

Parasite Ecology 11:217:302 (4 credits)
Syllabus

- Professor:** Dr. Michael Sukhdeo
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Bartlett Hall, Rm. 213A, Cook Campus
- TA:** Ariel Kruger
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ENR, Rm. 108, Cook Campus
- Lecture:** Tues/Fri, second period (10:55-12:15pm) in Rm 123 Bartlett Hall.
- Textbook:** There is no specific textbook. Any parasitology textbook, any sources on the internet or in regular libraries can be used for supplemental information.
Advanced students might be interested in “Evolutionary Ecology of Parasites” second edition by Robert Poulin 2007. Princeton University Press.
- Learning Goals:**
- 1) How natural selection works.
 - 2) How natural selection drives evolution.
 - 3) How parasites evolved and diversified over time.
 - 4) Understand life cycle strategies of parasites.
- Grading policy:**
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| - Mid term exam | 30% |
| - Final exam (inclusive) | 50% |
| - Pop quizzes and attendance | 20% |
- Lab section:**
- | | |
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| - Quizzes/attendance | 20% |
| - In class assignments | 40% |
| - Lab Practical | 40% |
- (If you fail the lab, you fail the course)

N.B. There will be NO makeups for missed quizzes or roll calls; a doctor’s note or funeral notice is required for excused absences.

Tentative Lecture Schedule:

- Sept 2 Lecture 1 Introduction.
Sept 5 Lecture 2 Basic ideas in parasitology.
- Sept 9 Lecture 3 Tapeworm biology and natural selection
Sept 12 Lecture 4 Monogeneans/Acanthocephalans/ Protozoa/
 Trematodes/ Nematodes
- Sept 16 Lecture 5 Origins of parasitism
Sept 19 Lecture 6 Evolution of direct life cycles.

Sept 23	Lecture 7 Evolution of complex life cycles..
Sept 26	Lecture 8 Protozoa
Sept 30	Lecture 9 Trematodes
Oct 3	Lecture 10 Nematodes
Oct 7	Lecture 11 Host specificity.
Oct 10	Lecture 12 Intrahost habitat specificity.
Oct 14	Lecture 13 Parasite migration behaviors.
Oct 17	Mid term Exam
Oct 21	Lecture 14 Parasite fitness profiles.
Oct 24	Lecture 15 Transmission – spatial and temporal strategies.
Oct 28	Lecture 16 Parasite manipulation of host behavior.
Oct 31	Lecture 17 Co-evolutionary processes
Nov 4	Lecture 18 Parasites as individuals
Nov 7	Lecture 19 Parasite aggregation in hosts
Nov 11	Lecture 20 Parasite population dynamics.
Nov 14	Lecture 21 Parasite communities.
Nv 18	Lecture 22 Species richness
Nov 21	Lecture 23 The evolution of virulence
Nov 26 wed	Lecture 24 The evolution of sex – Red Queen hypothesis. [Friday classes]
Nov 30	<i>Thanksgiving Recess</i>
Dec 2	Lecture 25 Parasites and Food webs
Dec 5	Lecture 26 Parasite and ecosystems
Dec 9	Lecture 27 Parasite and ecosystems
Dec 12	review
Dec 15.	Final Exam Friday 12:00-3:00 PM same classroom, responsible for all material in course (50% of final grade)