

For class offerings for a specific term, refer to the Schedule of Classes (<http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>)

ASNB 601. Gross Anatomy 6.5 Units Prerequisite(s): Permission from course director at least two weeks before beginning of course. Description: Primarily a laboratory course. Major emphasis is upon cadaver dissection, but lectures, group discussions, informal laboratory conferences, demonstrations, X-ray presentations are frequent. Correlation of function with structure is stressed in all areas. See Medical School Freshman Schedule for time. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	ASNB 608. Neural Systems 4 Units Prerequisite(s): ASNB 607 or consent of course director at least 2 weeks before course begins. Description: Topics covered include: electrical potentials in the nervous system, synaptic transmission, somatosensory pathways, special senses (vision, hearing, balance, taste, smell), eye movements, motor systems, higher functions (language, sleep and wakefulness, learning and memory). Emphasis is placed on clinical relevance. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)
ASNB 602. Fundamentals of Neuroscience 4 Units Description: Basics of cellular and systems neuroscience are taught through a combination of lectures, laboratories, and independent study. Lectures concurrent with ASNB 502; one added lecture hour each week covers advanced topics through recent article readings and discussion. Topics covered include: electrical potentials in the nervous system, synaptic transmission, somatosensory pathways, special senses (vision, hearing, balance, taste, and smell), eye movements, motor systems, and higher functions (language, sleep and wakefulness, cognition, emotion and memory). Note: Credit may not be earned for both ASNB 502 and ASNB 602. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	ASNB 609. Fundamentals of Neuroscience Discussion 1 Unit Term Typically Offered: Fall Only Prerequisite(s): ASNB 502. Description: The goal is for students to gain a better understanding of techniques used to study the nervous system. Select topic areas will be taught using an interactive approach that enables students to process course material through thinking, talking, writing, and/or problem solving. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)
ASNB 605. Human Embryology 3 Units Prerequisite(s): Permission from course director at least two weeks before beginning of course. Description: The 2012 embryology course is trying to emphasize the clinical aspect of embryology and to allow students to better understand the importance of this particular pre-clinical subject in their medical education. The embryology material is divided into 7 modules, organized by anatomical systems. Although embryology course runs over 8 weeks period, as much as possible, we tried to match your embryology material with the gross anatomy and histology. Modules contain: descriptive developmental embryology lectures, clinical lectures. Note: Cross-listed with IDEP 865.	ASNB 610. Neuroscience Methods 1-2 Units Grading Basis: Pass/Fail Prerequisite(s): ASNB 502 or ASNB 602, or consent of the Course Director. Description: The primary goal of the Methods course is to provide graduate students with the framework to become familiar with key tools and techniques used in neuroscience research. One method will be learned per credit hour in a laboratory of the students choosing. By the end of the semester, each student will generate a written step-by-step protocol of the technique learned along with a two page description (double-spaced) of the method and its use. Note: Cross-listed with BIOC 610, MBIO 610, PHTX 610, and PHXB 610. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)
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ASNB 606. Anatomy Seminar 1 Unit Prerequisite(s): ASNB 602 as a pre-requisite or a co-requisite and restricted to Anatomical Sciences and Neurobiology graduate students. Description: Presentations and discussions of individual research or topics of current anatomical interest throughout the year. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	ASNB 616. Special Projects in Anatomy 1-15 Units Prerequisite(s): Permission from instructor at least two weeks before beginning of course. Description: This course, to be arranged to fit individual needs, is intended primarily to accommodate students with special backgrounds in anatomy; it may also be offered for others who have special needs for other advanced training. May be offered each quarter. Schedule to be arranged. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)

ASNB 617. Seminar on Developmental Neurobiology Prerequisite(s): Consent of instructor. Description: Covers neural development from neurulation through development of integrated systems. Emphasis will be on the cellular level. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	3 Units	ASNB 630. Origin of Mammalian Sensory Systems and Comparative Neurobiology Term Typically Offered: Fall Even Years Prerequisite(s): ASNB 502 or ASNB 602 or permission of instructor. Description: This course examines the phylogenetic and developmental history of the mammalian senses with a focus on the integration of anatomy, neurobiology, and fossil evidence. We will study how our understanding of non-human vertebrates (both model and non-model organisms) can provide important insights into the structure and function of the modern mammalian senses and their brain correlates. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	4 Units
ASNB 618. Laboratory Rotation Grading Basis: Pass/Fail Prerequisite(s): Consent of instructor. Description: This course will expose new graduate students to the research conducted in laboratories of the faculty of the Department of Anatomical Sciences Neurobiology. The objectives of the laboratory rotations are to expose doctoral students to different approaches and areas of research, and to assist the student in choosing a laboratory for dissertation research. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	1-3 Units	ASNB 666. Synaptic Organization of the Central Nervous System Description: An overview of the synaptic organization of the central nervous system will be covered through lectures and discussion of seminal systems neuroscience journal articles. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	3 Units
ASNB 619. Original Investigations For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	1-15 Units	ASNB 671. General and Oral Histology Prerequisite(s): Oral Biology major or related field. Description: Provides knowledge of histological structure including ultrastructure of tissues and organs. Oral structures presented in detail. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	5 Units
ASNB 620. Thesis For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	1-6 Units	ASNB 672. Integrated Biomedical Sciences II Term Typically Offered: Spring Only Prerequisite(s): Enrollment in the School of Dentistry, Oral Biology major or related field or consent of course director. Description: This course is designed specifically for first-year dental students. The primary goal of the course is to introduce clinically-oriented principles of the gastro-intestinal (GI) tract, head, and neck regions integrating gross anatomy, neuroanatomy, histology, physiology, biochemistry, and embryology. The course is also designed to foster critical thinking skills necessary for students to utilize their knowledge of these regions to evaluate the health of patients and to solve clinical problems. Anatomical donor prosection is the focal point of all teaching activities, allowing students to develop a three-dimensional/functional appreciation for the relationships of the various structures of these regions. Note: Cross-listed with BMSC 809.	11 Units
ASNB 621. Introduction to Scientific Computing Grading Basis: Pass/Fail Term Typically Offered: Summer Only Description: The goal of this course is to provide the student with a sufficient understanding of the MATLAB work environment for scientific computing to begin to use MATLAB for their own research purposes. The course covers syntax, data import/export, data visualization, data analysis process design, and data organization and management. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	2 Units	ASNB 675. Advanced Head and Neck Anatomy Prerequisite(s): One of the following: 1) Admission to the MS Oral Biology program; 2) a DDS, DMD, MD, or DO degree or its foreign equivalent; 3) consent of the course director. Description: Advanced topics in the anatomic relations of the head and neck as applicable to the post-graduate health professional, with major emphasis on cadaver dissection. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	2 Units
ASNB 622. Analytics in Biomedical Science Term Typically Offered: Fall Only Prerequisite(s): Course is restricted to students enrolled in an IPIBS Program (ASNB, BIOC, MBIQ,PHTX, PHZB) or IPTN. Description: Others require instructor permission The purpose of this course of Analytics in biomedical science is to explore quantitative methods used in biomedical science research. A heavy emphasis will be placed on learning descriptive and inferential analytics along with available tools (software) that can be used to this end. Towards the end, there will also be an introduction to large observational studies and predictive analytics. Also, storytelling with data will be briefly explored along with academic writing. Mastery will be evaluated through assignments, exams, and most importantly a project which will be presented at the end of the course. For class offerings for a specific term, refer to the Schedule of Classes (http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm)	3 Units		

ASNB 677. Current Topics in Sensory Systems Research 1 Unit

Grading Basis: Pass/Fail

Prerequisite(s): Consent of course director at least 2 weeks before course begins.

Description: Recent research directed toward understanding the organization and function of the auditory, gustatory, olfactory, somatosensory, and visual systems will be presented and critiqued.

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