# DEPARTMENT OF BIOMEDICAL SCIENCES



Office in H120 Anatomy/Zoology Building (970) 491-6187 vetmedbiosci.colostate.edu/bms/ (https://vetmedbiosci.colostate.edu/ bms/)

Professor Bret Smith, Department Head

# Undergraduate Majors

- Major in Biomedical Sciences (http://catalog.colostate.edu/ general-catalog/colleges/veterinary-medicine-biomedical-sciences/ biomedical-sciences-major/)
  - Anatomy and Physiology Concentration (http:// catalog.colostate.edu/general-catalog/colleges/veterinarymedicine-biomedical-sciences/biomedical-sciences/biomedicalsciences-major-anatomy-physiology-concentration/)
  - Environmental Public Health Concentration (http:// catalog.colostate.edu/general-catalog/colleges/veterinarymedicine-biomedical-sciences/environmental-radiological-healthsciences/biomedical-sciences-major-environmental-public-healthconcentration/)
  - Microbiology and Infectious Disease Concentration (http:// catalog.colostate.edu/general-catalog/colleges/veterinarymedicine-biomedical-sciences/microbiology-immunologypathology/biomedical-sciences-major-microbiology-infectiousdisease-concentration/)
- Major in Neuroscience (http://catalog.colostate.edu/general-catalog/ colleges/veterinary-medicine-biomedical-sciences/biomedicalsciences/neuroscience-major/)

- Behavioral and Cognitive Neuroscience Concentration (http://catalog.colostate.edu/general-catalog/colleges/ veterinary-medicine-biomedical-sciences/biomedical-sciences/ neuroscience-major-behavioral-cognitive-concentration/)
- Cell and Molecular Neuroscience Concentration (http:// catalog.colostate.edu/general-catalog/colleges/veterinarymedicine-biomedical-sciences/biomedical-sciences/ neuroscience-major-cell-molecular-concentration/)

# Minor

 Minor in Biomedical Sciences (http://catalog.colostate.edu/ general-catalog/colleges/veterinary-medicine-biomedical-sciences/ biomedical-sciences/biomedical-sciences-minor/)

# Graduate Graduate Programs in Biomedical Sciences

Graduate programs lead to the Master of Science and Doctor of Philosophy degrees in Biomedical Sciences. Students interested in graduate work should refer to the Graduate and Professional Bulletin (http://catalog.colostate.edu/general-catalog/graduate-bulletin/) or the Department of Biomedical Sciences (https://vetmedbiosci.colostate.edu/ bms/).

# **Master's Programs**

- Master of Science in Biomedical Sciences, Plan A (http:// catalog.colostate.edu/general-catalog/colleges/veterinary-medicinebiomedical-sciences/biomedical-sciences/plan-a-ms-biomedicalsciences/)
- Master of Science in Biomedical Sciences, Plan B (http:// catalog.colostate.edu/general-catalog/colleges/veterinary-medicinebiomedical-sciences/biomedical-sciences/plan-b-ms-biomedicalsciences-paper/)
- Master of Science in Biomedical Sciences, Plan B, Anatomical and Physiological Sciences Specialization (http://catalog.colostate.edu/ general-catalog/colleges/veterinary-medicine-biomedical-sciences/ biomedical-sciences/plan-b-ms-biomedical-sciences-anatomicalphysiological-sciences-specialization/)
- Master of Science in Biomedical Sciences, Plan B, Reproductive Technology Specialization (http://catalog.colostate.edu/generalcatalog/colleges/veterinary-medicine-biomedical-sciences/ biomedical-sciences/plan-b-ms-biomedical-sciences-reproductivetechnology-specialization/)

# Ph.D.

 Ph.D. in Biomedical Sciences (http://catalog.colostate.edu/ general-catalog/colleges/veterinary-medicine-biomedical-sciences/ biomedical-sciences/biomedical-sciences-phd/)

# **Courses Biomedical Sciences (BMS)**

BMS 192 First Year Seminar in Biomedical Sciences Credit: 1 (0-0-1) Course Description: The university and its resources, college survival skills, careers in the biomedical sciences; current issues in health and biotechnology.

Prerequisite: None.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

#### BMS 200 Concepts in Human Anatomy and Physiology Credit: 1 (0-0-1) Course Description: Basic concepts in the anatomy and physiology of the human body.

Prerequisite: None.

**Registration Information:** Must have concurrent registration in BMS 300. **Terms Offered:** Fall, Spring. **Grade Mode:** Traditional.

Special Course Fee: No.

## BMS 260 Biomedical Sciences Credits: 3 (2-0-1)

**Course Description:** Opportunities and challenges in biomedical sciences; business of science, ethics, model systems, cellular and systemic physiology.

Prerequisite: LIFE 102. Registration Information: Must register for lecture and recitation. Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

# BMS 296 Honors-Physiological Concepts Credit: 1 (0-0-1)

**Course Description:** Honors breakout session integrating physiological concepts for students in BMS 260.

Prerequisite: None.

**Registration Information:** Must have concurrent registration in BMS 260. **Term Offered:** Spring.

Grade Mode: Traditional.

Special Course Fee: No.

# BMS 300 Principles of Human Physiology Credits: 4 (4-0-0)

Course Description: Physiology of humans. Prerequisite: (BZ 101 or BZ 110 or LIFE 102) and (CHEM 103 or CHEM 107 or CHEM 111).

Registration Information: Sections may be offered: Online. Terms Offered: Fall, Spring, Summer. Grade Mode: Traditional.

Special Course Fee: No.

# BMS 301 Human Gross Anatomy Credits: 5 (3-2-1)

**Course Description:** Structure and function of the human body. Study of prosected human cadavers; clinical applications; living anatomy. **Prerequisite:** BZ 110 or LIFE 102.

**Registration Information:** Must register for lecture, laboratory, and recitation.

Terms Offered: Fall, Spring, Summer. Grade Mode: Traditional. Special Course Fee: Yes.

#### BMS 302 Laboratory in Principles of Physiology Credits: 2 (1-3-0) Course Description: Basic physiology lab exercises.

**Prerequisite:** BMS 300, may be taken concurrently or BMS 360, may be taken concurrently.

**Registration Information:** Must register for lecture and laboratory. Credit not allowed for both BMS 302 and BMS 320.

Terms Offered: Fall, Spring. Grade Mode: Traditional.

Special Course Fee: Yes.

## BMS 304 Applied Food and Fiber Animal Anatomy Credits: 3 (1-2-1)

**Course Description:** Provide functional knowledge of anatomy for major food and fiber animals. Describe major diseases affecting these animals, and communicate with producers and veterinarians about the animals and their care.

Prerequisite: BZ 110 or LIFE 102.

Restriction: Must not be a: Freshman.

**Registration Information:** Sophomore standing. Must register for lecture, lab, and recitation. Credit not allowed for both BMS 304 and BMS 380A2. **Term Offered:** Fall.

Grade Mode: Traditional.

Special Course Fee: Yes.

# BMS 305 Domestic Animal Gross Anatomy Credits: 4 (3-3-0)

**Course Description:** Comparative gross anatomy of domestic carnivores, ruminants, and horses.

Prerequisite: BZ 110 or LIFE 102.

**Registration Information:** Must register for lecture and laboratory. Credit not allowed for both BMS 305 and VS 333.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: Yes.

## BMS 310 Anatomy for the Health Professions Credits: 4 (3-3-0)

**Course Description:** Gross anatomy of the human body from a regional perspective, utilizing clinical applications as a basis for anatomical understanding.

Prerequisite: LIFE 000 to 499 - at least 3 credits.

Registration Information: Offered as an online course only.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Traditional.

Special Course Fee: No.

## BMS 320 Virtual Laboratory in Physiology Credits: 2 (0-4-0)

**Course Description:** Physiology lab exercises using a virtual laboratory simulation system.

**Prerequisite:** BMS 300, may be taken concurrently or BMS 360, may be taken concurrently.

**Registration Information:** Credit not allowed for both BMS 320 and BMS 302. Offered as an online course only.

Terms Offered: Fall, Spring. Grade Mode: Traditional.

Special Course Fee: No.

## BMS 325 Cellular Neurobiology Credits: 3 (3-0-0)

Course Description: Cellular and molecular bases of nervous system function and behavior. Prerequisite: BMS 300 or BMS 360. Term Offered: Fall. Grade Mode: Traditional. Special Course Fee: No.

#### BMS 330 Microscopic Anatomy Credits: 4 (3-3-0)

**Course Description:** Microscopic anatomy of mammalian tissue. **Prerequisite:** BMS 300 or BMS 360.

**Registration Information:** Must register for lecture and laboratory. Credit not allowed for both BMS 330 and VS 331.

Term Offered: Spring. Grade Mode: Traditional.

Special Course Fee: No.

#### BMS 345 Functional Neuroanatomy Credits: 4 (3-2-0)

**Course Description:** Functional systems and circuits of the human brain and spinal cord.

Prerequisite: BMS 300 or BMS 360.

Registration Information: Must register for lecture and laboratory. Terms Offered: Fall, Spring. Grade Mode: Traditional. Special Course Fee: Yes.

#### BMS 360 Fundamentals of Physiology Credits: 4 (4-0-0)

**Course Description:** Cell, tissue, and organ function related to integrated whole body function.

**Prerequisite:** (BZ 110 or LIFE 102) and (CHEM 245, may be taken concurrently or CHEM 341, may be taken concurrently).

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

# BMS 384 Supervised College Teaching Credits: Var[1-5] (0-0-0)

**Course Description:** Supervision by and work with graduate teaching assistants in small group learning sessions involving students enrolled in BMS 300.

Prerequisite: BMS 300 or BMS 360.

**Registration Information:** A maximum of 10 combined credits for all 384 and 484 courses are counted towards graduation requirements. **Terms Offered:** Fall, Spring, Summer.

Terms Offered: Fall, Spring, Summe

Grade Mode: Traditional.

Special Course Fee: No.

BMS 400 Neuroanatomy Through Clinical Case Studies Credit: 1 (0-0-1) Course Description: Neuroanatomical case studies to reinforce and apply information gained in BMS 345, Functional Neuroanatomy.

Prerequisite: BMS 345, may be taken concurrently.

**Registration Information:** Biomedical sciences majors only. Required field trips.

Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

BMS 401 Laboratory Research in Biomedical Sciences Credits: 4 (0-9-1) Course Description: Hands-on experience in laboratory research methods for students working individually on a project which stems from a larger research project of a faculty member's laboratory. All students will work in the same facility equipped with appropriate equipment and supplies to

conduct the student research proposal. **Prerequisite:** BMS 300 or BMS 360.

Registration Information: Must register for laboratory and recitation. Terms Offered: Fall, Spring. Grade Mode: Traditional. Special Course Fee: No.

# BMS 405 Nerve and Muscle-Toxins, Trauma and Disease Credits: 3 (3-0-0)

**Course Description:** Structure, composition, function of nerves and muscles, etiology of genetic and autoimmune neuromuscular diseases, alteration by toxins and nerve gas.

Prerequisite: BMS 325 or BMS 345. Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

BMS 409 Human and Animal Reproductive Biology Credits: 3 (3-0-0)

**Course Description:** Basis for male and female reproductive function in humans and animals. **Prerequisite:** BMS 300 or BMS 360.

Term Offered: Fall. Grade Mode: Traditional.

Special Course Fee: No.

## BMS 420 Cardiopulmonary Physiology Credits: 3 (3-0-0)

Course Description: Normal and pathophysiology of cardiovascular and pulmonary systems. Prerequisite: BMS 300 or BMS 360. Term Offered: Fall. Grade Mode: Traditional. Special Course Fee: No.

# BMS 421 Perspectives in Cardiopulmonary Diseases Credits: 2 (1-0-1)

**Course Description:** Pathophysiology of cardiopulmonary diseases. **Prerequisite:** BMS 420, may be taken concurrently.

**Registration Information:** Must register for lecture and recitation. Biomedical sciences majors only. **Term Offered:** Fall.

Grade Mode: Traditional.

Special Course Fee: No.

#### BMS 425 Introduction to Systems Neurobiology Credits: 3 (3-0-0)

**Course Description:** Functional organization of the nervous system at the circuit level in producing simple and complex behaviors, sensations and cognition.

Prerequisite: BMS 325. Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

## BMS 430 Endocrinology Credits: 3 (3-0-0)

Course Description: Physiology of the glands of internal secretion. Prerequisite: BMS 300 or BMS 360. Term Offered: Fall. Grade Mode: Traditional. Special Course Fee: No.

#### BMS 450 Pharmacology Credits: 3 (3-0-0)

Course Description: Pharmacologic principles, absorption, distribution, metabolism, excretion, side effects, and actions of drugs. Prerequisite: (BMS 300 or BMS 360) and (BC 351 or LIFE 210). Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

# BMS 460 Essentials of Pathophysiology Credits: 3 (3-0-0)

Course Description: Integration of different facets of mechanisms

underlying health and disease.

Prerequisite: BMS 300 or BMS 360. Registration Information: Biomedical sciences majors only.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

# BMS 461 Pathophysiology Perspectives Credits: 2 (0-0-2)

**Course Description:** Capstone course in pathophysiology for biomedical sciences majors.

Prerequisite: BMS 460, may be taken concurrently. Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

#### BMS 487 Internship Credits: Var[1-6] (0-0-0)

Course Description: Work/research experience with an approved preceptor outside of a university laboratory. Prerequisite: None. Registration Information: Written consent of department required. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

### BMS 495 Independent Study Credits: Var[1-18] (0-0-0)

Course Description: Prerequisite: None. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 496A Honors: Human Gross Anatomy Credits: Var[1-3] (0-0-0) Course Description: Honors breakout session for students in Human Gross Anatomy.

Prerequisite: BMS 301, may be taken concurrently. Terms Offered: Fall, Spring. Grade Mode: Traditional. Special Course Fee: No.

# BMS 496B Honors: Physiology Lab Credits: Var[1-3] (0-0-0)

**Course Description:** Honors breakout session for students in Physiology Lab.

Prerequisite: BMS 302, may be taken concurrently. Terms Offered: Fall, Spring. Grade Mode: Traditional. Special Course Fee: No.

# BMS 496C Honors: Physiology Case Studies Credits: Var[1-3] (0-0-0)

**Course Description:** Honors breakout session for students in Physiology Case Studies.

Prerequisite: BMS 360, may be taken concurrently. Terms Offered: Fall, Spring. Grade Mode: Traditional. Special Course Fee: No.

BMS 496D Honors: Animal Gross Anatomy Credits: Var[1-3] (0-0-0) Course Description: Honors breakout session for students in Animal Gross Anatomy. Prerequisite: BMS 305, may be taken concurrently. Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

#### BMS 498 Research Credits: Var[1-3] (0-0-0)

Course Description: Faculty-directed research in biomedical sciences. Prerequisite: BMS 300 or BMS 360. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

#### BMS 500 Mammalian Physiology I Credits: 4 (4-0-0)

**Course Description:** Cell physiology of nerve, skeletal, cardiac and smooth muscle with an emphasis on how cellular functions integrate into systems behavior.

Prerequisite: BMS 300 or BMS 360.

**Registration Information:** Credit not allowed for both BMS 500 and NB 501. Sections may be offered: Online.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

## BMS 501 Mammalian Physiology II Credits: 4 (4-0-0)

**Course Description:** Respiratory, renal, digestive, endocrine, metabolic, and reproductive function.

Prerequisite: BMS 300 or BMS 360.

Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

# BMS 502 Readings in Cellular Neurobiology Credit: 1 (0-0-1) Also Offered As: NB 500.

**Course Description:** Faculty directed exploration of key literature in the neurosciences.

Prerequisite: (BZ 100 to 481 - at least 1 course or BIO 100 to 481 - at least 1 course or LIFE 100 to 481 - at least 1 course) and (BC 100 to 481 - at least 1 course and PH 100 to 481 - at least 1 course) and (MATH 141 or MATH 155 or MATH 160 to 161 - at least 1 course or MATH 255 or MATH 261) and (BMS 325) and (BMS 500, may be taken concurrently or NB 501, may be taken concurrently).

**Restriction:** Must not be a: Freshman, Sophomore, Junior. **Registration Information:** Senior standing. Written consent of instructor. Credit not allowed for both BMS 502 and NB 500.

Term Offered: Fall. Grade Mode: Traditional.

Special Course Fee: No.

## BMS 503 Developmental Neurobiology Credits: 3 (3-0-0) Also Offered As: NB 503.

**Course Description:** Molecular mechanisms involved in development of nervous system including differentiation, growth, pathfinding, and synaptogenesis.

**Prerequisite:** (BIO 100 to 481 or BZ 100 to 481 or LIFE 100 to 481) and (BC 100 to 481 and PH 100 to 481) and (MATH 141 or MATH 155 or MATH 160 to 161 or MATH 255 or MATH 261).

**Registration Information:** Credit not allowed for both BMS 503 and NB 503.

Term Offered: Spring. Grade Mode: Traditional.

Special Course Fee: No.

#### BMS 505 Neuronal Circuits, Systems and Behavior Credits: 3 (3-0-0) Also Offered As: NB 505.

**Course Description:** Anatomical and physiological organization of the nervous system.

Prerequisite: BMS 325 or BMS 500 or NB 501.

**Registration Information:** Credit not allowed for both BMS 505 or NB 505. **Term Offered:** Spring.

Grade Mode: Traditional.

Special Course Fee: No.

#### BMS 521 Comparative Reproductive Physiology Credits: 3 (3-0-0)

**Course Description:** A comparative overview of reproduction in vertebrates (focusing on mammals) emphasizing both conserved and species-specific aspects of physiology. **Prerequisite:** BMS 300 or BMS 360.

Term Offered: Spring. Grade Mode: Traditional.

Special Course Fee: No.

#### BMS 531 Domestic Animal Dissection Credits: 3 (0-9-0)

Course Description: Dissection of domestic animals. Prerequisite: BMS 305. Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: Yes.

#### BMS 540 Assisted Reproductive Technologies Lab I Credits: 3 (1-6-0)

**Course Description:** Principles and fundamental skills of assisted reproduction technologies, including sterile methods for collecting and culturing oocytes, in vitro fertilization and embryo culture.

Prerequisite: None.

Restriction: Must be a: Graduate.

**Registration Information:** Graduate standing. Admission to the Master of Science in Biomedical Sciences, Plan B, Reproductive Technology Specialization. Must register for lecture and laboratory. Credit not allowed for both BMS 540 and BMS 580A2.

Term Offered: Fall. Grade Mode: Traditional. Special Course Fee: No.

#### BMS 541 Assisted Reproductive Technologies Lab II Credits: 3 (1-6-0)

**Course Description:** Principles and fundamental skills needed for assisted reproductive technologies, including advanced techniques for splitting, obtaining biopsies from and transferring embryos; as well as learning the latest industry techniques for collecting, staining, manipulating and labeling embryos.

Prerequisite: BMS 540.

Restriction: Must be a: Graduate.

**Registration Information:** Graduate standing. Admission to the Master of Science in Biomedical Sciences, Plan B, Reproductive Technology Specialization. Must register for lecture and laboratory. Credit not allowed for both BMS 541 and BMS 580A3.

Term Offered: Spring.

Grade Mode: Traditional. Special Course Fee: No.

## BMS 545 Neuroanatomy Credits: 5 (3-4-0)

**Course Description:** Nervous system structure and function presented from a systems perspective; applied and comparative aspects are emphasized.

Prerequisite: None.

Registration Information: Written consent of instructor required. Must register for lecture and laboratory. Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: Yes.

#### BMS 575 Human Anatomy Dissection Credits: 4 (0-8-0)

**Course Description:** Regional approach to human gross anatomy through laboratory dissection of human cadaver.

Prerequisite: None.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: Yes.

# BMS 610A Managing a Career in Science: Survival Skills for Coursework (M.S.) Credit: 1 (1-0-0)

**Course Description:** Survival skills for professionals. How to succeed in science, including writing, teaching, speaking; finding the right job.

Prerequisite: None. Restriction: Must be a: Graduate, Professional.

Term Offered: Fall.

Grade Mode: Traditional. Special Course Fee: No.

# BMS 610B Managing a Career in Research: Survival Skills for Research (M.S. and Ph.D.) Credit: 1 (1-0-0)

**Course Description:** Survival skills for professionals. How to succeed in science, including improving writing, teaching, speaking; finding the right job.

Prerequisite: None. Restriction: Must be a: Graduate, Professional. Term Offered: Fall. Grade Mode: Traditional. Special Course Fee: No.

## BMS 619 Advanced Human Gross Anatomy Credits: 2 (0-0-2)

**Course Description:** Clinical application of human anatomy through casebased study.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional. Registration Information: Written consent of instructor. Term Offered: Fall. Grade Mode: Traditional. Special Course Fee: Yes.

# BMS 631 Mechanisms of Hormone Action Credits: 2 (2-0-0)

**Course Description:** Synthesis, secretion, and mechanisms of action of hormones.

Prerequisite: BMS 430 or BMS 501. Restriction: Must be a: Graduate, Professional. Term Offered: Fall (odd years). Grade Mode: Traditional. Special Course Fee: No.

# BMS 632 Metabolic Endocrinology Credits: 2 (2-0-0)

Course Description: Endocrine regulation of metabolic homeostasis; effects of exercise or pregnancy. Prerequisite: BMS 631. Restriction: Must be a: Graduate, Professional. Term Offered: Fall (odd years). Grade Mode: Traditional. Special Course Fee: No. BMS 633 Domestic Animal Anatomy-Case Discussions Credits: 2 (0-0-2) Course Description: Clinical case discussions utilized in advanced

understanding of domestic animal anatomy and physiology. **Prerequisite:** None.

Restriction: Must be a: Graduate, Professional.

Registration Information: Must have concurrent registration in BMS 531. Term Offered: Spring. Grade Mode: Traditional.

Special Course Fee: No.

BMS 640 Reproductive Physiology and Endocrinology Credits: 4 (4-0-0) Course Description: Reproductive physiology and endocrinology of

vertebrate animals.

Prerequisite: BMS 501.

Restriction: Must be a: Graduate, Professional. Term Offered: Fall (even years). Grade Mode: Traditional.

Special Course Fee: No.

# BMS 642 Research Techniques for Gametes and Embryos Credit: 1 (0-3-0)

**Course Description:** Collection, storage, evaluation, in vitro manipulation, and replacement of sperm, oocytes, embryos, and other reproductive tissues.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional. Registration Information: Admission to Biomedical Sciences graduate program required. Term Offered: Fall.

Grade Mode: Traditional. Special Course Fee: No.

# BMS 643 Applied Andrology Credits: 2 (1-3-0)

**Course Description:** The male side of reproduction including the development of the male reproductive tract, hormonal control of the tract and spermatogenesis, fundamentals of spermatogenesis and seminal plasma and the physiology of sperm. Current methods for collecting, analyzing, cryopreserving and preparing sperm for either artificial insemination or in vitro fertilization.

Prerequisite: BMS 300 or BMS 360 or BMS 409.

Restriction: Must be a: Graduate, Professional.

**Registration Information:** Must register for lecture and laboratory. Credit not allowed for both BMS 643 and BMS 680A2.

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

# BMS 684 Supervised College Teaching Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None.

Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 692 Seminar-Classics in Neurosciences Credit: 1 (0-0-1) Course Description: Review of classic papers in the neurosciences. Prerequisite: None. Restriction: Must be a: Graduate, Professional. Registration Information: Admission to Biomedical Sciences graduate program required. Terms Offered: Fall, Spring. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 695A Independent Study: Developmental Anatomy Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None.

Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option.

Special Course Fee: No.

# BMS 695B Independent Study: Microscopic Anatomy Credits: Var[1-18] (0-0-0) Course Description:

Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

## BMS 695C Independent Study: Neuroanatomy Credits: Var[1-18] (0-0-0) Course Description:

Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 695D Independent Study: Radiographic Anatomy Credits: Var[1-18] (0-0-0)

Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 695E Independent Study: Surgical Anatomy Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option.

Special Course Fee: No.

# BMS 695F Independent Study: Gross Anatomy Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None.

Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

#### BMS 696 Group Study-Neurosciences Credits: Var[1-3] (0-0-0)

**Course Description:** Current topics in neuroscience; how to evaluate scientific presentations.

Prerequisite: None. Restriction: Must be a: Graduate, Professional. Term Offered: Fall. Grade Mode: Instructor Option. Special Course Fee: No.

BMS 699 Thesis Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

# BMS 742 Ethical Issues in Human Assisted Reproduction Credit: 1 (1-0-0)

**Course Description:** Journal club style seminar focusing on ethical issues that arise around assisted reproductive techniques in humans. Open discourse around controversial topics ranging from genetic modification of embryos to LGBTQIA reproductive rights.

Prerequisite: None.

**Restriction:** Must be a: Graduate, Professional. **Registration Information:** Credit not allowed for both BMS 742 and BMS 780A1.

Term Offered: Spring. Grade Mode: Traditional. Special Course Fee: No.

# BMS 784 Supervised College Teaching Credits: Var[1-18] (0-0-0) Course Description:

Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

#### BMS 792A Seminar: Biomedical Sciences Credits: Var[1-5] (0-0-0) Course Description: Prereguisite: None.

Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring. Grade Mode: Instructor Option. Special Course Fee: No.

### BMS 792B Seminar: Neurophysiology Credits: Var[1-5] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 792C Seminar: Reproductive Physiology Credits: Var[1-5] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 795A Independent Study: Endocrinology Credits: Var[1-18] (0-0-0)

Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

BMS 795B Independent Study: Neurophysiology Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

#### BMS 795C Independent Study: Cell Physiology Credits: Var[1-18] (0-0-0) Course Description: Prereguisite: None.

Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 795D Independent Study: Cardiopulmonary Physiology Credits: Var[1-18] (0-0-0) Course Description:

Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

## BMS 795E Independent Study: Reproductive Physiology Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

## BMS 796A Group Study: Topics in Neuroscience Credits: Var[1-4] (0-0-0) Also Offered As: NB 796C. Course Description: Faculty-directed exploration of areas of special interest in neuroscience.

Prerequisite: None. Restriction: Must be a: Graduate, Professional. Registration Information: Written consent of instructor. May not be taken concurrently with NB 796C. Terms Offered: Fall, Spring. Grade Mode: Instructor Option. Special Course Fee: No.

# BMS 796B Group Study: Cardiopulmonary Physiology Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No. BMS 796C Group Study: Reproductive Physiology Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: Instructor Option. Special Course Fee: No.

BMS 799 Dissertation Credits: Var[1-18] (0-0-0) Course Description: Prerequisite: None. Restriction: Must be a: Graduate, Professional. Terms Offered: Fall, Spring, Summer. Grade Mode: S/U Sat/Unsat Only. Special Course Fee: No.