen H, Yamasaki H. (eds). Vol. 2: Taeniasis/Cysticercosis and Echinococcosis in Asia. 334 pp.Kimura E, Jong Rim H, Dejian S, & Weerasooriya MV. (eds.). Vol. 3: Filariasis in Asia and Western Pacific Islands. 295 pp.Yano A, Woo Nam H, Anuar A K, & Shen J. (eds.). Vol. 4. Toxoplasmosis and Babesiosis in Asia. 295 pp.Chen MG, Zhou XN, Hirayama K. (eds). Vol. 5: Schistosomiasis in Asia. 276 pp.Kano S. & Tongol-Revira P. (eds). Vol. 6: Malaria in Asia. 232 pp.*Basic laboratory methods in medical parasitology*. (1991). Wold Health Organization Geneva**Readings:** Basic principles and concepts in parasitism: <http://www.upei.ca/biology/lectures/bio441C/topic01.pdf>Selected Journal Articles |

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| **Class Policies** |
| * Honesty and integrity are integral components of the academic process.
* Proper decorum is to be observed among peers in all activities.
* Absence and tardiness are strongly discouraged.
* Attentiveness and active participation are critical to successful learning.
* The use of mobile phones and other electronic devices is not allowed during class hours, unless necessary or upon the teacher's approval.
* The policies on academic dishonesty, attendance and behavior stipulated in your Student Handbook are honored in this course.
* When appropriate, use of laboratory gown and other protective gears is required.
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Approved by:

**DR. MARY JANE CRUZ - FLORES**

Chair, Biology Department