SC/BIOL 4340 - 3.0 [WINTER 2009]

PEOPLE

Course Director: Dr. Scott P. Kelly

Location: Farq. Room 021 (basement)
Telephone: 416 736 2100 Ext. 77830
Email: spk@yorku.ca
Office Hours: Fridays 2-3 PM OR by appointment

Guest Lecturers

Locations & contact information will be provided in each case
COURSE GOALS

An appraisal of the most numerous and diverse vertebrate group

- The provision of factual and conceptual information about fishes
- Examine far-reaching interests from classical ichthyology to recent developments and rapidly growing fields
- Provide an opportunity to develop presentation, critical thinking and writing skills

GRADERS

Final grades will be determined as follows:

- Midterm Exam* 18% [Tuesday April 7th]
- Final Exam* 40%

*Short question and “essay” format
[midterm includes lecture material up to & including March 31st]

- e.g. 2008 midterm
  - 1 h 15 min long, 3 sections, 1 question/section
  - section 1; 4 choices, 1 x 10 mark question
  - section 2; 3 choices, 1 x 15 mark question
  - section 3; 2 choices, 1 x 25 mark question
**GRADES**

Final grades will be determined as follows:

- Midterm Exam* 18% [Tuesday April 7th]
- Final Exam* 40 %
- Assignment (Essay)† 25 %

† Essay topic to be chosen either by yourself or from a list provided.

1) **Literature Review**: review literature within a defined area and write a report that summarizes the topic *in your own words*.

2) **Research proposal**: background literature within a defined area followed by a proposal for research including specific methodology to be used and significance etc.

**ASSIGNMENT GUIDELINES**

**Essay**

1. Length should be somewhere in the region of 10 - 12 pages including figures diagrams and references.

2. Use original research articles (i.e. scientific papers), literature reviews and book chapters for source material. Don’t use too few as it will restrict your discussion.

3. Don’t try to be too broad and cover everything unless you are prepared to cover a lot of material/literature and summarize important points with real clarity.

4. For literature review, use subheadings to discuss specific areas within your chosen subject and then bring things together with a final discussion at the end.
**GRADES**

Final grades will be determined as follows:

- **Midterm Exam***: 18% [Tuesday April 7th]
- **Final Exam***: 40%
- **Assignment (Essay)†**: 25%
- **In-Class Presentation‡**: 17%

† Give a 13 min in-class presentation on assignment topic, providing background and pertinent information.

**Format**

- ~ 10 min presentation followed by ~ 3 min of questions
- attend all but one of the lectures with talks (1%)
- participate by asking questions after talks (1%)
- grading by all (2008: 40% Class/60% Course Director)

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**SC/BIOL 4340 – Winter 2009**

**In Class Presentation Evaluation**

**Speaker:**

**Title/Subject:**

<table>
<thead>
<tr>
<th>Criteria for Evaluation</th>
<th>Weight (%)</th>
<th>Mark (0-100)</th>
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</thead>
<tbody>
<tr>
<td>Was the level of explanation appropriate (i.e. not too easy but not too confusing or difficult)?</td>
<td>15%</td>
<td></td>
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<tr>
<td>Were the figures and diagrams on the slides explained clearly so that you could understand them?</td>
<td>10%</td>
<td></td>
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<td>Were the visual aids clear, readable and appropriate?</td>
<td>15%</td>
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<tr>
<td>Did the speaker project enthusiasm for the subject and make it interesting?</td>
<td>10%</td>
<td></td>
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<td>Was the speaker loud enough and understandable?</td>
<td>5%</td>
<td></td>
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<td>Were questions answered well?</td>
<td>20%</td>
<td></td>
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<tr>
<td>Overall, was the subject presented well and do you feel you have learned something new?</td>
<td>25%</td>
<td></td>
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**Additional Comments (use other side of page if space limiting):**

**Grades:**

- A+ = 90-100, A = 80-90
- B+ = 75-79, B = 70-74
- C+ = 65-69, C = 60-64
- D+ = 55-59, D = 50-54
- E = 40-49
- F = 0-39
ASSIGNMENT GUIDELINES:
Presentation

1. PowerPoint may be easiest.
2. Make slides clear (i.e. font size big etc.)
3. Know what you are going to say and DON’T go over time
4. Speak clearly and don’t turn your back to the audience
5. If you don’t know the answer to a question don’t be afraid to say so.
   (i.e. move on to the next question and leave a better impression)

LECTURE FORMAT
Organization and Coverage of Material
• Diversity, Classification, Evolution etc.
• Organismic Biology of Fishes
  - Endocrine Systems
  - Muscles, Locomotion, etc.
  - Osmoregulation
  - Circulation & Respiration
  - Sensory Systems
  - Colour, Light, Sound etc.
  - Feeding, Nutrition & Growth
  - Reproduction
  - Excretion
  - Behaviour

• Fundamentals plus specific research examples
• Place in context of environment, habitat and ecology
**LECTURE FORMAT** (Cont.)

- Lecture notes* will be posted on-line ASAP after each lecture
  
  www.yorku.ca/spk/biol4340.htm

  *Some Research Focus and/or additional lecture material may not be posted on the website!

- Respect your classmates
e.g. turn cell phones off!

- Lectures will not be “policed”

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**LECTURE SCHEDULE**

<table>
<thead>
<tr>
<th>MARCH</th>
<th></th>
<th>PRESENTATIONS</th>
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</thead>
<tbody>
<tr>
<td>5th</td>
<td>- Introduction</td>
<td>April 23rd - May 21st</td>
</tr>
<tr>
<td>10th</td>
<td>- General Morphology &amp; Diversity I</td>
<td>March 31st - Essay Topic Deadline</td>
</tr>
<tr>
<td>12th</td>
<td>- General Morphology &amp; Diversity II</td>
<td>April 23rd - Essay Deadline</td>
</tr>
<tr>
<td>17th</td>
<td>- Classification &amp; Evolution I</td>
<td></td>
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<tr>
<td>19th</td>
<td>- Classification &amp; Evolution II</td>
<td></td>
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<tr>
<td>24th</td>
<td>- Classification &amp; Evolution III</td>
<td></td>
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<tr>
<td>26th</td>
<td>- Endocrine System I</td>
<td></td>
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<tr>
<td>31st</td>
<td>- Endocrine System II</td>
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<tr>
<th>APRIL</th>
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<tbody>
<tr>
<td>2nd</td>
<td>- Review</td>
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<tr>
<td>7th</td>
<td>- Midterm</td>
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<tr>
<td>9th</td>
<td>- Osmoregulation</td>
<td>Dr. Kelly</td>
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<tr>
<td>14th</td>
<td>- Excretion</td>
<td>Grad Student</td>
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<tr>
<td>16th</td>
<td>- Locomotion</td>
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<tr>
<td>21st</td>
<td>- Sensory Systems</td>
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BOOKS & READING MATERIAL

Biology of Fishes
Second Edition
Carl E. Bond
BROOKS/COLE - THOMSON LEARNING
ISBN: 0-03-070342-5
(COPIES ON RESERVE IN LIBRARY)

Suggested Text

Selected Papers:
- additional reading on discoveries & detailed insights
- articles will be posted on the website

BOOKS & READING MATERIAL

Fishes - An Introduction to Ichthyology
Fifth Edition
Peter B. Moyle & Joseph J. Cech, Jr.
PEARSON - Prentice Hall
ISBN: 0-13-100847-1
(COPY ON RESERVE IN LIBRARY)

Good supplemental reading

Selected Papers:
- additional reading on discoveries & detailed insights
- articles will be posted on the website