GRANDE PRAIRIE REGIONAL COLLEGE

DEPARTMENT OF SCIENCE

COURSE OUTLINE

ZOOLOGY 2500
Survey of the Invertebrates
(ZO 2500)
3-0-3
2010-2011

INSTRUCTORS

Dr. Georgia Goth
Office: J222
phone: 539-2827
e-mail: ggoth@gprc.ab.ca

Dr. Philip Johnson
Office: J224
phone: 539-2863
e-mail: pjohnson@gprc.ab.ca

DESCRIPTION The functional anatomy and life cycles of the major invertebrate taxa are emphasized.

PREREQUISITE: BI 1080 (Introduction to Biological Diversity)

CREDIT HOURS: 3-0-3

TRANSFERABILITY:

Athabasca University	SCIE 3xx (3)
Concordia University	BIO 2xx (3)
Grant MacEwan University	ZOOL 250 (3)
King's University College	BIOL 344 (3)
University of Alberta	ZOOL 250 (3) or AUBIO 294 (3)
University of Calgary	ZOOL 375 (3)
University of Lethbridge	BIOL 3520 (3)

SCHEDULE: T.B.A.

INSTRUCTORS:

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phone: 539-2827
e-mail: *ggoth@gprc.ab.ca*

Dr. Philip Johnson
Office: J224
phone: 539-2863
e-mail: *pjohnson@gprc.ab.ca*

LAB COORDINATOR:

Rick Scott
J121
Phone: 539-2953
e-mail: *rscott@gprc.ab.ca*

TEXTBOOKS:

Living Invertebrates (1987)
Pearse, Pearse, Buchsbaum, & Buchsbaum
Blackwell Publishers
ISBN: 0-86542-312-1

Zoology 2500 Laboratory Manual
(available from GPRC Bookstore)

COURSE REQUIREMENTS:

Students are expected to attend all classes and laboratory sessions. Should a student miss a scheduled class, it is their responsibility to obtain the material covered in that class.
Should a student miss a scheduled laboratory session, they may talk to the Lab Coordinator and ask if it is possible to make alternate arrangements. The final decision on this will be that of the Lab Coordinator

Students must familiarize themselves with the Student Rights and Responsibilities as described on pages 48-51 of the GPRC Calendar.

MARKS DISTRIBUTION:

Lab Quizzes	12%
Lab Dissections	6%
Lab Final Exam	20%
Mid-term Exam	17%
Annotated Bibliography	10%
Final Exam	35%

Annotated Bibliography:

Each student must prepare a short annotated bibliography (approx 250 words) of three papers from the primary scientific literature on any aspect of the biology of a single genus of invertebrate.
Examples of annotated bibliographies will be made available on the course website.
Useful web links will be provided to students.

ASSIGNMENT OF GRADES:

Final grades will be determined from the total marks obtained from all course requirements. Total marks will be converted to grades based on the following criteria:

>90%	A+
87-90%	A
83-86%	A-
79-82%	B+
74-78%	B
70-73%	B-
66-69%	C+
62-65%	C
58-61%	C-
54-57%	D+
50-53%	D
<50%	F

Students should be aware that a final grade of D or D+ may not be acceptable for transfer to some post-secondary institutions

Student Conduct:

All cell phones should be switched off while students are in class. Should a cell phone ring during class, the first instance will result in a warning to all students; further instances will results in the owner of the cell phone being asked to leave that day's class.

Students will be allowed to use standard non-programmable calculators in exams. **All other electronic devices are prohibited** and should not be brought into exams. Students found to be using a prohibited electronic device during an exam will be required to leave immediately and will receive a mark of zero for that exam.

Students should read pages 47-50 of the 2010-2011 G.P.R.C. Calendar dealing with the Rights and Responsibilities of Students, especially the sections dealing with plagiarism, cheating and the penalties involved since these are serious issues and will be dealt with severely.

LECTURE SCHEDULE

Summaries of class material will also be made available on the ZO 2500 website

Topic	Text reading
Introduction	Ch. 1; Ch. 30
Protozoa	Ch. 2
Multicellularity and the Porifera	Ch. 3
Tissue organization and Introduction to the Cnidaria	Ch. 5: 99-117; 128-131
Diversity of the Cnidaria	Ch. 6: 133-142; 146-148; 152-158; 163-175
The Ctenophora	Ch. 7: 187-191; 195; 202
Bilateria – Protostomia & Deuterostomia	Ch. 8: 204-205
The Platyhelminthes	Ch. 8: 204-209 Ch. 9: 222-223; 233-248
The Nemertea	Ch. 11
The Aschelminthes	Ch. 12: 268-278; 287-292; 294-300 Ch. 13: 301-316
The Mollusca – general organ systems	Ch. 15: 382-384
Diversity of the Mollusca	Ch. 15: 327-344; 347-355; 362-375; 381
The Sipuncula	Ch. 18: 441-442
Metamerism & Introduction to the Annelida	Ch. 16: 387-402; 410
Diversity of the Annelida	Ch. 17: 411-423; 428-436
Minor Protostomes	Ch. 18: 438-440; 443-446
Onychophora & Arthropod origins	Ch. 19
Overview of the Arthropoda	Ch. 20: 455-467; 472-477
Arthropoda – Diversity of the Crustacea	Ch. 21: 481-486; 492-496; 500-506
Other Arthropod subphyla	Ch. 22: 529-537; 548-551; 559-563 Ch. 23: 565-570
The Echinodermata	Ch. 27: 683-691; 694-699; 705-711; 717-724
Lophophorates	Ch. 26: 656-658; 662-663; 667-673
The Hemichordata	Ch. 28: 731-736
“Invertebrate” chordates	Ch. 29: 737-743; 747-751

LABORATORY SCHEDULE

Week	Topic
1	Overview of Invertebrate Diversity
2	Microscopy; Protozoa; Porifera
3	Cnidaria and Ctenophora
4	Platyhelminthes
5	Aschelminthes **QUIZ I** **Marked Dissection**
6	Mollusca – Gastropoda, Bivalvia
7	Mollusca – Cephalopoda & Molluscan diversity
8	Annelida & Minor Protostomes **QUIZ II**
9	Arthropoda – Crustacea **Marked Dissection**
10	Arthropod diversity **QUIZ III**
11	Deuterostomes – Echinodermata, Lophophorates & Hemichordata **Hand in Annotated Bibliography**
12	**FINAL LAB EXAM**