Office and Office Hours
MGB 302-A, 683-5680, e-mail kkilburn@odu.edu
Home page: http://www.odu.edu/~ksk/home.htm
Office hours: MW 1:00 - 2:30 and by appointment

Important note: When you e-mail, please include “Bio 209” in the subject line, especially if you’re using something other than an ODU e-mail account. I delete e-mail from unknown accounts without reading them; properly identifying your e-mail will keep that from happening to you.

Course Description and Objectives
This course will provide you with an introduction to the vertebrate animals, including overviews of their evolution, systematics, anatomy, physiology, ecology and behavior. In addition to the “facts” about vertebrates, you will be introduced to important ideas in the areas of evolutionary biology, systematics, morphology, and ecology that form the basis of our conceptual understanding of this group of animals. We will also discuss a number of important hypotheses about the biology of various vertebrates and explore the ways in which these hypotheses are conceived, tested, and modified. The general approach will be phylogenetic, tracing each group of vertebrates from its origins, discussing the major changes associated with its evolution, and reviewing selected elements of its current diversity and biology.

In addition to the conceptual material, you will be expected to master an extensive body of factual information, including taxonomy and patterns of evolutionary relationship. Lecture quizzes and exams will assess your understanding of both factual and conceptual material.

Text & Other Reading Assignments (required)
Vertebrate Zoology (custom text)

Additional readings will be required and will be provided either in class or for downloading from the course website.

Specific reading assignments and documents are posted in the Lecture Materials area of the course Blackboard site in the folders for each section of lecture material. You are responsible for completing the reading assignments before material is discussed in class; you are responsible for all the material covered in the readings even if it is not specifically repeated in lecture. Lecture quizzes will frequently be used to test you on the reading assignments.

Other Resources
This course has two associated web sites. The site I refer to as “the course website” is http://www.lions.odu.edu/~kkilburn/vzhome.htm; it includes links to important course documents (lecture notes, syllabus, study guide, etc.) and to other resources relevant to the course.
The Blackboard site (http://www.blackboard.odu.edu) houses an on-line gradebook where you can check your lecture exam and quiz scores. I also use the Blackboard site to post lecture ancillaries (reading assignments, lecture outlines, study guides, PowerPoint handouts), additional course policies, important announcements, and additional course documents as appropriate; and to send e-mail to the class when necessary. You must have an active ODU e-mail account to use the Blackboard sites. I update Blackboard announcements frequently; when I do, I also send the information via e-mail. You are responsible for all information included in the Announcements and Course Docs & Info areas of the Blackboard site.

I have developed a set of print resources to accompany this course. Depending on your personal preferences, you may find some more useful than others. They are:

- **Lecture notes** posted on the course website and on Blackboard. These are the notes I use in lecture; they are not the “final word” on the material I actually present. I may add material not on the printed notes; I may decide to leave out material I thought I would include. The printed notes, therefore, are not a substitute for attending class.

- **PowerPoint handouts** posted on the Blackboard site. I provide PDF files of both the 3-slide and 6-slide views. Having printed figures of the PowerPoint slides may be useful because it keeps you from having to draw all the figures as I discuss them. PowerPoint handouts are not available on the main course website because of copyright restrictions on many of the figures. I do not guarantee that I will use PowerPoint slides in all lectures, so always be prepared to take notes.

- **Study guides** posted on the course website and on Blackboard. These are lists of discussion-style questions designed to help you identify, review, and self-test over the material that will be covered on each exam. They are not lists of exam questions; used properly, they are excellent study aids.

**Evaluation**

Your grade in this course will be determined by your performance on a series of lecture examinations, weekly quizzes and other assignments, and a partially cumulative final examination.

**Lecture exams**: 3 exams worth 100 points each will be taken at the Learning Assessment Lab (a.k.a. “Testing Center”, 683-3170) in the Gornto Technology building (between the library and BAL) on the dates indicated on the course schedule. You are responsible for scheduling your own tests; that includes knowing when the exams will be available (usually no less than 2 hours before the lab closes), when the lab is open, etc. You are also responsible for knowing and adhering to all of the lab’s policies. You do not need scantrons or blue books for the exams. Exams will comprise a variety of question types, including short-answer/essay, and will assess your mastery of content and ability to apply concepts to novel situations. Information on lab hours and policies can be found at
http://www.dl.odu.edu/departments/clt/lalab/hours.html and 

To accommodate missed exams, I will drop the lowest of the three exam scores. **No makeup exams will be given** unless you have a legitimate, ongoing, irreconcilable conflict with the exam dates and/or a documented, legitimate reason (University business, illness, family emergency, or inability to travel due to weather) for missing two exams. **The first exam you miss is the exam I will drop, regardless of your performance on other exams or the reason you missed the exam!** This policy is designed to allow every student one legitimate missed exam without creating the administrative burden of administering large numbers of makeup exams.

If you know you have a conflict with an exam date and have already missed one exam, you must contact me at least one week in advance of the second exam to receive permission to make up the exam. If you have an emergency the day of an exam and have already missed one exam, you must notify me within 24 hours of the second exam to receive permission to make up the exam. With my written permission, you will take your **one** makeup exam on the scheduled makeup day (Monday, 24 April) in the Learning Assessment Lab.

**Quizzes** will be given at the start of class each Monday and will cover assigned reading or other material to be announced the previous Friday. Quizzes will follow a team-based learning approach that includes individual and team performance components. You must be on time to take the quizzes, and your two lowest scores will be dropped. **No makeup quizzes will be given.**

**Team participation:** At the end of the semester, you will evaluate your team members based on their preparedness and participation in the team-based learning portions of the course (primarily the team quizzes).

The **final exam** will be given on Wed., 5/3 at 8:30 a.m. in MGB 311. It will be worth 100 points and **may not** be used as your low score to be dropped. Its format will be the same as that of the lecture exams and it will include a combination of new material and material from previous exams. If you miss the final exam for a documented, legitimate reason (see above), you must notify me the day of the final and arrange to make up the exam within 24 hours. **Additional information about the final exam will be provided a few weeks before the end of the semester.**

Students taking lecture exams with Disability Services must make appointments with that office **no less than one week** before each exam is given. Failure to do so will result in the student being required to take the exam in the Learning Assessment Lab. All lecture exams must be taken on the day for which the rest of the class is scheduled; the times are up to you. **The final exam must be taken on the same day and at the same time** as the rest of the class.
Point Distribution, Grading Scale, and Grade Policies

Point distribution:

<table>
<thead>
<tr>
<th></th>
<th>Grading Scale:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exams</strong> (3 @ 100 pts ea, low score dropped) = 200</td>
<td>90-100% (382.5 - 400 pts) = A</td>
</tr>
<tr>
<td><strong>Quizzes</strong> (12 @ 10 pts ea, 2 lowest dropped) = 100</td>
<td>80-89.9% (340 - 382.4 pts) = B</td>
</tr>
<tr>
<td><strong>Final Exam</strong> (1 @ 100pts ) = 100</td>
<td>70-79.9% (297.5 - 339.9 pts) = C</td>
</tr>
<tr>
<td><strong>Team Participation</strong> (1 @ 25pts) = 25</td>
<td>60-69.9% (255 - 297.4 pts) = D</td>
</tr>
<tr>
<td><em>Total = 425 points</em></td>
<td>less than 60% (less than 255 pts) = F</td>
</tr>
</tbody>
</table>

I do not grade on a curve, nor do I provide extra-credit assignments. I may elect to make adjustments to scores on some exams. If you receive an anomalously low score on a single exam, I reserve the right (but do not guarantee) to weight that exam less heavily than I do other exams. If, at the end of the semester, your grade falls on a “borderline”, I reserve the right (but do not guarantee) to take improvement, effort, and class participation into account.

I may, at my discretion, use plus/minus grading, but only for students on grade borderlines and only if awarding a “plus” or “minus” results in a higher score than the student would otherwise receive based on the scale above (i.e., an 89% may earn an A- or B+, but a 90% will always earn an A).

In keeping with University regulations, grades of Incomplete (I) will be given only in exceptional circumstances beyond the student’s control (such as illness or injury), and only after the student has completed 80% or more of the course requirements.

Scores on exams, quizzes, and assignments will be posted regularly to the Blackboard site. You are responsible for checking the site and reporting any errors to me promptly. Because of privacy concerns, I will not provide course grades or exam scores over the phone or via e-mail.

Students needing interim/midterm grade reports must follow the instructions posted in the Course Docs & Info area of Blackboard. You are responsible for completing the necessary paperwork in time to meet any deadlines you may have.

**Attendance**

Your attendance in this course may be recorded but will not, except as part of your team assessment score, be used as part of your grade in the course. For most students, regular attendance is critical for academic success. You are responsible for all information, including announcements, presented in lecture. If you miss class you should attempt to obtain any missed information from other students before contacting me.
Honor code
By taking this course, you agree to adhere to Old Dominion University’s honor code. Infractions, including plagiarizing written assignments, cheating on exams and/or providing information about exam contents to other students, will not be tolerated and will be dealt with according to University policy.

My Expectations of You
I expect you to arrive to class on time and ready to learn, and to remain in class for the entire lecture period. If you must leave early, please notify me before class and sit at the back of the room to minimize disruptions to other students.

Cell phones and pagers must be turned off while you are in class. You should refrain from any activity that creates noise and disrupts the attention of the students sitting around you. Students who consistently disrupt the class will be dealt with according to University policy.

This is a rigorous, challenging, information-rich course. To do well, you will need to master a wealth of information ranging from specific vocabulary to key hypotheses and theories. Exams and quizzes will assess not only your factual recall, but your understanding of major concepts and your ability to apply concepts to novel situations. To do well, therefore, you should plan on spending a minimum of 6-9 hours per week preparing for this class. That time includes reading each section of the text before it is covered in class; studying lecture material; re-reading text material in depth; and preparing questions over any material with which you need additional help. Note, however, that your grade is based on performance, not on how many hours you spend studying.

You are responsible for keeping your own record of your performance in the class and for contacting me promptly if you need help improving it. Waiting until the week before the final to ask “how can I pass the class” is NOT a formula for success.

In Case of Difficulty
If you are having any difficulty – with specific course content or anything else I can help with – please don’t hesitate to let me know. Remember also that you have access to a variety of student services on campus; I’m more than willing to help you locate those as necessary.

If You Have Special Needs
Please inform me as soon as possible of any special needs you might have, including medical conditions that may require special accommodation.

Changes
I reserve the right to make reasonable changes to the syllabus following timely notification of the students.
Helpful Hints

I encourage all students to visit “Dr. Mom’s Guide to College” (http://www.lions.odu.edu/~kkilburn/dr_mom_home.htm) for general advice on maximizing your success in my class. The course homepage also includes links to other “academic success sites”; I encourage you to check them out.

For most students, the best way to maximize academic performance is to develop a consistent, regular program of preparation, review, and study and to **STICK WITH IT**. That means setting aside specific times each week to “preview” upcoming material from the text and to review previous material from the text and lecture. With a regular, consistent study program, test preparation becomes much more effective and much less traumatic.

A good way to think about your study time is to recognize four essential steps to mastering the material you need to learn.

- **Step 1** is to **identify** the material you need to learn. When you preview a text chapter, read study guide questions, and locate the material you need to use to answer them in the lecture notes, text, and other materials, that’s what you’ve done. The biggest mistake I see many students make is to stop at this step. Don’t make that mistake!
- **Step 2** is to **learn** the material. How you do that will depend on your particular learning style and the nature of the material. Listening to taped lectures, making and using flash cards, outlining the material from the text, diagraming processes, drawing and labeling structures – these are all tools (but not the only tools) to help with Step 2.
- **Step 3** is to **self-test**. This will help you determine what you have succeeded in learning and what you still need to work on. The study guide is a good tool for this, as is working in a study group in which you and other students can quiz one another. How you self-test, again, depends on your particular style.
- **Step 4** is to **repeat as necessary**. For most of us, really learning something requires repetition. That’s why it’s so important to continue to identify, review, learn, and self-test consistently throughout the semester.

Note that simply memorizing the lecture outlines is NOT the same as learning the material. Use all the resources provided to test yourself over the material and ensure that you truly understand it.

Although none of the following strategies will guarantee your success in the course, they have proven helpful to many of my students in a variety of classes. You might consider trying several of the following until you work out the study style that works best for you. (Quick quiz – which step or steps from the list above do these help with?)

- **Tape the lectures** and listen to them in the car, at home, etc. for review.
- **Ask questions** in lecture and during my office hours.
• **Rewrite your lecture notes**, filling in details and concepts from the text.
• **Ask questions** in lecture and during my office hours.
• **Test yourself** by making up questions and answering them aloud or in writing.
• **Ask questions** in lecture and during my office hours.
• **Use flash cards** to study vocabulary whenever you’ve got a few minutes.
• **Study in a group**: take turns explaining material to each other.
• **Ask questions** in lecture and during my office hours.
• **Come to office hours** any time you have a question or want help reviewing.

Remember that I am not a mind-reader; if you need help, please ask for it!

**Requirements of the Old Dominion University Department of Biological Sciences**

By taking this course, you agree to adhere to the following requirements and policies of the ODU Department of Biological Sciences. Additional expectations and requirements are detailed in other parts of the syllabus.

• There is to be no consumption of food or drink in the laboratory or lecture rooms. If you require food or drink for medical reasons, please move to the lobby.
• If you are in conflict with a faculty or staff member, your first point of contact is the Biology Department Chair. His office is located in room 110 of MGB. If you are in conflict with a teaching assistant, your first point of contact is the instructor of the course.
• Inform the instructor or graduate teaching assistant of any medical conditions or needs you may have.
• Turn off electronic devices (cell phones, hand palms, etc) during the lecture and laboratory periods.
• Refer any questions concerning these requirements to the Department of Biological Science Chair, Lytton John Musselman Room 110 MGB.
## Exam & Tentative Lecture Schedule

Readings for each section are posted on Blackboard in the Lecture Materials area.

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>Section</th>
<th>TOPICS</th>
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<tbody>
<tr>
<td>1</td>
<td>1/9</td>
<td>1</td>
<td>Introduction &amp; Background; Review of Evolutionary Principles</td>
</tr>
<tr>
<td>2</td>
<td>1/16</td>
<td></td>
<td>MLK holiday; Systematics</td>
</tr>
<tr>
<td>3</td>
<td>1/23</td>
<td>2</td>
<td>Vertebrate Relationships, Structure, and Function</td>
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<tr>
<td>4</td>
<td>1/30</td>
<td>3</td>
<td>Vertebrate Origins and Early Radiations: Jawless Fishes and Early Gnathostomes</td>
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<tr>
<td>5</td>
<td>2/6</td>
<td>4, 5</td>
<td>Radiation of Chondrichthyes; Osteichthyes</td>
</tr>
<tr>
<td>6</td>
<td>2/13</td>
<td>5, 6</td>
<td>Fish Radiations, cont’d; Life In Water</td>
</tr>
<tr>
<td>7</td>
<td>2/20</td>
<td>6, 7</td>
<td>Life In Water, cont’d; Origins &amp; Early Radiations of Tetrapods</td>
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<tr>
<td>8</td>
<td>2/27</td>
<td>8</td>
<td>Lissamphibia: Modern Amphibians</td>
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<tr>
<td>9</td>
<td>3/6</td>
<td></td>
<td>!!!SPRING BREAK!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!</td>
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<tr>
<td>10</td>
<td>3/13</td>
<td>9</td>
<td>Origins &amp; Early Radiations of Amniotes</td>
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<tr>
<td>11</td>
<td>3/20</td>
<td>10</td>
<td>Anapsids &amp; Selected Archosaurs</td>
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<tr>
<td>12</td>
<td>3/27</td>
<td>11</td>
<td>Modern Diapsids: Lepidosaurus</td>
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<tr>
<td>13</td>
<td>4/3</td>
<td>12, 13</td>
<td>Thermoregulation; Introduction to Aves</td>
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<tr>
<td>14</td>
<td>4/10</td>
<td>13</td>
<td>Birds, cont’d</td>
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<tr>
<td>15</td>
<td>4/17</td>
<td>14</td>
<td>Mammalia</td>
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<tr>
<td>16</td>
<td>4/24</td>
<td>M = last class</td>
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</table>

**FINAL EXAM, WED 5/3 AT 8:30 A.M. IN MGB 311**