

# NEMATODE MORPHOLOGY AND ANATOMY

NEM 6101 (LECTURE) 2 CREDIT HOURS (BLENDED W/ ONLINE)

NEM 6905 (LAB) 1 CREDIT HOUR

SPRING/2019

“Consider the nematode roundworm, the most abundant of all animals. Four out of five animals on Earth are nematode worms – if all solid materials except nematode worms were to be eliminated you could still see the ghostly outline of the most of it in nematode worms.” E. O. Wilson (*paraphrasing N. A. Cobb*)

ROOM 2218, DEPARTMENT OF ENTOMOLOGY AND NEMATOLOGY, BUILDING 970

LECTURES: WEDNESDAYS 9:30 – 10:55 (PERIOD 3)

LABS: WEDNESDAYS 10:55 – 12:35 (PERIOD 4-5)

**INSTRUCTOR:** Dorota Porazinska

Room 2210, Department of Entomology and Nematology, Bld. 970

email: [dorotalp@ufl.edu](mailto:dorotalp@ufl.edu)

phone number: 352-273-3936

**OFFICE HOURS:** Tuesdays 12:35 – 2:35 PM, but you can always send me an email or call me to schedule a meeting.

**COURSE TA OR COORDINATOR:** Alexandros Dritsoulas  
email: [alextrits@ufl.edu](mailto:alextrits@ufl.edu)  
phone number: 352-273-2220

**COURSE COMMUNICATIONS:** For general questions, go to a discussion board – FAQ and post your question there. For private questions, your first choice should be an email on CANVAS, but if necessary contact me via my personal email ([dorotalp@ufl.edu](mailto:dorotalp@ufl.edu)) or phone (352-273-3936). I will get back to you within 24 – 48 hrs.

**REQUIRED TEXT:** Bird, A. F. and J. Bird. 1991. The structure of Nematodes, second edition. Academic Press. The e-version of this book is available for purchase [here](#). I will place this and several other reference texts on reserve in the Marston’s Science Library.

**ADDITIONAL RESOURCES:** Introduction to Nematology, Chitwood and Chitwood, 1974. The Biology of Nematodes, Donald Lee, 2002

**COURSE DESCRIPTION:** The course provides more advanced knowledge on morphology and anatomy of free-living, plant-parasitic, and animal-parasitic nematodes. It covers detailed morphological structures, anatomical systems, and their physiological functions with emphasis on features that form the basis of identification and classification.

**PREREQUISITE KNOWLEDGE AND SKILLS:** None. Just bring your curiosity, excitement about learning, and appreciation for diversity!

**PURPOSE OF COURSE:** To establish a strong foundation of basic knowledge of nematode morphology, anatomy, and physiology that informs about nematode feeding habits, their taxonomic diversity, and potential habitats and functioning.

**COURSE GOALS AND/OR OBJECTIVES:** By the end of this course, students will:

1. Identify and describe a variety of morphological and anatomical features used in nematode classification.
2. Analyze and interpret the features to infer about evolutionary and functional relationships.
3. Master the use of light microscopy and skills relevant to nematode systematics

**INSTRUCTIONAL METHODS:** This course will consist of **lectures** and/or **labs**.

**Lecture** modules will be posted online with prerecorded voice. You will be expected to listen to the lectures prior to weekly meetings devoted to Lectures where we will engage in activities (e.g. discussions, projects, presentations) to master the content. A 15 minute oral presentation on the topic of the student's choice (in consultation with the instructor) and a written report is required.

**Labs** will involve work with microscopes and an actual observation of the features on fixed and living specimens. As part of the lab requirement, students will prepare a slide set of nematodes that demonstrate at least 10 morphological features encountered in class. Specimens may come from any unmounted source. Occasionally, students will be required to read, summarize, and lead a discussion on an assigned paper.

## COURSE POLICIES:

**ATTENDANCE POLICY:** *Students are expected, but not required to attend. Studies suggest strong correlation between attendance and student achievement.* [National Center for Education Statistics](#)

**EXAM POLICY:** Quizzes/exams for the lecture component will be posted online along with specific completion time deadlines. Practical exam for the lab component will be conducted in class.

**MAKE-UP POLICY:** Make-up of exams must be approved by the instructor. Completing extra projects to earn additional credit toward the final grade is not allowed.

**ASSIGNMENT POLICY:** 15 minute presentations and a written report will be due one week before MIDTERM EXAM. Approval for the presentation topic will be due XXXXX. (Depending on the number of people, it may become a group/pair project).

**COURSE TECHNOLOGY:** All lecture modules, required/extra readings, quizzes and exams will be available on CANVAS. Reference books will be reserved in the library. Laptops in class are expected.

## UF POLICIES:

**UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES:** Students requesting accommodation for disabilities must first register with the Dean of Students Office ([Disability Resource Center](#)). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

**UNIVERSITY POLICY ON STUDENT HONOR CODE AND STUDENT CONDUCT CODE:** Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the [UF Student Honor and Conduct Codes](#).

**ETIQUETTE AND COMMUNICATION COURTESY:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. Please be considerate of your classmates by showing up on time, not leaving class early, turning off cell phones, and not using laptops for any work unrelated to the course work. UF rules prohibit food or drinks in classrooms.

## GETTING HELP:

For issues with technical difficulties for E-learning in CANVAS, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

\*\* Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

#### GRADING POLICIES:

Assignment	Percentage
Midterm Exam	20%
Final Exam	20%
Lab Practical Exam*	20%
Oral Presentation and Written Report	10%
Paper Discussion and Participation*	10%

Slide Set	10%
Class activities and participation*	10%

\*Equivalent modifications for 100% online students.

### GRADING SCALE (%):

100 – 90	A
<90 – 88	A-
<88 – 86	B+
<88 – 80	B
<80 – 78	B-
<78 – 76	C+
<76 – 70	C
<70 – 68	C-
<68 – 66	D+
<66 – 60	D
<60 – 58	D-
<58	E

### COURSE SCHEDULE:

#### FINAL EXAM: May 03 2019

Lecture Schedule (tentative), Tuesday 9:30 – 10:55 (Period 3), Room 2217 ENY

Module	Date	Topic	Assignment
1.1	01/09/19	Introduction, phylogeny, history	TBA
2.1	01/16/19	General morphology, cuticle markings and structures	TBA
2.2	01/23/19	Cuticle anatomy	TBA
2.3	01/23/19	Hypodermis and musculature	TBA

3.1	01/30/19	Introduction to digestive system	TBA
3.2	02/06/19	Stoma	TBA
3.2	02/13/19	Stoma	TBA
3.3	02/20/19	Esophagus	TBA
	02/27/19	Review	TBA
	03/6/19	<b>MIDTERM EXAM</b>	TBA
3.4	03/20/19	Intestine and posterior gut	TBA
4.1	03/27/19	Secretory/excretory system	TBA
5.1	04/3/19	Nervous system	TBA
6.1	04/10/19	Reproductive system	TBA
	04/17/19	Review	TBA
	04/24/19	<b>LAB PRACTICAL EXAM</b> Written Reports Due	
	05/01/19	FINAL EXAM	

Lab Schedule (tentative), Tuesday 9:30 – 12:35 (Period 4-5), Room 2217 ENY

Lab	Date	Topic	Assignment
1	01/09/19	Microscopy; making slides	TBA
2	01/16/19	Cuticular markings; Cuticle anatomy and permeability.	TBA
3	01/23/19	Hypodermis, glands, musculature	TBA
4	01/30/19	Field trip to collect soil samples for the slide collection	TBA
5	02/06/19	Stoma	TBA
6	02/13/19	Stoma	TBA
7	02/20/19	Esophagus	TBA
8	02/27/19	Oral Presentations	TBA
9	03/6/19	Esophagus	TBA
10	03/20/19	Intestine and posterior gut	TBA
11	03/27/19	Secretory/excretory system	TBA
12	04/3/19	Nervous system	TBA
13	04/10/19	Reproductive system	TBA
14	04/17/19	Review	

15	04/24/19	LAB PRACTICAL EXAM	
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Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.