

NEUROBIOLOGY-NB (NB)

Courses

NB 192 Introductory Neuroscience Seminar Credit: 1 (0-0-1)

Course Description: Introduction to basic neuroscience concepts and discussion of neuroscience content within concentrations. Study of emerging technologies, career paths and research opportunities. Group activities and strategies for success.

Prerequisite: None.

Registration Information: Written consent of instructor required.

Terms Offered: Fall, Spring.

Grade Mode: Traditional.

Special Course Fee: No.

NB 292 Research Topics in Neuroscience Credit: 1 (0-0-1)

Course Description: A discussion of current research interests of neuroscience faculty.

Prerequisite: None.

Registration Information: Neuroscience majors only. May only be taken once for credit.

Term Offered: Spring.

Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

NB 399 Thesis Preparation Credit: 1 (0-0-1)

Course Description: Preparation for senior thesis in Neuroscience.

Prerequisite: (CO 300 or CO 301B) and (BMS 300).

Registration Information: Junior standing in Neuroscience major.

Terms Offered: Fall, Spring.

Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

NB 475 Mentored Research in Neuroscience Credits: 3 (0-6-1)

Course Description: Mentored research with final written report required.

Prerequisite: CHEM 344, may be taken concurrently and LIFE 212.

Registration Information: May be taken twice for a maximum of 6 credits. Maximum of 12 credits toward degree for any combination of NB 475, NB 487, NB 495, NB 496.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Traditional.

Special Course Fee: No.

NB 487 Internship in Neuroscience Credits: Var[1-12] (0-0-0)

Course Description: Work experience with an approved preceptor outside of CSU.

Prerequisite: CHEM 344 and LIFE 212.

Registration Information: Approval by undergraduate program director of preceptor and project. Maximum of 12 credits toward degree for any combination of NB 475, NB 487, NB 495, NB 496.

Terms Offered: Fall, Spring, Summer.

Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

NB 493 Senior Seminar Credit: 1 (0-0-1)

Course Description: Topics of current interest in neuroscience.

Prerequisite: None.

Registration Information: Senior standing.

Terms Offered: Fall, Spring.

Grade Mode: Traditional.

Special Course Fee: No.

NB 495 Independent Study Credits: Var[1-4] (0-0-0)

Course Description: Instructor mentored projects performed independently.

Prerequisite: None.

Registration Information: Written consent of Neuroscience undergraduate program director. Maximum of 12 credits toward degree for any combination of NB 475, NB 487, NB 495, NB 496.

Terms Offered: Fall, Spring, Summer.

Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

NB 496 Group Study in Neuroscience Credits: Var[1-4] (0-0-0)

Course Description: Faculty-directed exploration of areas of special interest in neuroscience.

Prerequisite: None.

Registration Information: Written consent of Neuroscience undergraduate program director. Maximum of 12 credits toward degree for any combination of NB 475, NB 487, NB 495, NB 496.

Terms Offered: Fall, Spring, Summer.

Grade Mode: S/U Sat/Unsat Only.

Special Course Fee: No.

NB 499 Senior Thesis Credits: 3 (0-0-3)

Course Description: Interpreting research results (experiential or from the literature) and writing a thesis; oral presentation required; supervised by a faculty mentor.

Prerequisite: NB 399 and NB 493, may be taken concurrently.

Registration Information: Senior standing in the Neuroscience major.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Traditional.

Special Course Fee: No.

NB 500 Readings in Cellular Neurobiology Credit: 1 (0-0-1)

Also Offered As: BMS 502.

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 (NB 501, may be taken concurrently or BMS 500, 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.

NB 501 Cellular and Molecular Neurophysiology Credits: 2 (2-0-0)

Course Description: Membrane properties of nerve and muscle; molecular mechanisms of synaptic function; neuromuscular units.

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) and (MATH 141 or MATH 155 or MATH 160 to 161 - at least 1 course or MATH 255 or MATH 261).

Registration Information: Credit not allowed for both NB 501 and BMS 500.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

NB 502 Molecular and Cellular Neurobiology Credits: 2 (2-0-0)

Course Description: Molecular cellular signaling and mechanisms.

Prerequisite: None.

Restriction: Must be a: Graduate.

Registration Information: Graduate standing.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

NB 503 Developmental Neurobiology Credits: 3 (3-0-0)

Also Offered As: BMS 503.

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

Prerequisite: (BIO 100 to 481 - at least 1 course or BZ 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).

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

Term Offered: Spring.

Grade Mode: Traditional.

Special Course Fee: No.

NB 505 Neuronal Circuits, Systems and Behavior Credits: 3 (3-0-0)

Also Offered As: BMS 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.

NB 506 Neuroscience of Disease Credits: 2 (0-0-2)

Course Description: Application of fundamental neuroscience concepts and methods to the study of neurological diseases, through analysis and presentation of case studies.

Prerequisite: BMS 500, may be taken concurrently or NB 501, may be taken concurrently.

Restriction: Must be a: Graduate.

Registration Information: Graduate standing. Credit not allowed for both NB 506 and NB 580A1.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

NB 586 Practicum-Techniques in Neuroscience II Credit: 1 (0-2-0)

Course Description: Current research projects in the laboratories of neuroscience faculty.

Prerequisite: NB 501 and NB 502.

Term Offered: Spring.

Grade Mode: Instructor Option.

Special Course Fee: No.

NB 650 Computer Analysis of Neuronal Proteins Credit: 1 (1-0-0)

Course Description: Theory and practice of using computers to study proteins.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Term Offered: Spring (odd years).

Grade Mode: Traditional.

Special Course Fee: No.

NB 750 Physiology of Ion Channels Credits: 2 (2-0-0)

Course Description: Physiological and structural analysis of membrane ion channels.

Prerequisite: BMS 500.

Restriction: Must be a: Graduate, Professional.

Registration Information: Written consent of instructor required.

Term Offered: Spring (odd years).

Grade Mode: Traditional.

Special Course Fee: No.

NB 771 Writing, Submitting, and Reviewing Grants Credit: 1 (1-0-0)

Course Description: Preparation of NRSA fellowship proposals; proposal review; possible submission to NIH for funding.

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Term Offered: Fall.

Grade Mode: Traditional.

Special Course Fee: No.

NB 793 Neuroscience Seminar Credit: 1 (0-0-1)

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring.

Grade Mode: Instructor Option.

Special Course Fee: No.

NB 795 Independent Study Credits: Var[1-18] (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.

NB 796A Group Study: Ion Channels Credits: Var[1-18] (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.

NB 796B Group Study: Neuronal Growth and Regeneration Credits: Var[1-18] (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.

NB 796C Group Study: Topics in Neuroscience Credits: Var[1-4] (0-0-0)

Also Offered As: BMS 796A.

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 BMS 796A.

Terms Offered: Fall, Spring.

Grade Mode: Instructor Option.

Special Course Fee: No.

NB 796D Group Study: Seizures and Epilepsy Credits: Var[1-18] (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.**NB 796E Group Study: Neuroendocrine Mechanisms Credits:****Var[1-18] (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.