**Zoology (ZOOL)**

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<tr>
<th>Course Code</th>
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<tr>
<td>ZOOL 1090</td>
<td>Introduction to Human Anatomy and Physiology</td>
<td>Presents a basic introduction to the sciences of anatomy and physiology. Covers the basic structure and function of the human body at the cellular, tissue, organ, and system levels. Provides a foundation of particular value for pre-nursing students who wish to have a preview of their required life science courses.</td>
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<tr>
<td>ZOOL 2320</td>
<td>Human Anatomy</td>
<td>Studies, in-depth, the anatomy of the human body. Covers the structure and some functions at the cellular, tissue, organ, and system levels. Emphasizes the names, locations, and functions of body components. Involves problem solving and analytical thinking. Includes weekly laboratory study of human cadavers, models, and specimens.</td>
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<tr>
<td>ZOOL 2325</td>
<td>Human Anatomy Laboratory</td>
<td>Studies, in-depth, the anatomy of the human body. Covers the structure and some functions at the cellular, tissue, organ, and system levels. Emphasizes the names, locations, and functions of body components. Involves problem solving and analytical thinking. Includes weekly laboratory study of human cadavers, models, and specimens. Course Lab fee of $30 applies.</td>
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<tr>
<td>ZOOL 232H</td>
<td>Human Anatomy</td>
<td>Studies, in-depth, the anatomy of the human body. Covers the structure and some functions at the cellular, tissue, organ, and system levels. Provides a foundation of particular value for pre-nursing students who wish to have a preview of their required life science courses.</td>
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<td>ZOOL 2420</td>
<td>Human Physiology</td>
<td>Studies the functions of the human body at the chemical, cellular, organ, and system levels. Explains control mechanisms involved in homeostasis and stimulus/response pathways. Involves problem solving and analytical thinking. Includes weekly laboratory.</td>
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<td>ZOOL 2425</td>
<td>Human Physiology Laboratory</td>
<td>Studies the functions of the human body at the chemical, cellular, organ, and system levels. Explains control mechanisms involved in homeostasis and stimulus/response pathways. Involves problem solving and analytical thinking. Includes weekly laboratory.</td>
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<td>ZOOL 242H</td>
<td>Human Physiology</td>
<td>Studies the functions of the human body at the chemical, cellular, organ, and system levels. Explains control mechanisms involved in homeostasis and stimulus/response pathways. Involves problem solving and analytical thinking. Includes weekly laboratory.</td>
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<tr>
<td>ZOOL 242L</td>
<td>Human Anatomy Honors Laboratory</td>
<td>Studies the functions of the human body at the chemical, cellular, organ, and system levels. Emphasizes the roles and value of anatomical knowledge in health and disease. Covers the same general material as ZOOL 2320, but emphasizes clinical applications of the information. Students will choose and complete a course project that may involve short written reports, a term paper, or a poster presentation. Includes weekly laboratory study of human cadavers, models, and specimens.</td>
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<tr>
<td>ZOOL 242L</td>
<td>Human Physiology Honors Laboratory</td>
<td>Studies the functions of the human body at the chemical, cellular, organ, and system levels. Emphasizes the roles and value of anatomical knowledge in health and disease. Covers the same general material as ZOOL 2320, but emphasizes clinical applications of the information. Students will choose and complete a course project that may involve short written reports, a term paper, or a poster presentation. Includes weekly laboratory study of human cadavers, models, and specimens.</td>
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**Additional Courses**

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<td>Human Physiology</td>
<td>Studies the functions of the human body at the chemical, cellular, organ, and system levels. Explains control mechanisms involved in homeostasis and stimulus/response pathways. Involves problem solving and analytical thinking. Includes weekly laboratory.</td>
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<td>ZOOL 3100</td>
<td>Vertebrate Zoology</td>
<td>Designed for intended Biology or Zoology majors who desire a broad introduction to the vertebrates and a greater understanding of their unique structure, distribution and the importance of these organisms in the present and past history of the Earth. Covers the evolutionary developmental of the vertebrates pertaining to major skeletal and physiological adaptations. The approach is also ecological as to vertebrate habitat requirements, their distribution, and community roles. Includes weekly laboratory.</td>
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<tr>
<td>ZOOL 3105</td>
<td>Vertebrate Zoology Laboratory</td>
<td>Laboratory portion of the course which provides students with hands-on experience with vertebrates. Course Lab fee of $26 applies.</td>
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<td>ZOOL 3200</td>
<td>Invertebrate Zoology</td>
<td>Intended for Biology Department majors. Covers the anatomy, physiology, systematics, evolution and ecology of invertebrate animals. Includes weekly laboratory. Course Lab fee of $25 applies.</td>
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<tr>
<td>ZOOL 3300</td>
<td>Herpetology</td>
<td>Intended for Biology Department majors. Covers the anatomy, physiology, systematics, evolution and ecology of reptiles and amphibians. Includes active class discussions, oral presentations. Emphasizes native Utah herpetofauna. Includes weekly laboratory and required field trips. Course Lab fee of $40 for transportation, support, and lab applies.</td>
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Utah Valley University
Course Catalog 2017-2018
ZOOL 3430  
Entomology  
3:3:0  On Sufficient Demand  
* Prerequisite(s): BIOL 1620 and BIOL 1625 with a minimum grade of C- in each, and University Advanced Standing  
* Corequisite(s): ZOOL 3430  
An introduction to the study of insects, including insect diversity and classification, anatomy and physiology, relationships to other animals and plants, behavior, and ecology. Also includes the application of the study of insects to pest management, environmental assessment, and forensic investigations.

ZOOL 3435  
Entomology Laboratory  
1:0:2  On Sufficient Demand  
* Prerequisite(s): University Advanced Standing  
* Corequisite(s): ZOOL 3430  
Laboratory to accompany ZOOL 3430. Will examine collection, preservation, and identification of insects. An individual reference collection is required of each student.

ZOOL 3500  
Mammalogy  
3:3:0  Fall  
* Prerequisite(s): BIOL 1620 with a minimum grade of C-, and University Advanced Standing; ZOOL 3100 and ZOOL 3105 strongly recommended  
* Corequisite(s): ZOOL 3505  
Explores the taxonomy, morphology, behavior, ecology, evolution, development, and conservation of mammals. Includes three weekly lectures and a weekly laboratory.

ZOOL 3505  
Mammalogy Laboratory  
1:0:2  Fall  
* Prerequisite(s): University Advanced Standing  
* Corequisite(s): ZOOL 3500  
Explores the taxonomy, morphology, behavior, ecology, evolution, development, and conservation of mammals. Includes three weekly lectures and a weekly laboratory. Course Lab fee of $56 for transportation, lab applies.

ZOOL 3700  
Exercise Physiology  
3:3:0  Fall, Spring, Summer  
* Prerequisite(s): ZOOL 2320 (or 232H), ZOOL 2325 (or 232L), ZOOL 2420 (or 242H), ZOOL 2425 (or 242L), and Pre or Co-requisite EXSC 270G all with a C- or higher and (MATH 1050 or MATH 1055). PETE Majors: ZOOL 1090 and Pre or Co-requisite PETE 2700 both with a C- or higher and (Math 1050 or MATH 1055). University Advanced Standing  
Studies acute and chronic physiological responses to exercise, as well as nutritional and environmental effects on these responses. Requires separate weekly laboratory. Canvas Course Mats $78/McGraw applies.
ZOO: 4750
Human Physiology A Cell Biology Approach
4:3:3 Not Offered
* Prerequisite(s): BIOL 3400 and University Advanced Standing
Addresses physiological principles and functions of the human body systems at the molecular level. Emphasizes cell signal transduction involved in the body maintaining homeostasis. Gives special attention to nervous, muscular, cardiovascular, urinary and respiratory systems. Students will be required to use problem solving and analytical thinking skills to be successful in the class. Includes weekly laboratory. Course Lab fee of $25 applies.

ZOO: 4780
Neuroscience
4:4:0 Fall
* Prerequisite(s): ZOOL 2420 with a C- or higher and University Advanced Standing
Focuses on neurobiology and neuroscience, covering aspects of molecular and cell biology, physiology, pharmacology, anatomy and the interplay of these and other disciplines in our understanding of the structure and function of the nervous system. Topics to be covered include neuroanatomy and developmental neurobiology, electrophysiology and membrane specializations related to signal propagation and signal transmission, neurotransmitter function and neuropharmacology, structure and function of simple neuronal circuits and complex neural networks and the plasticity of the nervous system, among others. Incorporates discussion of journal articles related to the latest advances in neuroscience. Requires students write a paper on a neuroscience topic of interest to them.