

Division of Medical Sciences
Ph.D. Programs at Harvard Medical School

First Meeting of Courses

Spring Semester

2012-2013

Spring term begins: Monday, January 28, 2013

Add Deadline: Monday, March 11, 2013

Drop Deadline: Tuesday, March 26, 2013

Holiday: President's Day, Monday, February, 18, 2013

For Information Call: 617-432-0162

Division of Medical Sciences
Ph.D. Programs at Harvard Medical School
First Meeting of Courses
Spring Semester 2013

Biological Chemistry and Molecular Pharmacology

BCMP 201. Biological Macromolecules: Structure, Function and Pathways

Catalog Number: 5068

Stephen C. Harrison (Medical School), Stephen C. Blacklow (Medical School), Gaudenz Danuser (Medical School), and Peter K. Sorger (Medical School)

Half course (spring term). Tu., Th., 9:30–11, W., 4–5:30.

Macromolecular structure with emphasis on biochemistry, interactions and catalysis in cellular processes and pathways. Links between theory and observation will emerge from discussion of fundamental principles, computational approaches and experimental methods.

Note: The course is intended for all Division of Medical Sciences (DMS) graduate students and is open to advanced undergraduates. Offered jointly with the Medical School as BP 714.0.

First Meeting: Tuesday, January 29, 2013

Final Meeting: Thursday, April 25, 2013

Location: Bldg. C, Cannon Room

Course Website: <http://isites.harvard.edu/icb/icb.do?keyword=k82839>

Course Head: Stephen Harrison, schadmin@crystal.harvard.edu

***BCMP 213. Behavioral Pharmacology**

Catalog Number: 4782 Enrollment: Limited to 15.

Jack Bergman (Medical School) and Brian D. Kangas (Medical School)

Half course (spring term). Tu., Th., 3:30-5.

Introduction to CNS pharmacology and behavior in seminar format. Effects of psychomotor stimulants, antischizophrenics, opioid analgesics, and antianxiety agents on behavior. Emphasis on methodology and pharmacological analysis; attention to tolerance, drug dependence/addiction.

Note: Offered jointly with the Medical School as BP 719.0.

First Meeting: Thursday, January 31, 2013

Final Meeting: Thursday, May 2, 2013

Location: TMEC Bldg., 428

Course Head: Jack Bergman, jack_bergman@hms.harvard.edu

BCMP 234. Cellular Metabolism and Human Disease

Catalog Number: 9644 Enrollment: May be limited

Thomas Michel (Medical School), Cheryl Vaughan (FAS/DCE), and members of the Department Curriculum Fellow: Joya Mukerji

Half course (spring term). M., W., F., 9-10:30.

Cellular and organismal metabolism, with focus on interrelationships between key metabolic pathways and human disease states. Genetic and acquired metabolic diseases and functional consequences. Interactive lectures and critical reading conferences are integrated with clinical encounters.

Note: Also listed as MCB 234.

Prerequisite: Knowledge of introductory biochemistry, genetics, and cell biology required (MCB 52 and 54 or equivalent); one year of organic chemistry.

First Meeting: Monday, January 28, 2013

Final Meeting: Wednesday, May 8, 2013

Location: Countway 403 and Bldg. C, Cannon Room (HMS); interactive video feed for some lectures to DCE 304 (Cambridge)

Course Head: Thomas Michel, thomas_michel@harvard.edu

Curriculum Fellow: Joya Mukerji, joya_mukerji@hms.harvard.edu

Cell Biology

Cell Biology 201. Molecular Biology of the Cell

Catalog Number: 1044

Marcia Haigis (Medical School)

Curriculum Fellow: Abha Ahuja

Half course (spring term). M., W., 10:30-12, and sections F., at 10:30-12.

Molecular basis of cellular compartmentalization, protein trafficking, cytoskeleton dynamics, mitosis, cell locomotion, cell cycle regulation, signal transduction, cell-cell interaction, cell death, and cellular/biochemical basis of diseases.

Note: Methodological focus on current approaches in cell biology including quantitative tools. Emphasis on experimental design. Offered jointly with the Medical School as CB 713.0.

Prerequisite: Basic knowledge in biochemistry, genetics and cell biology.

First Meeting: Monday, January 28, 2013

Final Meeting: Friday, May 3, 2013

Location: Bldg. C, Cannon Room

Course Head: Marcia Haigis, Marcia_haigis@hms.harvard.edu

Curriculum Fellow: Abha Ahuja, abha_ahuja@hms.harvard.edu

Cell Biology 207. Developmental Biology: Molecular Mechanisms of Vertebrate Development

Catalog Number: 2044 Enrollment: Limited to 25.

Andrew B. Lassar (Medical School), Arkhat Abzhanov (FAS), Patricia A. D'Amore (Medical School), John G. Flanagan (Medical School), Wolfram Goessling (Medical School), Jordan A. Kreidberg (Medical School), Trista Elizabeth North (Medical School), Clifford J. Tabin (Medical School), and Malcolm Whitman (Dental School)

Half course (spring term). Tu., Th., 2-4.

Analyzes the developmental programs of frog, chick, zebrafish, and mouse embryos, emphasizing experimental strategies for understanding the responsible molecular mechanisms that pattern the vertebrate embryo. Morphogenesis, organogenesis, stem cells and regeneration will also be discussed.

Note: Offered jointly with the Medical School as CB 710.0. Includes lectures and conference sessions in which original literature is discussed in depth. Short research proposals are required in lieu of exams.

First Meeting: Tuesday, January 29, 2013

Final Meeting: Thursday, May 16, 2013

Location: TMEC Bldg., 109

Course Head: Andrew B. Lassar, andrew_lassar@hms.harvard.edu

Cell Biology 212 (formerly Cell Biology 211b). Biology of the Cancer Cell

Catalog Number: 4169

David Frank (Medical School) and Jean Zhao (Medical School)

Curriculum Fellow: Narveen Jandu

Half course (spring term). M., W., 12:30-2.

This semester long course takes a molecular approach to examine the basis of human cancer. The main concepts that we will cover include: tumor suppressor genes and oncogenes, signal transduction, DNA damage and repair, angiogenesis, metastasis and invasion, and apoptosis. Lectures will be delivered by experts in the various fields of Cancer Biology research to provide an integrated perspective on past, current and future approaches in Cancer Biology Research.

Note: Given alternate years with Cell Biology 211.

Prerequisite: Advanced biochemistry, molecular genetics, and cell biology.

First Meeting: Monday, January 28, 2013

Final Meeting: Wednesday, May 1, 2013

Location: TMEC Bldg., 126 (TMEC Bldg., 309 on January 28 and 30)

Course Co-Directors: David Frank, david_frank@dfci.harvard.edu and Jean Zhao, jean_zhao@dfci.harvard.edu

Curriculum Fellow: Narveen Jandu, narveen_jandu@hms.harvard.edu

Genetics

Genetics 202. Human Genetics

Catalog Number: 8064 Enrollment: Limited to 30.

Matthew L. Warman (Medical School) and members of the Department

Half course (spring term). M., 12:30-3:30.

This course examines genetic principles and experimental approaches for addressing fundamental questions about human variation, history, health, and disease. Each session is comprised of a lecture followed by a class discussion.

Prerequisite: Genetics 201 (or permission of the instructor) and basic knowledge of probability and statistics. Familiarity with bioinformatics and computational tools will be useful, but tutorial assistance will be provided where necessary.

First Meeting: Monday, January 28, 2013

Final Meeting: Monday, April 29, 2013

Location: New Research Bldg., Room 258

Course Head: Matthew Warman, matthew.warman@childrens.harvard.edu

Genetics 228. Genetics in Medicine - From Bench to Bedside

Catalog Number: 9840

Susan A. Slaughaupt (Medical School) and Christopher Holmes Newton-Cheh

Half course (spring term). F., 2–5.

Focus on translational medicine: the application of basic genetic discoveries to human disease. Will discuss specific genetic disorders and the approaches currently used to speed the transfer of knowledge from the laboratory to the clinic.

Note: Course will include patient presentations and lectures by investigators known for their work in a specific disease area. Course will be held at MGH (transportation provided to MGH). Offered jointly with the Medical School as GN 711.0. For more information visit the [Massachusetts General Hospital](#).

Prerequisite: Genetics 201 or equivalent.

First Meeting: Friday, February 8, 2013

Final Meeting: Friday, May 10, 2013

Location: MGH Simches Research Center, Room 3120, 185 Cambridge Street, Boston.

Transportation provided from Longwood Area.

Course Head: Susan A. Slaughaupt, slaughaupt@chgr.mgh.harvard.edu

***Genetics 330. Critical Thinking and Research Proposal Writing**

Catalog Number: 0210 Enrollment: Limited to 25.

Monica P. Colaiacovo (Medical School) 4949, Randolph Watnick (Medical School) and members of the Department

Half course (spring term). Hours to be arranged.

A small group tutorial systematically guiding students in the writing of original, hypothesis-driven research proposals from initial topic selection through completion of a final draft.

Note: Open to all BBS students; others need permission of the instructor.

Prerequisite: Core course in genetics, cell biology, molecular biology, or biochemistry.

First Meeting: Monday, January 28, 2013, 3:30pm

Final Meeting: Friday, May 17, 2013

Location: New Research Building, Room 350

Course Head: Monica P. Colaiacovo, colaiaco@receptor.med.harvard.edu and Randolph Watnick, randy.watnick@childrens.harvard.edu

Human Biology and Translational Medicine (HBTM)

HBTM 200. Principles and Practice of Human Pathology

Catalog Number: 10575 Enrollment: Enrollment may be limited

Constance L. Cepko (Medical School)

Half course (spring term). Tu., Th., 9–11 lab will be either Tuesday or Thursday, TBD, 11-1.

Overview of human pathology, emphasis on mechanisms of disease and modern diagnostic technologies. Integrated lectures, abs, and student-driven term project leading to formal presentation on a medical, socioeconomic, or technological issue in human pathology.

Note: Jointly offered with HMS as HT035.0

First Meeting: Tuesday, February 5, 2013

Final Meeting: Thursday, May 16, 2013

Location: TMEC Bldg., L008; lab in HST Skills Area, TMEC Bldg., 209

Course Head: Constance L. Cepko, cepko@genetics.med.harvard.edu

Curriculum Fellows: Kamila Naxerova, naxerova@fas.harvard.edu, and Daniel Dwyer, dfdwyer@fas.harvard.edu

Immunology

Immunology 202. Advanced Principles of Immunology

Catalog Number: 5674

D. Branch Moody (Medical School) and Martin E. Hemler (Medical School)

Half course (spring term). Tu., Th., 1:30–4.

Continuation of Immunology 201 as an intensive core course in fundamentals of the immune system with emphasis on physiological roles of immune cells in vivo. Classes taught by experts in their fields; involve critical reading of primary literature.

Note: Offered jointly with the Medical School as IM 712.0.

Prerequisite: Immunology 201 or its equivalent.

First Meeting: Tuesday, January 29, 2013

Final Meeting: Thursday, May 9, 2013

Location: Jeffrey Modell Center Fred S. Rosen Classroom, Room 100A

Course Head: D. Branch Moody, bmoody@rics.bwh.harvard.edu

Immunology 204. Critical Readings for Immunology

Catalog Number: 9563

Florian Winau (Medical School)

Half course (spring term). Th., 10-1.

Original research articles from fields including immunology, biochemistry, genetics, and cell and developmental biology will be critically analyzed in an intensive small group format. Grading will be based on class participation and oral presentations.

Note: Required for first-year immunology students, open to second-year immunology students. No auditors. Offered jointly with the Medical School as IM 703.0.

First Meeting: Thursday, January 31, 2013

Final Meeting: Thursday, May 2, 2013

Location: Jeffrey Modell Center Fred S. Rosen Classroom, Room 100A

Course Head: Florian Winau, florian.winau@childrens.harvard.edu

***Immunology 301. Immunology Seminar**

Catalog Number: 4971 Enrollment: Limited to 20.

Michael C. Carroll (Medical School) and William Nicholas Haining (Medical School)

Half course (fall term; repeated spring term). W., 3:30-5.

Gives students exposure to research topics in Immunology. Students prepare for the weekly seminar through readings, discussions, and preparing brief write-ups. These discussions are facilitated by members of the Committee on Immunology.

Note: Required for first-year Immunology graduate students.

First Meeting: Wednesday, January 30, 2013

Final Meeting: Wednesday, May 8, 2013

Location: Jeffrey Modell Center Fred S. Rosen Classroom, Room 100A

Course Head: Michael C. Carroll, michael.carroll@childrens.harvard.edu

Microbiology and Immunobiology

Microbiology 201. Molecular Biology of the Bacterial Cell

Catalog Number: 38739

David Z. Rudner (Medical School), Thomas G. Bernhardt (Medical School), Simon L. Dove (Medical School), and Ann Hochschild (Medical School)

Curriculum Fellow: Zofia Gajdos

Half course (spring term). Tu., Th., 10–12.

This course is devoted to bacterial structure, physiology, genetics, and regulatory mechanisms. The class consists of lectures and group discussions emphasizing methods, results, and interpretations of classic and contemporary literature.

First Meeting: Tuesday, January 29, 2013

Final Meeting: Thursday, May 9, 2013

Location: New Research Bldg., 1031

Course Head: David Z. Rudner, david_rudner@hms.harvard.edu

Curriculum Fellow: Zofia Gajdos, zofia_gajdos@hms.harvard.edu

***Microbiology 210. Microbial Sciences: Chemistry, Ecology, and Evolution**

Catalog Number: 63006 Enrollment: Limited to 30.

Michael S. Gilmore (Medical School)

Half course (spring term). F., 8:30, F., 9:45–11:45.

This is an interdisciplinary graduate-level and advanced undergraduate-level course in which students explore topics in molecular microbiology, microbial diversity, and microbially-mediated geochemistry in depth. This course will be taught by faculty from the Microbial Sciences Initiative. Topics include the origins of life, biogeochemical cycles, microbial diversity, and ecology.

Note: Co-listed as Organismic and Evolutionary Biology 290.

Prerequisite: For advanced undergraduates, Life Sciences 1a and 1b are required, or permission of instructor. MCB 52 is recommended.

First Meeting: Friday, February 1, 2013

Final Meeting: Friday, April 26, 2013

Location: Harvard Center for the Environment, Conference Room 310, 24 Oxford St, Cambridge; Shaler Seminar Room 413, Geological Museum, 24 Oxford St, Cambridge.

Course Head: Michael S. Gilmore, michael_gilmore@meei.harvard.edu

Microbiology 213. Social Issues in Biology

Catalog Number: 7905 Enrollment: Limited to 20.

Jonathan R. Beckwith (Medical School) and Roberto G. Kolter (Medical School)

Half course (spring term). Th., 1–4.

Discussion topics selected from: history, philosophy of science; evolution vs. creationism; genetics, gender and race; genetic testing; science journalism; genetics and criminality; science in wartime; scientists' social responsibility; theater and the public presentation of science.

Note: Offered jointly with the Medical School as MG 722.0. Alternates yearly between the Longwood and the Cambridge Campuses.

Prerequisite: Some background in genetics.

First Meeting: Thursday, January 24, 2013

Final Meeting: Thursday, May 2, 2013

Location: Biological Laboratories Room 1075f, Harvard University Cambridge Campus

Course Head: Jonathan R. Beckwith, jon_beckwith@hms.harvard.edu

Neurobiology

Neurobiology 204. Neurophysiology of Central Circuits

Catalog Number: 5603

Rachel I. Wilson (Medical School), John A. Assad (Medical School), Richard T. Born (Medical School), Michael Tri Hoang Do (Medical School), Christopher D. Harvey (Medical School), Margaret S. Livingstone (Medical School), and John Maunsell (Medical School)

Half course (spring term). M., W., 10-12.

This course introduces major themes and fundamental concepts underlying current research in systems neuroscience. Each week covers a different theme, and draws on research from different sensorimotor modalities and model organisms.

Note: Offered jointly with the Medical School as NB 721.0.

Prerequisite: Neurobiology 200 or with permission of instructor.

First Meeting: Wednesday, January 30, 2013

Final Meeting: Monday, April 29, 2013

Location: Goldenson, 229

Course Head: Rachel I. Wilson, rachel_wilson@hms.harvard.edu

Neurobiology 207. Developmental Neurobiology

Catalog Number: 4977 Enrollment: Limited to 20.

Lisa V. Goodrich (Medical School), Michela Fagiolini (Medical School), Chenghua Gu (Medical School), and Beth Stevens (Medical School)

Half course (spring term). F., 10-12, W., 2-4.

Advanced topics in nervous system development, including cell fate determination, axon guidance, synapse development and critical periods. Focus on current areas of investigation, unresolved questions, and common experimental approaches.

Note: Offered jointly with the Medical School as NB 720.0. Students will read and discuss primary literature in the discussion sessions. Emphasis will be given to learning how to identify an important question and develop a feasible research plan, including a lecture on how to write a grant proposal and a mock study section. The final exam consists of a grant proposal; grades will also be determined by successful completion of homework assignments and class participation.

Prerequisite: Neurobiology 200 or with permission of instructor.

First Meeting: Wednesday, January 30, 2013

Final Meeting: Friday, April 26, 2013

Location: Goldenson, 422

Course Head: Lisa V. Goodrich, lisa_goodrich@hms.harvard.edu

Neurobiology 221. Molecular Neurobiology

Catalog Number: 0443

Sandeep Robert Datta (Medical School), Jonathan B. Cohen (Medical School), Pascal Kaeser (Medical School), Joshua M. Kaplan (Medical School)

Half course (spring term). Tu., Th., 10-12.

Molecular biology and genetics of the nervous system. Emphasis on importance of ligand-receptor interactions and receptor regulation for the function of the nervous system, on the mechanisms of storage and release of neurotransmitters, and the molecular genetics of the nervous system.

Note: Offered jointly with the Medical School as NB 715.0.

Prerequisite: Introductory neurobiology and molecular biology. Permission of the instructor required for undergraduates.

First Meeting: Tuesday, January 29, 2013

Final Meeting: Tuesday, April 30, 2013

Location: Goldenson Bldg., 422

Course Head: Bob Datta, srdatta@hms.harvard.edu

Cross-listed under Neurobiology

***Psychology 2060. Reward and Self Control - (New Course)**

Catalog Number: 13358 Enrollment: Limited to 15. For graduate students and upper-level undergraduates with permission of instructor.

Joshua William Buckholtz

Half course (spring term). Th., 1-4.

What's stopping you from doing absolutely everything that your devious heart desires? The ability to flexibly control our behavior - particularly when it comes to rewarding things like food, sex, and drugs - has huge consequences for our long-term happiness and success. Though we are reasonably good at this as a species, dramatic individual differences in the capacity for self-control are readily apparent. In this class, we will examine the cognitive construct of self-control, its neurobiological underpinnings and sources of individual variation, and relationships to psychopathology.

Prerequisite: Science of Living System 20 or its predecessors and one foundational course.

First Meeting: Thursday, January 31, 2013

Final Meeting: Thursday, May 9, 2013

Location: Northwest Building, Room 205 (52 Oxford Street, Cambridge)

Course Head: Joshua Buckholtz: joshua_buckholtz@harvard.edu

Speech and Hearing Bioscience and Technology

SHBT 202. Clinical Aspects of Hearing and Speech - (New Course)

Catalog Number: 69294 Enrollment: Limited to 15. Minimum of 5

Joseph B. Nadol (Medical School and MEEI) and Konstantina Stankovic (Medical School and MEEI)

Half course (spring term). M., W., 5–7 pm. Clinical observations M.-F., 8am-3pm.

Clinical approach to speech and hearing disorders as practiced by physicians, audiologists, speech clinicians, rehabilitation specialists, bioengineers. Includes observation of patient care in clinic and operating room, audiology/balance disorders experience, lectures and discussion groups.

Note: Offered jointly with HST 724 at MIT. Classes to be held at the Massachusetts Eye and Ear Infirmary (MEEI)

Prerequisite: Anatomy of Speech and Hearing, Acoustics of Speech and Hearing or permission of the course director

First Meeting: Tuesday, January 29, 2013

Final Meeting: Friday, May 10, 2013

Location: MEEI, Fourth-floor Conference Room

Course Head: Joseph B. Nadol, joseph_nadol@meei.harvard.edu, Konstantina Stankovic, konstantina_stankovic@meei.harvard.edu

***SHBT 203. Anatomy of Speech and Hearing - (New Course)**

Catalog Number: 17772 Enrollment: Limited to 12.

Barbara C. Fullerton (Medical School), James Tracey Heaton (Medical School), and James Bradley Kobler (Medical School)

Half course (spring term). January Course. Lecture: M.-F., 9:30-10:30, Lab: M.-F., 10:30-1

This course covers anatomy of the head and neck, with cadaver dissection, stressing structures important in speech and hearing. Lecture topics also include basic neuroanatomy, imaging, surgery, and cancer of head and neck.

Note: Offered jointly with MIT as HST 718. Classes to be held at the Harvard Medical School campus (HMS)

Prerequisite: Introductory biology or equivalent and permission of the course director.

First Meeting: Wednesday, January 1, 2013

Final Meeting: Friday, January 25, 2013

Location: TMEC Bldg., 443

Course Head: Barbara C. Fullerton, barbara_fullerton@meei.harvard.edu

SHBT 204. Speech Communication - (New Course)

Catalog Number: 47986 Enrollment: Limited to 20.

Robert E. Hillman (Medical School) and other faculty

Half course (spring term). Tu., Th., 11–12:30.

Survey of human speech communication. Acoustic theory of speech production; physiologic and acoustic descriptions of phonetic features, prosody, voice and speech perception and speech motor control. Applications to recognition, synthesis and speech disorders.

Note: Offered jointly with MIT course HST.710. ***Classes to be held at MIT.***

Prerequisite: Background equivalent to MIT HST.714.

First Meeting: Thursday, February 5, 2013

Final Meeting: Thursday, May 16, 2013

Location: MIT, Building 34-302, 46 Vassar St, Cambridge, MA 02139

Course Head: Robert E. Hillman, hillman.robert@mgh.harvard.edu

SHBT 205. Neural Coding and Perception of Sound - (New Course)

Catalog Number: 63093 Enrollment: Limited to 20.

Bertrand Delgutte (Medical School), M. Christian Brown (Medical School), Donald Keith Eddington (Medical School), John J. Guinan (Medical School), Jennifer R. Melcher (Medical School), and Daniel B. Polley (Medical School)

Half course (spring term). M., W., 9:30–11:30, Occasional lab on Friday.

Neural structures and mechanisms mediating the detection, localization and recognition of sounds. General principles are conveyed by theme discussions of auditory masking, sound localization, musical pitch, cochlear implants, and auditory scene analysis.

Note: Offered jointly with MIT HST.723J. Classes to be held at the Harvard Medical School campus (HMS).

Prerequisite: Neurobiology 200 or Permission of the instructor.

First Meeting: Monday, January 28, 2013

Final Meeting: Wednesday, May 8, 2013

Location: TMEC Bldg., 443

Course Head: Bertrand Delgutte, bertrand_delgutte@meei.harvard.edu

***SHBT 310. Independent Study in Speech and Hearing Sciences - (New Course)**

Catalog Number: 76933

John J. Rosowski (Medical School) and Bertrand Delgutte (Medical School)

Half course (fall term; repeated spring term).

Opportunity for independent study of topics in speech and hearing sciences under regular supervision by an SHBT faculty member.

Note: For SHBT students only.

Course Head: John J. Rosowski, jjr@epl.meei.harvard.edu

Virology

Virology 201. Virology

Catalog Number: 1190

Sean P.J. Whelan (Medical School), James M. Cunningham (Medical School), and David T. Evans (Medical School)

Half course (spring term). M., W., 2–3:30.

Literature based reading. Proposal writing. Course covers a broad range of topics: viral genetics, structure/replication, pathogenesis, evolution ("emerging viruses"), chronic infection, latency, innate and adaptive immunity, anti-viral drugs and vaccine strategies.

Note: Offered jointly with the Medical School as MG 723.0.

Prerequisite: Graduate standing and permission required.

First Meeting: Monday, January 28, 2013

Final Meeting: TBD

Location: TMEC Bldg., 340

Course Head: Sean Whelan, sean_whelan@hms.harvard.edu

Other Courses of Interest

Biophysics 205. Computational and Functional Genomics

Catalog Number: 6777 Enrollment: Limited to 20.

Martha L. Bulyk (Medical School), Suzanne Gaudet (Medical School), and Shamil R. Sunyaev (Medical School)

Half course (spring term). M., W., 2:30–4.

This is an upper-level critical paper reading and discussion course in the areas of experimental and computational functional genomics. Introductory lectures will be interspersed within the topic blocks, with most of the meeting time devoted to critical discussion of assigned journal articles. Students will be responsible for presenting assigned articles throughout the semester and for leading class discussions of those articles. There will be written and oral presentations of final student proposals at the end of the term.

Prerequisite: Molecular biology and introductory statistics. Harvard BS 50 or BS 52 or the equivalent. Permission of the instructors is required.

First Meeting: Monday, January 29, 2013

Final Meeting: Monday, May 6, 2013

Course Location: Bldg. C, Folin-Wu Room

Course Head: Martha L. Bulyk, mlbulyk@receptor.med.harvard.edu

***SCRB 200. Independent Research in Stem Cell and Regenerative Biology**

Catalog Number: 88356 Enrollment: Enrollment may be limited.

Lee L. Rubin

Half course (spring term). Tu., 6–8.

This survey course provides contemporary approaches to the study of stem cell and regenerative biology.

Note: May not be taken concurrently with SCRB 300qc.

First Meeting: Tuesday, January 29, 2013

Final Meeting: Tuesday, April 30, 2013

Location: Sherman Fairchild, Room 268 (7 Divinity Avenue, Cambridge)

Course Head: Lee Rubin, lee_rubin@harvard.edu