The University of Kansas  
College of Liberal Arts & Sciences  
COMMITTEE ON UNDERGRADUATE STUDIES & ADVISING  
AGENDA  

September 24, 2013, 11:15AM  
STRONG HALL – ROOM 210

I. Welcome

II. Approval of CUSA Minutes from August 27, 2013

III. Dean’s Office Update

IV. SAS Office Update

V. UCCC/CUSA KU Core Feedback Mechanism Brainstorm

VI. Subcommittee Chair Reports
   a. Curricular Changes/Degree Requirements
      1. Curricular Changes for Approval:
         NEW COURSES: AAAS 321, AAAS 324, AAAS 521, AAAS 524, AAAS 661, BIOL 105, BIOL 421, BIOL 601, EALC 519, EALC 578, HEBR 395, HRNS 497, JWSH 395, JWSH 650, LING 343, PHSX 400, SPAN 101, YDHS 395
         CHANGES: ABSC 444, ASTR 293, BIOL 350, BIOL 360, CHEM 636, CHEM 695, EALC 220, EALC 319, ENGL 479, HEBR 310, HEBR 330, HEBR 340, HEBR 350, HWC 304, HWC 308, HWC 312, JWSH 600, LAA 300, LA&S 450, SOC 490
         DELETIONS: NONE
      2. Degree Requirements for Approval:
         a. Changes to Admission Requirements for all degree majors – Biological Sciences
         b. Changes to Existing Theatre Design – BFA
         c. New Minor in Middle East Studies
      3. KU Core Proposals (Attachment)
         b. Advising and Awards – BGS
            c. Academic Standards Report – Undergraduate Certificates

VII. Adjournment
The committee met on Tuesday, September 10, 2013, at 11:15 a.m. in Room 210 Strong Hall. The following were present: Antonik, Baskett, Bayer, Bradley, Brumfield, Childers, Conrad, Fillian, Garibotto, Gegenheimer, Goldstein, Hamilton, Hilding, Kelly, Ledom, Neidert, Persley, Rockey, Stock, Timm, Zogry

**Welcome:** Professor Neidert called the meeting to order.

**Approval of CUSA Minutes:** A motion was made to approve the August 27, 2013 meeting minutes of the Committee on Undergraduate Studies & Advising. The motion was seconded and passed unanimously.

**Dean’s Office Update:** CLAS Strategic Plan Feedback
Dean Goldstein presented the College of Liberal Arts and Science: Strategic Plan for 2014-2019 (see attachment a). He asked that CUSA members e-mail Larry Fillian with their individual feedback specifically pertaining to #1 and #3 (Transforming Undergraduate Education and Moving Into New Academic Spaces.) Once that information has been compiled a final draft will be sent to CUSA for their review and sent on to be incorporated into the strategic plan for the College.

Dean Goldstein related that the Teaching Post Doc Program is meeting expectations. One of the ideas behind this program is to have more engaged learning in the very large lecture classes. Better organization of classrooms is needed to facilitate more interaction time between student and faculty members. Geography, Geology and Biological Sciences are all undergoing major course re-design initiatives. A call for proposals will go out in the next few months for other departments to participate. In the future, we are hoping to include the humanities, contingent on funding.

**SAS Office Update:**
No updates on Student Academic Services at this time.

Mr. Fillian discussed the current KU Core course proposal approval process. Last year proposals were simultaneously submitted to CUSA and the UCCC. Going forward, KU Core nomination proposals will first be vetted by CUSA, once the courses that have been approved by CUSA they will then be forwarded to the UCCC. A clear reporting process between CUSA and the UCCC is needed to better facilitate communication between both committees. Dean Goldstein recommended that a joint meeting be called with members of the CUSA subcommittee and the UCCC to review each core goal and any outstanding issues.

**Subcommittee Assignments:**

A. Advising & Awards – BGS
   Professor Childers reported that the Advising & Awards Subcommittee met and identified data needed to assess the BGS with major and they are in the process of gather that information to move forward.

B. Curricular Changes/Degree Requirements KU Core Proposals (attachment b)
   Professor Conrad presented the KU Core course nominations. A motion was made to approve the KU Core Proposals. The motion was seconded and passed unanimously.

   ANTH 301 was provisionally approved for Goal 4.2 in the KU Core, but CUSA questioned the two nomination form responses that indicated not all sections of the course would teach to ensure learning outcomes or assess learning outcomes for the class. The department has been contacted and is considering whether to change the course structure in order to move the nomination forward.

   CLSX 374 was approved for Goal 4.2 and HIST 352 was approved for Goal 5.1. After the meeting it was discovered that the courses are cross-listed with courses in other departments. CUSA will require that all affected departments (not just the one proposing their section of the course) confirm they are aware of the expectations associated with approved courses for the KU Core and are willing to participate before cross-listed course nominations can move forward. All affected departments have been notified.

C. Academic Standards Report – Undergraduate Certificates
   Professor Antonik reported that the Academic Standards Subcommittee met. They discussed the certificates and are determining what purpose the certificates should serve to the students and the university. The subcommittee is currently reviewing information from peer institutions to determine what kind of certificates are currently available, and how they are used as job tools for the students.

Adjournment 11:45 a.m.
AFRICAN & AFRICAN-AMERICAN STUDIES

CHANGE: NEW COURSE
AAAS 321  AFRICAN STUDIES IN, HONORS  3  H, W
Lecture and discussion course in African area of current interest. May be repeated for credit toward the major. Only open to students admitted to the University Honors Program or with permission of the instructor. Prerequisite: AAAS 103 or AAAS 105 or AAAS 115 or consent of instructor.

CHANGE: NEW COURSE
AAAS 324  AFRICAN-AMERICAN STUDIES IN, HONORS  3  H
Lecture and discussion course in African-American area of current interest. May be repeated for credit toward the major. Only open to students admitted to the University Honors Program or with permission of the instructor. Prerequisite: AAAS 106 or AAAS 116 or consent of instructor.

CHANGE: NEW COURSE
AAAS 521  AFRICAN STUDIES IN, HONORS  3  H, W
Upper level lecture and discussion courses in African area of current interest and/or taking advantage of faculty resources in topics relevant to the major. May be repeated for credit toward the major. Only open to students admitted to the University Honors Program or with permission of the instructor. Prerequisite: junior/senior in good standing.

CHANGE: NEW COURSE
AAAS 524  AFRICAN-AMERICAN STUDIES IN, HONORS  3  H
Upper level lecture and discussion courses in African-American area of current interest and/or taking advantage of faculty resources in topics relevant to the major. May be repeated for credit toward the major. Only open to students admitted to the University Honors Program or with permission of the instructor. Prerequisite: junior/senior in good standing.

CHANGE: NEW COURSE
AAAS 661  POLITICS OF THE MIDDLE EAST  3  S
Survey of domestic and international political developments in the Middle East. Topics include: emergence of the modern nation-state, the role of Islam, leadership patterns, competing political ideologies, prospects for democratization, foreign policy relations, and regional conflicts. Prerequisite: POLS 150, POLS 170 and 3 additional hours of political science (or their honors equivalents); or permission of instructor.

APPLIED BEHAVIORAL SCIENCE

CHANGE: PREREQUISITE
ABSC 444  CURRICULUM DEVELOPMENT FOR YOUNG CHILDREN  3  U
(OLD)  A survey of educational materials and activities appropriate for young children. Students explore several components of effective curriculum development (e.g., objectives, methods of activity presentation, teaching strategies) and learn to integrate them to construct curricula for a range of content and skill areas. By focusing on functional components of a curriculum, students learn to construct, critically evaluate, and modify curricula for typically and atypically developing children. (Formerly HDFL 444.) ABSC/HDFL 100/101, ABSC/HDFL 140, or ABSC/HDFL 304. LEC.  Prerequisite:

ABSC 444  CURRICULUM DEVELOPMENT FOR YOUNG CHILDREN  3  U
(NEW)  A survey of educational materials and activities appropriate for young children. Students explore several components of effective curriculum development (e.g., objectives, methods of activity presentation, teaching strategies) and learn to integrate them to construct curricula for a range of content and skill areas. By focusing on functional components of a curriculum, students learn to construct, critically evaluate, and modify curricula for typically and atypically developing children. Prerequisites: ABSC 304 or instructor permission. LEC.
BIOLOGY

CHANGE: NEW COURSE
BIOL 105  BIOLOGY ORIENTATION SEMINAR  1  N
Introduces interested students to information about majoring in the biological sciences at the University of Kansas. Students learn about degree requirements, academic advising, research opportunities, and career options, as well as how to align academic and professional goals. Graded on a satisfactory/unsatisfactory basis.

CHANGE: CREDIT
BIOL 350  PRINCIPLES OF GENETICS  3  N
(OLD) Why are related individuals more similar than unrelated individuals and what is the basis for heritable traits? From Mendel's discoveries of the patterns of genetic inheritance, to the study of transmissible hereditary factors, genetics is central to understanding the biological sciences. Topics include molecular genetics and genetic engineering; Mendelian genetics and mapping; control of gene expression; cytogenetics; epigenetics and non-Mendelian genetics; and population and quantitative genetics. Examples are taken from a wide variety of organisms, including viruses, bacteria, plants, fungi, insects, and humans. Prerequisite: Two semesters of college-level chemistry and BIOL 150 or BIOL 152; or consent of the instructor.

BIOL 350  PRINCIPLES OF GENETICS  4  N
(NEW) Why are related individuals more similar than unrelated individuals and what is the basis for heritable traits? From Mendel's discoveries of the patterns of genetic inheritance, to the study of transmissible hereditary factors, genetics is central to understanding the biological sciences. Topics include molecular genetics and genetic engineering; Mendelian genetics and mapping; control of gene expression; cytogenetics; epigenetics and non-Mendelian genetics; and population and quantitative genetics. Examples are taken from a wide variety of organisms, including viruses, bacteria, plants, fungi, insects, and humans. Prerequisite: Two semesters of college-level chemistry and BIOL 150 or BIOL 152; or consent of the instructor.

CHANGE: CREDIT
BIOL 360  PRINCIPLES OF GENETICS, HONORS  3  N
(OLD) The science of genetics aims to explain why individuals differ from one another and how these differences are inherited. Honors Genetics covers all core topics in fundamental genetics: Mendelian inheritance, meiosis and recombination, mutation, molecular genetics, population genetics, quantitative genetics and genomics. Special attention given to the practice of genetics and the complex relationship between genotype, phenotype and environment. A broader goal of Honors Genetics is to provide students a framework for understanding recent advances in medical genetics and the modern era of personal genomics. Prerequisite: Two semesters of college-level chemistry and BIOL 150 or BIOL 152, membership in the University Honors Program; or consent of the instructor.

BIOL 360  PRINCIPLES OF GENETICS, HONORS  4  N
(NEW) The science of genetics aims to explain why individuals differ from one another and how these differences are inherited. Honors Genetics covers all core topics in fundamental genetics: Mendelian inheritance, meiosis and recombination, mutation, molecular genetics, population genetics, quantitative genetics and genomics. Special attention given to the practice of genetics and the complex relationship between genotype, phenotype and environment. A broader goal of Honors Genetics is to provide students a framework for understanding recent advances in medical genetics and the modern era of personal genomics. Prerequisite: Two semesters of college-level chemistry and BIOL 150 or BIOL 152, membership in the University Honors Program; or consent of the instructor.

CHANGE: NEW COURSE
BIOL 421  TOPICS IN MOLECULAR BIOSCIENCES  3  N
Lecture instruction and the preparation and presentation of oral and written reports on selected topics from the recent research literature in molecular biosciences. Students may enroll in a given topic only once. Prerequisite: Course work varying with the topic of the seminar; or consent of instructor.

CHANGE: NEW COURSE
BIOL 601  PRINCIPLES OF BIOCHEMISTRY LABORATORY  2  L
Theory and methods in the development of protein separation and purification, enzyme structure/function, and enzyme kinetics derived from primary literature searches and readings. Prerequisite or Co-requisite: BIOL 600; or consent of instructor.
CHEMISTRY

CHANGE: COURSE DESCRIPTION
CHEM 636 INSTRUMENTAL METHODS OF ANALYSIS LABORATORY 2 L
(OLD) Theory and application of instrumental methods to modern analysis problems. Experiments covered include atomic and molecular spectroscopy, electrochemistry, and separation methods. Prerequisite: CHEM 620 and CHEM 621 and one semester of physical chemistry laboratory, or permission of instructor. Corequisite: CHEM 635. LAB

CHEM 636 INSTRUMENTAL METHODS OF ANALYSIS LABORATORY 2 L
(NEW) Theory and application of instrumental methods to modern analysis problems. Experiments covered in this capstone laboratory course include atomic and molecular spectroscopy, electrochemistry, and separation methods. Prerequisite: CHEM 620 and CHEM 621, and one semester of physical chemistry laboratory; or permission of instructor. Corequisite: CHEM 635. LAB

CHANGE: COURSE DESCRIPTION
CHEM 695 SEMINAR II 0.5 U
(OLD) Special topics and presentations by students and faculty in areas of current interest such as recent advancements in chemistry, professional development, societal issues facing chemists, and reports of ongoing research. This is a half-semester capstone course. Recommended for seniors. Prerequisite: CHEM 180. LEC

CHEM 695 SEMINAR II 0.5 U
(NEW) Special topics and presentations by students and faculty in areas of current interest such as recent advancements in chemistry, professional development, societal issues facing chemists, and reports of ongoing research. This half-semester course is recommended for seniors. Prerequisite: CHEM 180. LEC

EAST ASIAN LANGUAGES & CULTURE

CHANGE: COURSE DESCRIPTION
EALC 220 ASIAN AUTOBIOGRAPHIES 3 H, NW
(OLD) An introduction to modern Asia (19th-20th centuries) through the reading of autobiographies by men and women of China, Japan, Korea, Tibet, and Vietnam. Combination of lecture and discussion format. LEC

EALC 320 MODERN EAST ASIA: MULTIPLE PERSPECTIVES 3 H, NW
(NEW) A survey of the major political changes in China, Japan, Korea and Tibet in the 20th century. Students will learn about the changes that swept through East Asia as it rapidly modernized via documentary films and lectures and will study the impact of these changes on individuals by reading autobiographies.

CHANGE: COURSE DESCRIPTION
EALC 319 CONTEMPORARY CHINESE LITERATURE IN TRANSLATION 3 H
(OLD) A general survey of the important writers of recent decades and their works. Lectures, readings, and discussions in English. A knowledge of Chinese is not required.

EALC 319 CONTEMPORARY CHINESE FICTION AND FILM 3 H
(NEW) A general survey of important Chinese fiction and film from the late 20th century to the present. Lectures, readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 519.)

CHANGE: NEW COURSE
EALC 519 CONTEMPORARY CHINESE FICTION AND FILM 3 H
A general survey of important Chinese fiction and film from the late 20th century to the present. Lectures, readings, and discussions in English. A knowledge of Chinese is not required. This course is taught at the 300 and 500 levels with additional assignments at the 500-level. Prerequisite: An introductory East Asian studies course such as ECIV 104 or ECIV 304 or EALC 105; or consent of instructor. (Not open to students with credit in EALC 319.)

CHANGE: NEW COURSE
EALC 578 GENDER & SOCIETY IN MODERN CHINA 3 H
This course examines gender politics and social institutions in modern China by examining important literary works and films from the Republican era (1911-1949), the Maoist era (1949-1976), and the post-Mao era (1976-present). Secondary readings are also supplied. All the readings are in English. No knowledge of Chinese is required. Prerequisite: An introductory East Asian studies course such as ECIV 104, ECIV 304, or EALC 105; or consent of the instructor.
ENGLISH

CHANGE: CREDIT
ENGL 479 THE LITERATURE OF: ___ 1-3 H
(OLD) A study of the literary treatment of a particular aspect of British and/or American society. May be repeated for credit as the topic changes. Prerequisite: Prior completion of the freshman-sophomore English requirement or its equivalent.

ENGL 479 THE LITERATURE OF: ___ 3 H
(NEW) A study of the literary treatment of a particular aspect of British and/or American society. May be repeated for credit as the topic changes. Prerequisite: Prior completion of KU Core Written Communication requirement or equivalent. Recommended: Prior completion of a 200-level English course.

HEBREW

CHANGE: COURSE DESCRIPTION NUMBER TITLE
HEBR 310 INTRODUCTION TO MODERN HEBREW LITERATURE 3 H
(OLD) An introduction to Hebrew literature from the nineteenth through the twentieth centuries. The emphasis is on the development of basic interpretive skills, as well as an understanding of basic literary movements, genres, and concepts of this period. Not open to native speakers of Hebrew. Prerequisite: HEBR 220 or equivalent. LEC

HEBR 410 STUDIES IN MODERN HEBREW LITERATURE 3 H
(NEW) An introduction to Hebrew literature from the nineteenth century to the present day. The course emphasizes the development of basic interpretive skills and the understanding of basic literary movements, genres, and concepts. Not open to native speakers of Hebrew. Prerequisite: HEBR 220 or equivalent. LEC

CHANGE: COURSE DESCRIPTION NUMBER TITLE
HEBR 330 THIRD LEVEL MODERN HEBREW 3 H
(OLD) A course designed to improve oral, audio and writing proficiencies in Modern Hebrew through reading and discussion of poems, Israeli newspaper articles and other selected materials. Not open to native speakers of Hebrew. Prerequisite: HEBR 220, with a grade of "B" or better recommended, or permission of the instructor. LEC

HEBR 420 STUDIES IN MODERN HEBREW 3 H
(NEW) Continued advanced study of modern Hebrew. Not open to native speakers of Hebrew. Prerequisite: HEBR 220 or permission of the instructor. LEC

CHANGE: COURSE DESCRIPTION TITLE
HEBR 340 ASPECTS OF MODERN HEBREW 3 H
(OLD) Continued study in Modern Hebrew via poems, short stories, Israeli newspaper articles and electronic media. The course is designed to strengthen linguistic skills, enrich vocabulary and further the study of grammar and syntax. Not open to native speakers of Hebrew. Prerequisite: HEBR 220 or permission of the instructor. LEC

HEBR 340 ADVANCED ISRAELI HEBREW I 3 H
(NEW) Advanced study of Modern Hebrew. This course is designed to strengthen linguistic skills, enrich vocabulary, and further the study of grammar and syntax. Not open to native speakers of Hebrew. Prerequisite: HEBR 220 or permission of the instructor. LEC

CHANGE: COURSE DESCRIPTION PREREQUISITE TITLE
HEBR 350 INTERMEDIATE CONVERSATIONAL HEBREW 3 H
(OLD) Enhancement of oral proficiency in Hebrew at the intermediate level via guided discussions and communicative practices. Prerequisite: HEBR 340 or permission of the instructor. LEC

HEBR 350 ADVANCED ISRAELI HEBREW II 3 H
(NEW) Continued advanced study of modern Hebrew. Not open to native speakers of Hebrew. Prerequisite: HEBR 340 or permission of the instructor. LEC

CHANGE: NEW COURSE
HEBR 395 STUDY ABROAD TOPICS IN HEBREW 3-6 H
This course is designed for the study abroad of special topics in Hebrew at the junior/senior level. Coursework must be arranged through the Office of KU Study Abroad. May be repeated for credit if content varies.

**HONORS**

**CHANGE: NEW COURSE**

**HNRS 497**  
HONORS FRESHMAN SEMINAR ASSISTANTSHIP  0  
Open to all Honors students selected to be Honors Freshman Seminar Assistants, regardless of major field. These students assist Seminar instructors in the teaching of an Honors seminar in various ways, including but not limited to: leading group discussion; engaging students in the learning process; developing classroom material; encouraging and guiding students to solve problems themselves and helping students prepare for their advising assignments. Offered fall semester only. May be repeated.

**HUMANITIES & WESTERN CIVILIZATION**

**CHANGE: TITLE**

**HWC 304**  
MASTERPIECES OF WORLD LITERATURE I  3  H, HL  
A study of great books in English translation from antiquity through the fifteenth century from two or more national literatures. LEC

**HWC 304**  
WORLD LITERATURE I  3  H, HL  
A study of great books in English translation from antiquity through the fifteenth century from two or more national literatures. LEC

**CHANGE: TITLE**

**HWC 308**  
MASTERPIECES OF WORLD LITERATURE II  3  H, HL  
A study of great books in English translation from the sixteenth, seventeenth, eighteenth, and early nineteenth centuries from two or more national literatures.

**HWC 308**  
WORLD LITERATURE II  3  H, HL  
A study of great books in English translation from the sixteenth, seventeenth, eighteenth, and early nineteenth centuries from two or more national literatures.

**CHANGE: TITLE**

**HWC 312**  
MASTERPIECES OF WORLD LITERATURE III  3  H, HL  
A study of great books in English translation from modern period (late nineteenth and twentieth centuries) from two or more national literatures.

**HWC 312**  
WORLD LITERATURE III  3  H, HL  
A study of great books in English translation from the modern period (late nineteenth and twentieth centuries) from two or more national literatures.

**JUDAIC STUDIES**

**CHANGE: NEW COURSE**

**JWSH 395**  
STUDY ABROAD TOPICS IN JEWISH STUDIES  3-6  H  
This course is designed for the study of special topics in Jewish Studies at the junior/senior level. Coursework must be arranged through the Office of KU Study Abroad. May be repeated for credit if content varies.

**CHANGE: COURSE DESCRIPTION**

**JWSH 600**  
ADVANCED TOPICS IN JEWISH STUDIES  3  H  
Intensive study of a selected topic from interdisciplinary areas in Jewish Studies. Topic, instructor, and prerequisite to be announced in Schedule of Classes. LEC

**JWSH 600**  
ADVANCED TOPICS IN JEWISH STUDIES  3  H  
Examination of advanced topics in Jewish Studies. May be repeated if topic varies. Prerequisite: Consent of instructor. LEC

**CHANGE: NEW COURSE**

**JWSH 650**  
SERVICE LEARNING IN JEWISH STUDIES  3  S  
This course, to be taken in the junior or senior year, is designed to give students the opportunity to apply the knowledge, concepts, and ideas gained in courses in Jewish studies to real-life situations in appropriate
agencies and organizations. Open to students in the Jewish Studies program. Prerequisite: Permission of instructor. FLD

LATIN AMERICAN AND CARIBBEAN STUDIES

CHANGE: PREREQUISITE

LAA 300 INTERDISCIPLINARY THEMES IN LATIN AMERICAN STUDIES 3 U
(OLD) This course offers an in-depth examination of several key themes in Latin American Studies. Emphasis is placed on exploring the utility of interdisciplinary methods and on becoming familiar with the theoretical framework that underpins the field. Prerequisite: Completion of LAA 100 and one other course in the major.

LAA 300 INTERDISCIPLINARY THEMES IN LATIN AMERICAN STUDIES 3 U
(NEW) This course offers an in-depth examination of several key themes in Latin American Studies. Emphasis is placed on exploring the utility of interdisciplinary methods and on becoming familiar with the theoretical framework that underpins the field. Prior completion of LAA 100 recommended.

LIBERAL ARTS & SCIENCES

CHANGE: NEW TOPIC

LA&S 450 BIOGRAPHY OF AMERICAN INDIAN LEADERS 3
This course is intended as a means to convey an important component of American Indian history by looking at the lives of American Indian leaders whose leadership skills helped shaped the destiny and history of their individual tribal groups. The study of American history has typically undermined any thoughtful and objective consideration of American Indian history.

CHANGE: NEW TOPIC

LA&S 450 ENVIRONMENTAL COMMUNITY HEALTH 3
"Environmental and Community Health and Climate Change" is the study of the relationship between environmental quality and public health. Based upon the concept that everything people interact with on a daily basis plays a role in determining our state of health, the course aims to identify environmental risks in order to promote traditional, healthy ways of life for American Indian/Alaskan Native communities. Global climate change may lead to changes in long term climate and extreme weather events which may affect human health through various mechanisms such as extreme heat events, changes in food and water supply and changes in the ecology of infectious diseases.

LINGUISTICS

CHANGE: NEW COURSE

LING 343 BILINGUALISM 3 S
This course provides an introduction to bilingualism and bilingual education exploring the linguistic, sociolinguistic, and psycholinguistic aspects of bilingualism. We read about and discuss bilingualism in the world and in the U.S.; language maintenance and language loss; effects of languages in contact; bilingual acquisition; the cognitive advantages of bilingualism; and the processing of language in the multilingual mind. Students are guided in conducting a small research project on one of these areas, learning how to read scientific studies about bilingualism and developing an understanding of the relationship between primary research sources and the popular press.

PHYSICS & ASTRONOMY

CHANGE: COURSE DESCRIPTION PREREQUISITE

ASTR 293 ASTRONOMY BIZARRE 3 N
(OLD) An exploration of astronomical extremes from various points of view: extremes in ages (the Big Bang and recent star formation), velocities and distances (quasars), rotation (pulsars), density (white dwarfs, neutron stars, black holes), energy release (stellar explosions), and proximity (interacting binary stars). Prerequisite: survey course in astronomy.

ASTR 293 ASTRONOMY BIZARRE 3 N
(NEW) An exploration of physical phenomena found in astrophysical extremes. Topics may include the following: the most violent explosions in the Universe (supernovae and gamma ray bursts); the biggest collisions in nature (galaxy interactions; the densest and most bizarre forms of matter (white dwarfs, neutron stars); the strongest magnetic fields (magnetars, pulsars); the amazing range of exo-planetary properties; and the mysteries of black holes. Prerequisite: eligibility for MATH 101.
PHSX 400  TOPICS IN PHYSICS AND ASTRONOMY: _____ 1-3 N
A course on special topics in physics and astronomy, given as the need arises. Course may be repeated for different topics. Each section may have prerequisites to be determined by the instructor. LEC

SLAVIC LANGUAGES & LITERATURES

CHANGE: NEW COURSE
YDSH 395  STUDY ABROAD TOPICS IN YIDDISH  3-6 H
This course is designed for the study abroad of special topics in Yiddish at the junior/senior level. Coursework must be arranged through the Office of KU Study Abroad. May be repeated for credit if content varies.

SOIOLOGY

CHANGE: COURSE DESCRIPTION
SOC 490  INTERNSHIP IN SOCIOLOGY  3 S
(OLD) The purpose of this course is to encourage students to think sociologically about social issues by working as volunteer interns for non-profit community or campus organizations. Enrollment must be approved by the departmental Undergraduate Studies Committee. See the department's Director of Undergraduate Studies for guidelines. Prerequisite: 21 credits in sociology with a 3.0 GPA and permission of the instructor. FLD
The purpose of this course is to encourage students to think sociologically about social issues by working as volunteer interns for non-profit community or campus organizations. Enrollment must be approved by the departmental Undergraduate Studies Committee. See the department's Director of Undergraduate Studies for guidelines. Prerequisite: 21 credits in sociology with a 3.0 GPA and permission of the instructor. FLD
(NEW) The purpose of this course is to encourage students to think sociologically about social issues by working as volunteer interns for non-profit community or campus organizations. Enrollment must be approved by a faculty mentor and the departmental Undergraduate Studies Committee. For additional information go to the Sociology department website. Prerequisite: 21 credits in sociology with a 3.0 GPA and permission of the instructor. FLD

SPANISH & PORTUGUESE

CHANGE: NEW COURSE
SPAN 101  ORIENTATION SEMINAR IN SPANISH AND PORTUGUESE  1 H
Provides an overview of the field of Hispanic Studies. Emphasizes developing an understanding of opportunities in Spanish and Portuguese at KU and the Spanish and Portuguese program curricula, exploring service-learning and other extracurricular options available at KU and beyond, and helping students plan goals for their education through an understanding of their personal values and aspirations as they relate to the field. Graded on a credit/no credit basis.

2. Degree Requirements for Approval
   a. Change to Admission Requirements for all degree majors – Biological Sciences

ADMISSION REQUIREMENTS FOR ALL DEGREES/MAJORS
Current Requirements with Proposed Changes in Red/Bold – Change to all biological sciences majors

Admission to the Major
Course Requirements
Admission course requirements for Biochemistry, Biology, Human Biology, and Molecular Biosciences:

- **Biology Orientation Seminar. Satisfied by BIOL 105.**
- Principles of Molecular and Cellular Biology. Satisfied by **BIOL 150** or 151.
- Principles of Organismal Biology. Satisfied by **BIOL 152** or **BIOL 153**.
- Chemistry II. Satisfied by **CHEM 135** (formerly **CHEM 188**), **CHEM 195** (formerly **CHEM 189**), or **CHEM 175**.
- Principles of Genetics. Satisfied by **BIOL 350** or **BIOL 360**.
Admission course requirements for Microbiology:

- **Biology Orientation Seminar. Satisfied by BIOL 105.**
- Principles of Molecular and Cellular Biology. Satisfied by BIOL 150 or 151.
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188), CHEM 195 (formerly CHEM 189), or CHEM 175.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.

**Biology Admission GPA**

Must have a grade-point average of at least 2.2 based on grades in BIOL 150, BIOL 152, CHEM 135 (formerly CHEM 188), and BIOL 350 (or equivalents). KU's course repeat policy applies to grade-point average calculation.

**Microbiology Admission GPA**

Must have a grade-point average of at least 2.2 based on grades in BIOL 150, CHEM 135 (formerly CHEM 188), and BIOL 350 (or equivalents). Microbiology admission requirements differ from those for Biochemistry, Biology, Human Biology, and Molecular Biosciences, because BIOL 152 is not required for the B.A. and B.S. degrees in microbiology. KU's course repeat policy applies to grade-point average calculation.

**Change to Existing Majors:**

**BA Biochemistry, BA Biology, BA Human Biology (all tracks), BA Microbiology**

The following changes are requested for all of the above BA degree/major requirements:

1. Add BIOL 105 as both a requirement for admission to the major and as a general science requirement for the major.
2. Increase the total credit hours required for the major as a result of the course credit hour change for BIOL 350/360 from 3 hours to 4 hours.

**Current Requirements with Proposed Changes in Red/Bold**

**Requirements for the B.A. Major in Biochemistry**

**Major Course Requirements**

**General Science Requirements.** Satisfied by completing 32-37 33-38 hours.

- **Biology Orientation Seminar. Satisfied by BIOL 105.**
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184), CHEM 190 (formerly CHEM 185), or CHEM 170.
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188), CHEM 195 (formerly CHEM 189), or CHEM 175.
- Organic Chemistry I. Satisfied by CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Organic Chemistry I Laboratory. CHEM 331 (formerly CHEM 625).
- Organic Chemistry II. Satisfied by CHEM 335 (formerly CHEM 626).
- Calculus I and II. Satisfied by MATH 115 & MATH 116 or MATH 121 & MATH 122 (or equivalent). Students who plan to attend graduate school should enroll in MATH 121 and 122.
- Physics. Satisfied by PHSX 211 & PHSX 216 and PHSX 212 & PHSX 236 or by PHSX 114 & PHSX 115.

**Biochemistry Requirements**

- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360 (BIOL 404 prior to Spring 2005).
- Biochemistry I. Satisfied by BIOL 636.
- Introductory Biochemistry Laboratory. Satisfied by BIOL 637.
- Biochemistry II. Satisfied by BIOL 638.
- Advanced Biochemistry Laboratory. Satisfied by BIOL 639.
- Gene Expression. Satisfied by BIOL 672.
- Senior Seminar in Biochemistry. Satisfied by BIOL 599 (BIOL 420 prior to Fall 2005). Must be taken in senior year.
Biological Physical Chemistry. Satisfied by CHEM 510 (formerly CHEM 640).

Biochemistry Electives. Satisfied by completing at least 6 hours of biology courses numbered 400 or higher. These courses must be selected in consultation with a biochemistry advisor. Some suggested courses are BIOL 400 or BIOL 401, BIOL 408, BIOL 416 or BIOL 536, BIOL 417, BIOL 424, or BIOL 646. No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement.

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours
Satisfied by 34 35 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 26 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

Current Requirements with Proposed Changes in Red/Bold

Requirements for the B.A. Major in Biology

Major Course Requirements

General Science Requirements (28-30 29-31 hours).

- Biology Orientation Seminar. Satisfied by BIOL 105.
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 195 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622) or CHEM 330 (formerly CHEM 624).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Calculus I. Satisfied by MATH 115 and MATH 116, MATH 121, or MATH 141.
- College Physics or General Physics I. Satisfied by PHSX 114 or by PHSX 211 & PHSX 216.
- College Physics or General Physics II. Satisfied by PHSX 115 or by PHSX 212 & PHSX 236.

Biology Core Requirements (24-25 25-26 hours).

- Principles of Molecular & Cellular Biology. Satisfied by: BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Evolutionary Biology. Satisfied by BIOL 412.
- Senior Seminar in Biology. Satisfied by BIOL 599 (BIOL 420 prior to spring 2006). Must be taken in senior year.
- Diversity of Organisms / Principles of Ecology / Introduction to Systematics. Satisfied by 1 of the following: BIOL 413, BIOL 414, or BIOL 428 (formerly BIOL 550).
- Fundamentals / Development / Function. Satisfied by 2 of the following: BIOL 400 or BIOL 401, BIOL 408, BIOL 416 or BIOL 536, BIOL 417, or BIOL 600.

Electives and Laboratory Requirements. Satisfied by completing 10 hours of BIOL courses numbered 400 or higher which include at least 4 hours of laboratory credit. Courses listed above which have not been used to fulfill the above requirements may be used as electives. No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study
can be applied towards the elective requirement with no more than 2 hours of BIOL 424 being applied towards the laboratory requirement.

- **Biology Electives.** Satisfied by completing at least 6 hours of biology courses numbered 400 or higher.
- **Biology Laboratory Electives.** Satisfied by completing at least 4 hours of biology lab courses numbered 400 or higher. No more than 2 hours of BIOL 424 may be applied towards the laboratory requirement.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 34-35 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 26 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

**Current Requirements with Proposed Changes in Red/Bold**

**Requirements for the B.A. Major in Human Biology**

**General Science Requirements.** Majors must complete the following 33-34 hour minimum of general science requirements that serve as foundational courses for this major.

- Fundamentals of Physical Anthropology. Satisfied by ANTH 304.
- **Biology Orientation Seminar.** Satisfied by BIOL 105.
- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Calculus. Satisfied by MATH 115 and MATH 116 or MATH 121 or MATH 141.
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- College or General Physics I. Satisfied by PHSX 114 or by PHSX 211 & PHSX 216.
- Statistics. Satisfied by BIOL 570, PSYC 210 or MATH 365 (PSYC 300 was renumbered to PSYC 210 and the honors version to PSYC 211, as of fall 2010). BIOL 570 is recommended for the Anthropology and Biology Concentrations. PSYC 210 is recommended for the Psychology Concentration.

**Anthropology**

**Anthropology Concentration**

Majors must complete the following 30-31 hours. These additional science courses are included in the Human Biology-Anthropology major hours and GPA calculations.

- Organic Chemistry I. CHEM 310 (formerly CHEM 622) or CHEM 330 (formerly CHEM 624).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Cell Structure & Function. Satisfied by BIOL 416 or BIOL 536.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Senior Seminar in Human Biology. Satisfied by BIOL 599 (must be taken in senior year).
Anthropology Concentration Categories

Satisfied by completing 2 of the following 4 categories (18-21 hours required):

**Human Anatomy and Physiology.** Satisfied by BIOL 417 and completing nine hours selected from the following courses: ANTH 542, ANTH 648, ANTH 650, BIOL 426, BIOL 440, BIOL 600, BIOL 637, BIOL 646, BIOL 647.

- Anatomy and Physiology. Satisfied by completing 9 hours from the following: ANTH 542, ANTH 648, ANTH 650, BIOL 426, BIOL 440, BIOL 600, BIOL 637, BIOL 646, BIOL 647.

**Human Population Biology.** Satisfied by completing 9 hours from the following: ANTH 340, ANTH 442, ANTH 544, ANTH 545, ANTH 652.

**Human Adaptation and Evolution.** Satisfied by completing 9 hours selected from the following: ANTH 350, ANTH 352, ANTH 450, ANTH 503, ANTH 549, ANTH 550.

**Human Biology and Behavior.** Satisfied by completing 9 hours selected from the following: ANTH 359, ANTH 447, ANTH 461, ANTH 754, PSYC 370, PSYC 536.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 30-31 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 30-31 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

Applied Behavioral Science

**Applied Behavioral Science Concentration**

Majors must complete the following 32-33 hours. These additional science courses are included in the Human Biology-Applied Behavior Science major hours and GPA calculations.

- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Introduction to Applied Behavioral Science. Satisfied by ABSC 100.
- Development. Satisfied by ABSC 160 or PSYC 333.
- Research Methods & Application. Satisfied by ABSC 308.
- Senior Seminar in Human Biology. Satisfied by BIOL 599. Must be taken in senior year.

**Applied Behavioral Science Concentration Categories**

Satisfied by completing 2 of the following 4 categories (18-21 hours required):

**Applied Behavioral Science.** Satisfied by ABSC 304 and completing 6 hours selected from the following courses: ABSC 150, ABSC 310 or ABSC 311, ABSC 359, ABSC 410, ABSC 437.
• Principles and Procedures of Applied Behavior Modification and Therapy. Satisfied by ABSC 304.
• Applied Behavioral Science. Satisfied by completing 6 hours selected from the following courses: ABSC 150, ABSC 310 or ABSC 311, ABSC 350, ABSC 410, ABSC 437.

**Development: Typical and Atypical.** Satisfied by ABSC 632 and completing 6 hours selected from the following courses: ABSC 535, ABSC 565, BIOL 417.

- Child Behavior and Development. Satisfied by ABSC 632.
- Development: Typical and Atypical. Satisfied by completing 6 hours selected from the following courses: ABSC 535, ABSC 565, BIOL 417.

**Biology of Behavior.** Satisfied by BIOL 408 and completing 6 hours selected from the following courses: ANTH 542, BIOL 435, BIOL 440, BIOL 454, BIOL 646, BIOL 647, BIOL 655, PSYC 370, PSYC 380.

- Physiology of Organisms. Satisfied by BIOL 408.
- Biology of Behavior. Satisfied by completing 6 hours selected from the following: ANTH 542, BIOL 435, BIOL 440, BIOL 454, BIOL 646, BIOL 647, BIOL 655, PSYC 370, PSYC 380.

**Evolution, Culture, and Behavior.** Satisfied by BIOL 412 and completing 6 hours selected from the following courses: ANTH 341, ANTH 415, ANTH 650, ANTH 661, BIOL/GEOG 410, BIOL 428 (formerly BIOL 550), BIOL 625, BIOL 652.

- Evolutionary Biology. Satisfied by BIOL 412.
- Evolution, Culture, and Behavior. Satisfied by completing 6 hours selected from the following: ANTH 341, ANTH 415, ANTH 650, ANTH 661, BIOL/GEOG 410, BIOL 428 (formerly BIOL 550), BIOL 625, BIOL 652.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 32-33 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 23 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

**Biology**

**Biology Concentration**

Majors must complete the following 34-32 hours. These additional science courses are included in the Human Biology-Biology major hours and GPA calculations.

- Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622) or CHEM 330 (formerly CHEM 624).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- College or General Physics II. Satisfied by PHSX 115 or PHSX 212 & PHSX 236.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Senior Seminar in Human Biology. Satisfied by BIOL 599 (must be taken in senior year).
- Biology Laboratory Electives. Course selections from the following categories must include at least 3 hours of laboratory credit, 400 level or above.
Biology Concentration Categories

Satisfied by completing 2 of the following 4 categories listed below. (18-19 hours required) (Course selections must include at least 3 hours of laboratory credit, 400 level or above.)

Development and Genetics. Satisfied by BIOL 417 and 6 additional hours selected from the following: ABSC/PSYC 535, ANTH 762, BIOL 405, BIOL 416 or BIOL 536, BIOL 595, BIOL 655, BIOL 688, PSYC 333, PSYC 430, PSYC 531, SPLH 566.

- Development and Genetics. Satisfied by completing 6 hours from the following list of courses: ABSC/PSYC 535, ANTH 762, BIOL 405, BIOL 416 or BIOL 536, BIOL 595, BIOL 655, BIOL 688, PSYC 333, PSYC 430, PSYC 531, SPLH 566.

Anatomy and Physiology. Satisfied by: BIOL 646 and completing six hours selected from the following courses: ANTH 542, ANTH 648, BIOL 435, BIOL 440, BIOL 467, BIOL 600, BIOL 637, HSES 672, PSYC 370, PSYC 380, PSYC 475.

- Mammalian Physiology. Satisfied by BIOL 646.
- Anatomy & Physiology. Satisfied by completing 6 hours from the following list of courses: ANTH 542, ANTH 648, BIOL 435, BIOL 440, BIOL 467, BIOL 600, BIOL 637, HSES 672, PSYC 370, PSYC 380, PSYC 475.

Evolution, Ecology, and Adaptation. Satisfied by BIOL 412 and completing 6 hours selected from the following: ANTH 340, ANTH 341, ANTH 350, ANTH 652, BIOL 410, BIOL 414, BIOL 668, PSYC 555.

- Evolutionary Biology. Satisfied by BIOL 412.
- Evolution, Ecology, and Adaptation. Satisfied by completing 6 hours selected from the following: ANTH 340, ANTH 341, ANTH 350, ANTH 652, BIOL 410, BIOL 414, BIOL 668, PSYC 555.

Human Disease. Satisfied by: BIOL 400 (or BIOL 401, Honors) and 6 hours selected from the following courses: ANTH 450, BIOL 402, BIOL 503, BIOL 506, BIOL 512, BIOL 518, BIOL 595, BIOL 616, BIOL 688.

- Fundamentals of Microbiology. Satisfied by BIOL 400 or BIOL 401.
- Human Disease. Satisfied by completing 6 hours selected from the following: ANTH 450, BIOL 402, BIOL 503, BIOL 504, BIOL 506, BIOL 507, BIOL 512, BIOL 513, BIOL 518, BIOL 519, BIOL 595, BIOL 616, BIOL 688.

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours
Satisfied by 32 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 27 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

Psychology

Psychology Concentration
Majors must complete the following 30 hours. These additional science courses are included in the Human Biology-Psychology major hours and GPA calculations.

- Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622) or CHEM 330 (formerly CHEM 624).
- Organic Chemistry I Laboratory. CHEM 331 (formerly CHEM 625).
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Senior Seminar in Human Biology. Satisfied by BIOL 599. Must be taken in senior year.

Psychology Concentration Categories

Satisfied by completing 2 of the following 4 categories listed below. (18 hours required)

**Evolution, Adaptation and Health.** Satisfied by completing 9 hours selected from the following: PSYC 555, PSYC 605, ANTH 340, ANTH 341, ANTH 350, ANTH 442, ANTH 447, ANTH 450, ANTH 542, BIOL 412, BIOL 595.

**Human Development.** Satisfied by completing PSYC 333 or PSYC 334 and 6 hours selected from the following courses: PSYC 430, PSYC/ABSC 535, PSYC/ABSC 632, BIOL 417.

- Child Development. Satisfied by PSYC 333 or PSYC 334.
- Human Development. Satisfied by completing 6 hours selected from the following: PSYC 430, PSYC/ABSC 535, PSYC/ABSC 632, BIOL 417.

**Human Cognition and Language.** Satisfied by completing PSYC 318 and 6 hours selected from the following: PSYC 418, PSYC 482, PSYC 518, PSYC 531, PSYC 536, SPLH 466, SPLH 566.

- Cognitive Psychology. Satisfied by PSYC 318.
- Human Cognition & Language. Satisfied by completing 6 hours selected from the following: PSYC 418, PSYC 482, PSYC 518, PSYC 531, PSYC 536, SPLH 466, SPLH 566.

**Neuroscience.** Satisfied by completing 9 hours selected from the following: PSYC 370, PSYC 380, PSYC 475, ANTH 650, BIOL 435, BIOL 454, BIOL 655, SPLH 320.

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 30 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 27 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

Speech-Language-Hearing

Speech-Language-Hearing Concentration

Majors must complete the following 30 hours. These additional science courses are included in the Human Biology-Speech-Language-Hearing major hours and GPA calculations.
• Physics. Satisfied by \textit{SPLH 120} or \textit{PHSX 115}.
• Research Methods. Satisfied by \textit{SPLH 660}.
• Genetics. Satisfied by \textit{BIOL 350} or \textit{BIOL 360}.
• Senior Seminar in Human Biology. Satisfied by \textit{BIOL 599}. Must be taken in senior year.

\textbf{Speech-Language-Hearing Concentration Categories.} Satisfied by completing 2 of the following 4 categories (18-19 hours required).

\textbf{Development and Genetics.} Satisfied by completing \textit{BIOL 417} and 6 hours selected from the following courses: \textit{ANTH 762}, \textit{BIOL 405}, \textit{BIOL 416} or \textit{BIOL 536}, \textit{BIOL 595}, \textit{BIOL 655}, \textit{PSYC 333}, \textit{PSYC 430}, \textit{SPLH 464} or \textit{SPLH 764}, \textit{SPLH 466}, \textit{SPLH 566}.

• Biology of Development. Satisfied by \textit{BIOL 417}.
• Development and Genetics. Satisfied by completing 6 hours selected from the following: \textit{ANTH 762}, \textit{BIOL 405}, \textit{BIOL 416} or \textit{BIOL 536}, \textit{BIOL 595}, \textit{BIOL 655}, \textit{PSYC 333}, \textit{PSYC 430}, \textit{SPLH 464} or \textit{SPLH 764}, \textit{SPLH 466}, \textit{SPLH 566}.

\textbf{Anatomy and Physiology.} Satisfied by completing \textit{BIOL 646} and 6 hours selected from the following: \textit{BIOL 440}, \textit{BIOL 647}, \textit{SPLH 662}, \textit{SPLH 663}, \textit{HSES 672}.

• Mammalian Physiology. Satisfied by \textit{BIOL 646}.
• Anatomy and Physiology. Satisfied by completing 6 hours selected from the following: \textit{BIOL 440}, \textit{BIOL 647}, \textit{SPLH 662}, \textit{SPLH 663}, \textit{HSES 672}.

\textbf{Neuroscience.} Satisfied by completing \textit{BIOL 408} and 6 hours selected from the following: \textit{BIOL 435}, \textit{PSYC 370}, \textit{PSYC 380}, \textit{PSYC 475}, \textit{SPLH 320}, \textit{SPLH 464} (Neural Bases of Speech & Voice), \textit{SPLH 464} (Speech Motor Control).

• Physiology of Organisms. Satisfied by \textit{BIOL 408}.
• Neuroscience. Satisfied by completing 6 hours selected from the following: \textit{BIOL 435}, \textit{PSYC 370}, \textit{PSYC 380}, \textit{PSYC 475}, \textit{SPLH 320}, \textit{SPLH 464} (Neural Bases of Speech & Voice), \textit{SPLH 464} (Speech Motor Control).

\textbf{Research Practicum.} Satisfied by completing 9 hours selected from the following courses \textit{SPLH 464} (Circuit Theory & Bioinstrumentation), \textit{SPLH 449} (various topics), \textit{SPLH 499}.

\textbf{Major Hours & Major GPA}

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

\textbf{Major Hours}
Satisfied by 29-30 hours of major courses.

\textbf{Major Hours in Residence}
Satisfied by a minimum of 15 hours of KU resident credit in the major.

\textbf{Major Junior/Senior Hours}
Satisfied by a minimum of 25 hours from junior/senior courses (300+) in the major.

\textbf{Major Junior/Senior Graduation GPA}
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the \textit{Semester/Cumulative GPA Calculator}.

\textbf{Requirements for the B.A. Major in Microbiology}

\textbf{Current Requirements with Proposed Changes in Red/Bold}

\textbf{General Science Requirements}
Microbiology General Science Requirements (34-36-36-38 Hours)

- **Biology Orientation Seminar.** Satisfied by BIOL 105.
- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622) or CHEM 330 (formerly CHEM 624).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Calculus I. Satisfied by MATH 115 and MATH 116, MATH 121, or MATH 141.
- College Physics or General Physics I. Satisfied by PHSX 114, by PHSX 211 & PHSX 216, or by PHSX 213.
- College Physics or General Physics II. Satisfied by PHSX 115, by PHSX 212 & PHSX 236, or by PHSX 214.

Microbiology Core Knowledge & Skills (9-10 Hours)

- Fundamentals of Microbiology. Satisfied by BIOL 400 or BIOL 401.
- Fundamentals of Microbiology Laboratory. Satisfied by BIOL 402.
- Microbial Physiology or Introductory Biochemistry. Satisfied by BIOL 516 or BIOL 600.
- Senior Seminar: Current Progress in Microbiology. Satisfied by BIOL 599. Must be taken in senior year.

Microbiology Electives and Laboratory Requirements. Satisfied by completing 15 hours of microbiology courses, including 3 lab courses, selected from the following: BIOL 503, BIOL 504, BIOL 506, BIOL 507, BIOL 512, BIOL 513, BIOL 517, BIOL 518, or BIOL 519.

Microbiology Elective. Satisfied by completing 3 additional hours of biology courses numbered 400 or higher to be selected in consultation with a microbiology advisor.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 27 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 27 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the [Semester/Cumulative GPA Calculator](#).

Change to Existing Majors:
**BS Biochemistry, BS Biology – Teaching Biology track, BS Microbiology**

The following changes are requested for all of the above BS degree/major requirements:
1. Change all general education requirements to Completion of the KU Core.
2. Add BIOL 105 as both a requirement for admission to the major and as a general science requirement for the major.
3. Increase the total credit hours required for the major as a result of the course credit hour change for BIOL 350/360 from 3 hours to 4 hours.

**Requirements for the B.S. Degree in Biochemistry**
Current Requirements with Proposed Changes in Red/Bold

**General College Education Requirements**

In addition to degree and major requirements, all students must complete the KU Core.

General Education offers opportunities for the development of core skills and critical inquiry, an understanding of the human condition, the natural world, and society, and the exploration of one’s own and diverse cultures, all leading to greater civic engagement.

**Written Communication - Core Skills and Critical Inquiry.**

- Composition. Satisfied by ENGL 101, ACT English score of 27 or above or SAT English score of 600 or above, AP English Literature and Composition score of 3 or above, or equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Critical Reading and Writing. Satisfied by ENGL 102, or ENGL 105 (Honors), AP English Literature & Composition score of 4 or above, or an equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Sophomore Reading and Writing. Satisfied by ENGL 203, or ENGL 205 (Honors), ENGL 209, ENG 210 or ENG 211, AP English Literature & Composition score of 5 or above, or an equivalent transfer course.

**Argument & Reason - Core Skills and Critical Inquiry.** Satisfied by completing COMS 130, COMS 131 (Honors), COMS 230, PHIL 148, PHIL 149, PHIL 310, or 1 year of high school speech or debate with B-level performance or above. Entering freshmen should consider 100-level options.

**Western Civilization – Exploration of One’s Own and Diverse Cultures.** Satisfied by HWC 204, or HWC 114 (Honors), and HWC 205, or HWC 115 (Honors). Advising Alert: Requires sophomore-level standing. Courses at other universities may have the same title but may not meet this requirement.

**Principal Course and/or Second Language Requirements.** Satisfied by 5 courses, with a minimum of 1 course in social sciences (i.e., SC/SF/SI) and a minimum of 1 course in the humanities (i.e., HL/HR/HT). (No more than 1 course may be taken in each topical subgroup from the principal course list.) Three additional courses selected from the social sciences (i.e., SC/SF/SI) or humanities (i.e., HL/HR/HT) principal course list and/or second language courses.

**General Science Requirements.** (38–39 hours) Majors must complete the following general science requirements that serve as foundational courses for this major.

- **Biology Orientation Seminar.** Satisfied by BIOL 105.
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184), CHEM 190 (formerly CHEM 185), or CHEM 170.
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188), CHEM 195 (formerly CHEM 189), or CHEM 175.
- Organic Chemistry I. Satisfied by CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Organic Chemistry II. Satisfied by CHEM 335 (formerly CHEM 626) or CHEM 385 (formerly CHEM 630).
- Organic Chemistry II Laboratory. Satisfied by CHEM 336 (formerly CHEM 627).
- Calculus I & II. Satisfied by MATH 121 and MATH 122 (or equivalent).
- Physics. Satisfied by PHSX 211 & PHSX 216 and PHSX 212 & PHSX 236 or by PHSX 114 & PHSX 115.

**Biochemistry Course Requirements.** Satisfied by completing 33–34 hours from courses below.

- Principles of Molecular and Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Biochemistry I. Satisfied by BIOL 636.
- Introductory Biochemistry Laboratory. Satisfied by BIOL 637.
- Biochemistry II. Satisfied by BIOL 638.
- Advanced Biochemistry Laboratory. Satisfied by BIOL 639.
- Gene Expression. Satisfied by BIOL 672.
• Senior Seminar in Biochemistry. Satisfied by BIOL 599. Must be taken in senior year.
• Analytical Chemistry. Satisfied by CHEM 620 (formerly CHEM 516).
• Analytical Chemistry Laboratory. Satisfied by CHEM 621 (formerly CHEM 517).
• Physical Chemistry. Satisfied by CHEM 510 (formerly CHEM 640) or CHEM 530 (formerly CHEM 646).

**Biochemistry Required Electives.** Satisfied by completing 12 hours of BIOL courses numbered 400 or higher, which must be selected in consultation with a Biochemistry advisor. Some suggested courses include BIOL 400, BIOL 401, BIOL 408, BIOL 416, BIOL 424, BIOL 430, BIOL 518, BIOL 688, or BIOL courses having a biochemistry course as prerequisite. No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 45-46 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 25 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

**Requirements for the B.S. Degree in Biology (Teaching Biology)**

**Current Requirements with Proposed Changes in Red/Bold**

**General College Education Requirements**

**In addition to degree and major requirements, all students must complete the KU Core.**

Satisfied by completing 33 hours from the following:

**Written Communication—Core Skills and Critical Inquiry:**

- Composition. Satisfied by ENGL 101, ACT English score of 27 or above or SAT English score of 600 or above, AP English Literature and Composition score of 3 or above, or equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Critical Reading and Writing. Satisfied by ENGL 102 or ENGL 105 (Honors), AP English Literature & Composition score of 4 or above, or an equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Sophomore Reading and Writing. Satisfied by ENGL 203 or ENGL 205 (Honors), ENGL 209 or ENGL 210 or ENGL 211, AP English Literature & Composition score of 5 or above, or an equivalent transfer course.

**Argument & Reason—Core Skills and Critical Inquiry.** Satisfied by COMS 140, COMS 131 (Honors), COMS 230, PHIL 148, PHIL 149, PHIL 310, or 1 year of high school speech or debate with B-level performance or above. Entering freshmen should consider 100-level options.

**Western Civilization—Exploration of One's Own and Diverse Culture.** Satisfied by HWC 204, or HWC 114 (Honors), and HWC 205 or HWC 115 (Honors). Advising Alert: Requires sophomore-level standing. Courses at other universities may have the same title but may not meet this requirement.
Principal Course and/or Second Language Requirements. Satisfied by 5 courses with a minimum of 1 course in social sciences and a minimum of 1 course in social sciences (i.e., SC/SF/SI) and a minimum of 1 course in the humanities (i.e., HL/HR/HT). (No more than 1 course may be taken in each topical subgroup from the principal course list.) Three additional courses selected from the social sciences (i.e., SC/SF/SI) or humanities (i.e., HL/HR/HT) principal course list and/or second language courses.

Teaching Biology

General Science Requirements. Majors must complete the following 29-31 hours of general science requirements that serve as foundational courses for this major.

- Biology Orientation Seminar. Satisfied by BIOL 105.
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622), CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Calculus I. Satisfied by MATH 115 and MATH 116, or MATH 121 or MATH 141.
- Physics I. Satisfied by PHSX 114, by PHSX 211 & PHSX 216, or by PHSX 213.
- Physics II. Satisfied by PHSX 115, by PHSX 212 & PHSX 236, or by PHSX 214.

Teaching Biology Course Requirements. Satisfied by completing 30-31 hours of course work below.

- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Evolutionary Biology. Satisfied by BIOL 412.
- Cell Structure & Function. Satisfied by BIOL 416 or BIOL 536.
- Research Methods. Satisfied by BIOL 598.
- Senior Seminar. Satisfied by BIOL 599 (must be taken in senior year).
- Choose 1 Course. Satisfied by BIOL 413 or BIOL 428 (formerly 550).
- Choose 1 Course. Satisfied by BIOL 400 or BIOL 401, BIOL 408, or BIOL 600.

Teaching Biology Required Electives and Laboratory. Satisfied by 7 hours of BIOL courses numbered 400 or higher which include at least 4 hours of laboratory credit. Courses listed above which have not been used to fulfill the above requirements may be used as electives. No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement with no more than 2 hours of BIOL 424 being applied towards the laboratory requirement.

- Laboratory. Satisfied by completing a minimum of 4 hours of biology laboratory courses numbered 400 or higher. Some course limits apply, including no more than 2 hours of BIOL 423/424 allowed toward Lab requirement.
- Teaching Biology Elective. Satisfied by completing a minimum of 3 hours of BIOL courses numbered 400 or higher. No more than 3 hours of BIOL 423/424 allowed toward Elective requirement.

Teaching Biology Education Requirements. Students who are seeking classroom certification must complete the following requirements through the School of Education.

- Approaches to Teaching Science and Mathematics I. Satisfied by LA&S 290.
- Approaches to Teaching Science and Mathematics II. Satisfied by LA&S 291.
- Knowing and Learning in Mathematics & Science. Satisfied by C&T 360.
- Classroom Interactions in Mathematics and Science. Satisfied by C&T 366.
- Reading and Writing Across the Curriculum. Satisfied by C&T 448.
- Project-Based Instruction in Mathematics & Science. Satisfied by C&T 460.
- Student Teaching. Satisfied by C&T 500.
- Special Topics Seminar. Satisfied by C&T 598.
Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 37-39 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 29 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the [Semester/Cumulative GPA Calculator](#).

Requirements for the B.S. Degree in Microbiology

**Current Requirements with Proposed Changes in Red/Bold**

**General College Education Requirements**
In addition to degree and major requirements, all students must complete the KU Core.

General Education offers opportunities for the development of core skills and critical inquiry, an understanding of the human condition, the natural world, and society, and the exploration of one's own and diverse cultures, all leading to greater civic engagement.

**Written Communication - Core Skills and Critical Inquiry.**

- Composition. Satisfied by [ENGL 101](#), ACT English score of 27 or above or SAT English score of 600 or above, AP English Literature and Composition score of 3 or above, or equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Critical Reading and Writing. Satisfied by [ENGL 102](#) or [ENGL 105](#) (Honors), AP English Literature & Composition score of 4 or above, or an equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Sophomore Reading and Writing. Satisfied by [ENGL 203](#), [ENGL 205](#) (Honors), [ENGL 209](#), [ENGL 210](#), [ENGL 211](#), AP English Literature & Composition score of 5 or above, or an equivalent transfer course.

**Argument & Reason - Core Skills and Critical Inquiry.** Satisfied by completing [COMS 130](#), [COMS 131](#) (Honors), [COMS 230](#), [PHIL 148](#), [PHIL 149](#), [PHIL 310](#), or one year of high school Speech or Debate with B level performance or above. Entering freshmen should consider 100 level options.

**Western Civilization - Exploration of One's Own and Diverse Cultures.** Satisfied by [HWC 204](#) or [HWC 114](#) (Honors), and [HWC 205](#) or [HWC 115](#) (Honors). Advising Alert: Requires sophomore level standing. Courses at other universities may have the same title but may not meet this requirement.

**Principal Course and/or Second Language Requirements.** Satisfied by 5 courses with a minimum of 1 course in social sciences (i.e., SC/SE/SI) and a minimum of 1 course in the humanities (i.e., HL/HR/HT). (No more than 1 course may be taken in each topical subgroup from the principal course list.) Three additional courses selected from the social sciences (i.e., SC/SE/SI) or humanities (i.e., HL/HR/HT) principal course list and/or second language courses.

**Microbiology Course Requirements**

**General Science Requirements.** Majors must complete 49-54 51-53 hours of the following general science requirements that serve as foundational courses for this major.
- Biology Orientation Seminar. Satisfied by BIOL 105.
- Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I. Satisfied by CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Organic Chemistry II. Satisfied by CHEM 335 (formerly CHEM 626) or CHEM 385 (formerly CHEM 630).
- Organic Chemistry II Laboratory. Satisfied by CHEM 336 (formerly CHEM 627).
- Physics. Satisfied by PHSX 114 & PHSX 115 or by PHSX 211 & PHSX 216 and PHSX 212 & PHSX 236.
- Calculus. Satisfied by MATH 115 & MATH 116 or MATH 121.
- Statistics. Satisfied by BIOL 570 or MATH 365 or PSYC 210.
- Biochemistry I. Satisfied by BIOL 636.
- Biochemistry II. Satisfied by BIOL 638.

**Microbiology Course Requirements.** Satisfied by completing 29 hours from the following courses:

- Fundamentals of Microbiology. Satisfied by BIOL 400 or BIOL 401.
- Fundamentals of Microbiology Laboratory. Satisfied by BIOL 402.
- Cell Structure & Function. Satisfied by BIOL 416 or BIOL 536.
- Immunology. Satisfied by BIOL 503.
- Immunology Laboratory. Satisfied by BIOL 504.
- Pathogenic Microbiology. Satisfied by BIOL 506.
- Pathogenic Microbiology Laboratory. Satisfied by BIOL 507.
- General Virology. Satisfied by BIOL 512.
- Virology Laboratory. Satisfied by BIOL 513.
- Microbial Genetics. Satisfied by BIOL 518.
- Microbial Genetics Laboratory. Satisfied by BIOL 519.
- Senior Seminar - Current Progress in Microbiology. Satisfied by BIOL 599. Must be taken in senior year.

**Microbiology Required Electives.** Satisfied by completing 6 hours of BIOL courses numbered 400 or higher, which must be selected in consultation with a microbiology advisor.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 35 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 35 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

**Change to Existing Majors:**
**BS Molecular Biosciences**

The following changes are requested for the above BS degree/major requirements:

1. Change all general education requirements to Completion of the KU Core.
2. Add BIOL 105 as both a requirement for admission to the major and as a general science requirement for the major.
3. Increase the total credit hours required for the major as a result of the course credit hour change for BIOL 350/360 from 3 hours to 4 hours.
4. Include BIOL 570 as part of the Core requirements for the major. This course was previously included in the general science requirements but was not a part of the major.
5. Add BIOL 601 as a Core requirement for the major.
6. Add 1 hour to the required electives (from 11 to 12), and REMOVE the requirement that 2 of these hours must be lab credit.
7. Add BIOL 421 as an option for the 2 hours of seminar/topics courses.
8. Remove CHEM 336, MATH 365, and PSYC 210 as general science requirements.

Requirements for the B.S. Degree in Molecular Biosciences

Current Requirements with Proposed Changes in Red/Bold

General College Education Requirements

In addition to degree and major requirements, all students must complete the KU Core.

General education offers opportunities for the development of core skills and critical inquiry, an understanding of the human condition, the natural world, and society, and the exploration of one's own and diverse cultures, all leading to greater civic engagement.

Written Communication—Core Skills and Critical Inquiry—

- Composition. Satisfied by ENGL 101, ACT English score of 27 or above or SAT English score of 600 or above, AP English Literature and Composition score of 3 or above, or equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Critical Reading and Writing. Satisfied by ENGL 102, or ENGL 105 (Honors), AP English Literature & Composition score of 4 or above, or an equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Sophomore Reading and Writing. Satisfied by ENGL 203, or ENGL 205 (Honors), ENGL 209, ENGL 210, ENGL 211, ENGL 362, AP English Literature & Composition score of 5 or above, or an equivalent transfer course.

Argument & Reason—Core Skills and Critical Inquiry. Satisfied by completing COMS 130, COMS 131 (Honors), COMS 230, PHIL 148, PHIL 149, PHIL 310, or one year of high school Speech or Debate with B level performance or above. Entering freshmen should consider 100 level options.

Western Civilization—Exploration of One's Own and Diverse Cultures. Satisfied by HWC 204, or HWC 114 (Honors), and HWC 205, or HWC 115 (Honors). Advising Alert: Requires sophomore-level standing. Courses at other universities may have the same title but may not meet this requirement.

Principal Course and/or Second Language Requirements. Satisfied by 5 courses with a minimum of 1 course in social sciences (i.e., SC/SF/SI) and a minimum of 1 course in the humanities (i.e., HL/HR/HT). (No more than 1 course may be taken in each topical subgroup from the principal course list.) Three additional courses selected from the social sciences (i.e., SC/SF/SI) or humanities (i.e., HL/HR/HT) principal course list and/or second language courses.

Major Course Requirements

This degree is offered at the Edwards Campus ONLY. Junior/Senior level BIOL courses for this degree must be completed at the Edwards Campus. Declaration of Major forms for Molecular Biosciences must be signed by an Edwards campus advisor. Contact Dan Mueller at 913-897-8659 (x48659) for more information.

General Science Requirements. (36-38  32-34 hours) Majors must complete the following general science requirements that serve as foundational courses for this major.

- Biology Orientation Seminar. Satisfied by BIOL 105.
- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
• Organic Chemistry I. Satisfied by CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
• Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
• Organic Chemistry II. CHEM 335 (formerly CHEM 626) or CHEM 385 (formerly CHEM 630).
• Organic Chemistry II Laboratory. Satisfied by CHEM 336 (formerly CHEM 627).
• Calclus. Satisfied by MATH 115 and MATH 116 or MATH 121.
• Statistics. Satisfied by MATH 365 or PSYC 210.
• Physics. Satisfied by PHSX 114 and PHSX 115 or by PHSX 211 & PHSX 216 and PHSX 212 & PHSX 236.

Molecular Biosciences Course Requirements. Satisfied by completing 29 35 hours from courses below.

• Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
• Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
• Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
• Fundamentals of Microbiology. Satisfied by BIOL 400 or BIOL 401.
• Fundamentals of Microbiology Laboratory. Satisfied by BIOL 402.
• Laboratory in Genetics. Satisfied by BIOL 405.
• Cell Structure & Function. Satisfied by BIOL 416 or BIOL 536.
• Molecular Biology Laboratory. Satisfied by BIOL 430.
• Introduction to Biostatistics. Satisfied by BIOL 570.
• Introductory Biochemistry. Satisfied by BIOL 600.
• Principles of Biochemistry Laboratory. Satisfied by BIOL 601.

Senior Seminar in Molecular Biosciences. Satisfied by BIOL 599. Must be taken in senior year. Offered only at the Edwards Campus.

Molecular Bioscience Required Electives (4+ 12 hours required.) Satisfied by completing 11 hours of BIOL courses numbered 400 or higher, including at least 2 hrs. of lab credit and 2 hrs. of a seminar/topics course (BIOL 419, 420, 421, 701). No more than 3 hrs. of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement with no more than 2 hours of BIOL 424 being applied towards the laboratory requirement.

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours
Satisfied by 40 47 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 32 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

Change to Existing Majors and Combine existing tracks to create new tracks:
BS Biology – Ecology and Evolutionary Biology and Organismal tracks combine into Ecology, Evolution, and Organismal Biology Track
BS Biology – Cellular, Genetics, and Neurobiology tracks combine into Molecular, Cellular, and Developmental Biology Track

1. Combine five existing tracks into two new tracks.
2. As a part of the new curriculum, include BIOL 105 in both the admissions and general science requirement for the major.

Current Requirements for the BS Biology, Ecology & Evolutionary Biology Track, and the Organismal Biology Track:
Requirements for the B.S. Degree in Biology

General College Requirements

Satisfied by completing 33 hours from the following:

Written Communication - Core Skills and Critical Inquiry.

- Composition. Satisfied by ENGL 101, ACT English score of 27 or above or SAT English score of 600 or above, AP English Literature and Composition score of 3 or above, or equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Critical Reading and Writing. Satisfied by ENGL 102, or ENGL 105 (Honors), AP English Literature & Composition score of 4 or above, or an equivalent transfer course. Requirement must be completed within the first academic year at KU.
- Sophomore Reading and Writing. Satisfied by ENGL 203, or ENGL 205 (Honors), ENGL 209, or ENGL 210 or ENGL 211, AP English Literature & Composition score of 5 or above, or an equivalent transfer course.

Argument & Reason - Core Skills and Critical Inquiry. Satisfied by COMS 130, COMS 131 (Honors), COMS 230, PHIL 148, PHIL 149, PHIL 310, or 1 year of high school speech or debate with B-level performance or above. Entering freshmen should consider 100-level options.

Western Civilization - Exploration of One's Own and Diverse Culture. Satisfied by HWC 204, or HWC 114 (Honors), and HWC 205, or HWC 115 (Honors). Advising Alert: Requires sophomore-level standing. Courses at other universities may have the same title but may not meet this requirement.

Principal Course and/or Second Language Requirements. Satisfied by 5 courses with a minimum of 1 course in social sciences and a minimum of 1 course in social sciences (i.e., SC/SF/SI) and a minimum of 1 course in the humanities (i.e., HL/HR/HT). (No more than 1 course may be taken in each topical subgroup from the principal course list.) Three additional courses selected from the social sciences (i.e., SC/SF/SI) or humanities (i.e., HL/HR/HT) principal course list and/or second language courses.

Ecology and Evolutionary Biology

General Science Requirements. Majors must complete the following 26-28 hours of general science requirements that serve as foundational courses for this major.

- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622), CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Calculus I. Satisfied by MATH 115 and MATH 116, or MATH 121 or MATH 141.
- Physics I. Satisfied by PHSX 114, by PHSX 211 & PHSX 216, or by PHSX 213.
- Physics II. Satisfied by PHSX 115, by PHSX 212 & PHSX 236, or by PHSX 214.

General Biology Requirements. Satisfied by completing 17-18 hours from courses below. These additional science courses are included in the Ecology and Evolutionary Biology major hours and GPA calculations.

- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Choose 2 Courses. Satisfied by completing 2 of the following courses BIOL 408, BIOL 416 or BIOL 536, BIOL 417, or BIOL 600.

Ecology and Evolutionary Biology Course Requirements. Satisfied by completing 18 hours of course work below.

- Evolutionary Biology. Satisfied by BIOL 412.
- History & Diversity of Organisms. Satisfied by BIOL 413.
- Principles of Ecology. Satisfied by BIOL 414 or BIOL 514.
- Introduction to Systematics. Satisfied by BIOL 428 (formerly BIOL 550).
- Introduction to Biostatistics. Satisfied by BIOL 570.
- Senior Seminar in Ecology & Evolutionary Biology. Satisfied by BIOL 599 (must be taken in senior year).

**Ecology & Evolutionary Biology Required Electives, Laboratory, and Seminar.** Satisfied by completing 13 hours of BIOL courses numbered 400 or higher which include at least 3 hrs. of laboratory credit and 2 hrs. of a seminar or topics course (BIOL 419, 420, 499, 701). Courses listed above which have not been used to fulfill the above requirements may be used as electives. No more than 3 hrs. of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement with no more than 2 hours of BIOL 424 being applied towards the laboratory requirement.

- Seminar. Satisfied by completing at least 2 hours of seminar or topics course (BIOL 419, BIOL 420, BIOL 499, or BIOL 701).
- Laboratory. Satisfied by completing at least 3 hours of laboratory courses. No more than 2 hours of BIOL 423/424 count toward lab requirement.
- Ecology and Evolutionary Biology Electives. Satisfied by completing 8 hours from BIOL courses numbered 400 or higher. No more than 3 hours of BIOL 423/424 allowed toward elective requirement.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 48 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 40 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

**Organismal Biology**

**General Science Requirements.** Majors must complete the following 28-30 hours of general science requirements that serve as foundational courses for this major.

- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622), CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Calculus I. Satisfied by MATH 115 and MATH 116, or MATH 121 or MATH 141.
- Physics I. Satisfied by PHSX 114, by PHSX 211 & PHSX 216, or by PHSX 213.
- Physics II. Satisfied by PHSX 115, by PHSX 212 & PHSX 236, or by PHSX 214.

**General Biology Requirements.** Satisfied by completing 18 hours from courses below. These additional science courses are included in the Organismal Biology major hours and GPA calculations.

- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Evolutionary Biology. Satisfied by BIOL 412.
Introductory Biochemistry. Satisfied by BIOL 600.

Organismal Biology Course Requirements. Satisfied by completing 21 hours of course work below.

- Physiology of Organisms. Satisfied by BIOL 408.
- Physiology of Organisms Laboratory. Satisfied by BIOL 409.
- History & Diversity of Organisms. Satisfied by BIOL 413.
- Senior Seminar in Organismal Biology. Satisfied by BIOL 599. Must be taken in senior year.
- Choose 1 course. Satisfied by choosing 1 course from the following: BIOL 416, BIOL 414, or BIOL 428 (formerly BIOL 550).

Students must take at least 1 course from each of the following three groups.

Development & Morphology. Satisfied by choosing 1 course from following: BIOL 435, BIOL 503, BIOL 506, BIOL 526 or BIOL 716, BIOL 606, BIOL 644, BIOL 646, BIOL 652, BIOL 655, BIOL 667, BIOL 673.

Function. Satisfied by choosing 1 course from following: BIOL 435, BIOL 440, BIOL 450, BIOL 500, BIOL 528 or BIOL 709, BIOL 711, BIOL 710, BIOL 783, BIOL 784, BIOL 792, BIOL 593, BIOL 603, BIOL 610, BIOL 613, BIOL 622, BIOL 640.

Diversity. Satisfied by choosing 1 course from following: ANTH 440, BIOL 400 or BIOL 401, BIOL 494, BIOL 500, BIOL 505, BIOL 509, BIOL 512, BIOL 521 or BIOL 711, BIOL 529 or BIOL 709, BIOL 533, BIOL 540, BIOL 583 or BIOL 783, BIOL 592 or BIOL 792, BIOL 593, BIOL 603, BIOL 610, BIOL 613, BIOL 622, BIOL 640.

Organismal Biology Required Electives, Laboratory, and Seminar. Satisfied by 10 hours of BIOL courses numbered 400 or higher, including at least 2 hrs. of lab credit and 1 hr. of a seminar/topics course (BIOL 419, 420, 499, 701). Courses listed above which have not been used to fulfill the above requirements may be used as electives. No more than 3 hrs. of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement with no more than 2 hours of BIOL 424 being applied towards the laboratory requirement.

- Seminar/Topics course. Satisfied by a minimum of 1 hour of seminar: BIOL 419, BIOL 420, BIOL 499, or BIOL 701.
- Laboratory. Satisfied by a minimum of 2 hours of BIOL laboratory credit, 400 level or higher. No more than 2 hours of BIOL 423/424 allowed toward Lab requirement.
- Organismal Biology Electives. Satisfied by a minimum of 7 hours of BIOL courses numbered 400 or higher. No more than 3 hours of BIOL 423/424 allowed toward elective requirement.

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours
Satisfied by 49 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 41 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

Proposed Requirements for the New Track - BS Biology-Ecology, Evolution, and Organismal Biology:

General Education Requirements

In addition to degree and major requirements, all students must complete the KU Core.

I. General Science Requirements (31-33 hrs)
   BIOL 105 Biology Orientation Seminar (1)
   CHEM 130 (170; 190 honors) General Chemistry I (5)
General Chemistry II (5)
CHEM 135 (175; 195 honors) General Chemistry II (5)
CHEM 310 Fundamentals of Organic Chemistry or
CHEM 330 (380 honors) Organic Chemistry I (3)
BIOL 600 Introductory Biochemistry, Lectures (4)
MATH 115 & MATH 116 Calculus I & II (6) or
MATH 121 Calculus I (5)
PHSX 114 and PHSX 115 College Physics I & II (8) or
PHSX 211/216 & PHSX 212/236 General Physics I & II (9)

**Ecology Evolution & Organismal Biology Requirements** (28 hrs)
BIOL 150 (151 honors) Principles of Molecular & Cellular Biology (4)
BIOL 152 (153 honors) Principles of Organismal Biology (4)
BIOL 350 (360 honors) Principles of Genetics (4)
BIOL 408 Physiology of Organisms (3)
BIOL 412 Evolutionary Biology (3)
BIOL 414 Principles of Ecology (3)
BIOL 428 Introduction to Systematics or
BIOL 413 History and Diversity of Organisms (3)
BIOL 570 Introduction to Biostatistics (3)
BIOL 599 Senior Seminar in EEOB (1) (must be taken in senior year)

**Ecology Evolution & Organismal Biology Electives** (18 hrs)
BIOL courses numbered 400 or higher, including at least 4 hrs of lab credit and 2 hrs of seminar/topics course
(BIOL 419, 420, 499, 701). No more than 5 hrs of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied to the elective requirement, with no more than 2 hrs of BIOL 424 being applied to the laboratory requirement. The Undergraduate Biology Program must approve exceptions to these elective requirements.

**Major Hours**
Satisfied by 46 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 38 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the [Semester/Cumulative GPA Calculator](#).

**Current Requirements for the BS Biology, Cellular, Genetics, and Neurobiology Tracks:**

**Cellular Biology**

**General Science Requirements.** Majors must complete the following 31-33 hours of general science requirements that serve as foundational courses for this major.

- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I Satisfied by CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625)
- Organic Chemistry II. Satisfied by CHEM 335 (formerly CHEM 626) or CHEM 385 (formerly CHEM 630).
- Calculus I. Satisfied by MATH 115 and MATH 116, or MATH 121 or MATH 141.
- Physics I. Satisfied by PHSX 114, by PHSX 211 & PHSX 216, or by PHSX 213.
- Physics II. Satisfied by PHSX 115, by PHSX 212 & PHSX 236, or by PHSX 214.

**General Biology Requirements.** Satisfied by completing 21 hours from courses below. These additional science courses are included in the Cellular Biology major hours and GPA calculations.
• Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
• Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
• Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
• Physiology of Organisms. Satisfied by BIOL 408.
• Evolutionary Biology. Satisfied by BIOL 412.
• Introductory Biochemistry. Satisfied by BIOL 600.

Cellular Biology Course Requirements. Satisfied by completing 19 hours of course work below.

• Cell Structure & Function. Satisfied by BIOL 416 or BIOL 536.
• Biology of Development. Satisfied by BIOL 417.
• Laboratory in Cell Biology. Satisfied by BIOL 426.
• Senior Seminar in Cell Biology. Satisfied by BIOL 599. Must be taken in senior year.

Cell Biology Electives. Satisfied by completing 9 hours from the following: BIOL 400 or BIOL 401, BIOL 402, BIOL 435, BIOL 503, BIOL 504, BIOL 512, BIOL 513, BIOL 570, BIOL 646, BIOL 673, BIOL 688, BIOL 719, BIOL 752, BIOL 755, BIOL 756

Seminar/Laboratory Requirements. At least 2 hours of laboratory credit (BIOL laboratories numbered 400 or higher) and 2 hours of a seminar/topics course (BIOL 419, 420, 499, 701).

• Seminar. Satisfied by BIOL 419, BIOL 420, BIOL 499, or BIOL 701
• Laboratory. Satisfied by completing 2 hours of lab course work.

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours
Satisfied by 44 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 36 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

Genetics

General Science Requirements. Majors must complete the following 28-30 hours of general science requirements that serve as foundational courses for this major.

*Students planning to enter graduate school (particularly those interested in applying molecular techniques) or medical school are advised to also enroll in CHEM 335 (formerly CHEM 626) and CHEM 336 (formerly CHEM 627).

• Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
• Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
• Organic Chemistry I. Satisfied by CHEM 310 (formerly CHEM 622), CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
• Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
• Calculus I. Satisfied by MATH 115 and MATH 116, or MATH 121 or MATH 141.
• Physics I. Satisfied by PHSX 114, by PHSX 211 & PHSX 216, or by PHSX 213.
• Physics II. Satisfied by PHSX 115, by PHSX 212 & PHSX 236, or by PHSX 214.
**General Biology Requirements.** Satisfied by completing 24 hours from courses below. These additional science courses are included in the Genetics major hours and GPA calculations.

- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Evolutionary Biology. Satisfied by BIOL 412.
- Cell Structure and Function. Satisfied by BIOL 416 or BIOL 536.
- Introduction to Biostatistics. Satisfied by BIOL 570.
- Introductory Biochemistry. Satisfied by BIOL 600.
- Choose 1 Course. Satisfied by BIOL 400 or BIOL 401, BIOL 408, or BIOL 417.

**Genetics Course Requirements.** Satisfied by completing 15 hours of the following:

- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Laboratory in Genetics. Satisfied by BIOL 405.
- Gene Expression. Satisfied by BIOL 672.
- Senior Seminar in Genetics. Satisfied by BIOL 599. Must be taken in senior year.
- Choose 2 courses. Satisfied by choosing 2 from the following: BIOL 512, BIOL 518, BIOL 595, BIOL 655, BIOL 688, BIOL 743, BIOL 747, BIOL 753, BIOL 755, ANTH 340, ANTH 442, ANTH 652.

**Genetics Required Electives, Laboratory, and Seminar.** Satisfied by completing 8 hours of BIOL courses numbered 400 or higher, including at least 3 hrs. of lab credit and 2 hrs. of a seminar/topics course (BIOL 419, 420, 499, 701). Courses listed above which have not been used to fulfill the above requirements may be used as electives. No more than 3 hrs. of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement with no more than 2 hours of BIOL 424 being applied towards the laboratory requirement.

- Seminar. Satisfied by a minimum of 2 hours of seminar or topics course (BIOL 419, BIOL 420, BIOL 499, or BIOL 701).
- Laboratory. Satisfied by a minimum of 3 hours of BIOL laboratory credit, 400 level or higher.
- Electives. Satisfied by choosing 3 additional hours in BIOL courses numbered 400 or higher.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 47 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 39 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the [Semester/Cumulative GPA Calculator](#). 

**Neurobiology**

**General Science Requirements.** Majors must complete the following 31-33 hours of general science requirements that serve as foundational courses for this major.

- Chemistry I. Satisfied by CHEM 130 (formerly CHEM 184) or CHEM 190 (formerly CHEM 185).
- Chemistry II. Satisfied by CHEM 135 (formerly CHEM 188) or CHEM 195 (formerly CHEM 189).
- Organic Chemistry I. Satisfied by CHEM 330 (formerly CHEM 624) or CHEM 380 (formerly CHEM 628).
- Organic Chemistry I Laboratory. Satisfied by CHEM 331 (formerly CHEM 625).
- Organic Chemistry II. Satisfied by CHEM 335 (formerly CHEM 626) or CHEM 385 (formerly CHEM 630).
- Calculus I. Satisfied by MATH 115 and MATH 116, or MATH 121 or MATH 141.
- Physics I. Satisfied by PHSX 114, by PHSX 211 & PHSX 216, or by PHSX 213.
- Physics II. Satisfied by PHSX 115, by PHSX 212 & PHSX 236, or by PHSX 214.

**General Biology Requirements.** Satisfied by completing 21-23 hours from courses below. These additional science courses are included in the Neurobiology major hours and GPA calculations.

- Principles of Molecular & Cellular Biology. Satisfied by BIOL 150 or BIOL 151.
- Principles of Organismal Biology. Satisfied by BIOL 152 or BIOL 153.
- Principles of Genetics. Satisfied by BIOL 350 or BIOL 360.
- Evolutionary Biology. Satisfied by BIOL 412.
- Diversity of Organisms or Principles of Ecology. Satisfied by BIOL 413 or BIOL 414.
- Biochemistry. Satisfied by BIOL 600 or BIOL 636 & BIOL 638.

**Neurobiology Course Requirements.** Satisfied by completing 15-16 hours of course work below.

- Cell Structure and Function. Satisfied by BIOL 416 or BIOL 536.
- Biology Laboratory. Satisfied by BIOL 405, BIOL 426, or BIOL 427.
- Introduction to Neurobiology. Satisfied by BIOL 435.
- Senior Seminar in Neurobiology. Satisfied by BIOL 599. Must be taken in senior year.

**Neurobiology Required Electives.** Satisfied by completing 12 hours of course work below.

- Choose 3 courses. Satisfied by choosing 3 courses (9 hours) from the following: BIOL 454, BIOL 570, BIOL 646, BIOL 647, BIOL 652, BIOL 655, BIOL 672, BIOL 673, BIOL 676, BIOL 755, BIOL 775, or BIOL 777.

**Additional Biology Electives.** Satisfied by choosing any BIOL course at the 400-level or above. No more than 3 hours of BIOL 423 Non-Lab Independent Study and/or BIOL 424 Independent Study (combined) can be applied towards the elective requirement.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 48 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 40 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

**Proposed Requirements for the New Track - BS Biology-Molecular, Cellular, and Developmental Biology**

**General Education Requirements**

In addition to degree and major requirements, all students must complete the KU Core.

**II. General Science Requirements** (35-37 hrs)
- BIOL 105 Biology Orientation Seminar (1)
- CHEM 130 (170; 190 honors) General Chemistry I (5)
CHEM 135 (175; 195 honors) General Chemistry II (5)
CHEM 330 (380 honors) Organic Chemistry I (3)
CHEM 331 Organic Chemistry I Laboratory (2)
CHEM 335 (385 honors) Organic Chemistry II (3)
MATH 121 Calculus I (5) or
MATH 115 & MATH 116 Calculus I & II (6)
BIOL 570 Intro to Biostatistics or
MATH 365 Elementary Statistics or
PSYC 210 Statistics Psychological Research (3)
PHSX 114 and PHSX 115 College Physics I & II (8) or
PHSX 211/216 & PHSX 212/236 General Physics I & II (9)

Molecular Cellular & Developmental Biology Requirements (34-35 hrs)
BIOL 150 (151 honors) Principles of Molecular & Cellular Biology (4)
BIOL 152 (153 honors) Principles of Organismal Biology (4)
BIOL 350 (360 honors) Principles of Genetics (4)
BIOL 412 Evolutionary Biology (3)
BIOL 405 Laboratory in Genetic (2) or
BIOL 426 Laboratory in Cell Biology (3) or BIOL 427 Developmental Biology Laboratory (2)
BIOL 416 (536 honors) Cell Structure and Function (3)
BIOL 417 Biology of Development (3)
BIOL 435 Introduction to Neurobiology (3)
BIOL 599 Senior Seminar in MCDB (1) (must be taken in senior year)
BIOL 600 Introductory Biochemistry Lectures (4)
BIOL 650 Advanced Neurobiology or
BIOL 672 Gene Expression or
BIOL 688 Molecular Biology of Cancer (3)

Molecular Cellular & Developmental Biology Electives (12 hrs)
Any Biology courses numbered 400 or higher; with no more than 3 hrs BIOL 423 Non-Lab Independent Study and/or
BIOL 424 Independent Study (combined) may be used to fulfill the elective requirement.

Major Hours
Satisfied by 46-47 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 40-41 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all
junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA
Calculator.

Rationale
1) We are proposing that all of the Bachelor of Science biology degrees (Biochemistry, Biology, Microbiology, Molecular
Biosciences) adopt the KU Core curriculum. The current CLAS general education requirements will be deleted from all B.S.
biology degrees. Considering the challenging nature of implementing the KU Core and the lack of meaningful communication
regarding this process as it relates to the B.S. degrees in CLAS, we are requesting that serious consideration be given for
allowing this change to take affect Fall 2013.

There are two rationales for making this change. First, there are redundancies between the KU Core requirements and
the College General Education requirements that make this change relatively straightforward. Requiring students to
satisfy the KU Core will thus be less confusing compared to adding another layer of requirements on top of the KU
Core that was added to existing B.S. degrees in the biological sciences starting Fall 2013. Second, incorporating the
KU Core into the B.S. biology degrees will better align the non-science requirements of the B.S. degrees with the B.A.
degrees in the biological sciences.
2) We are proposing to eliminate five B.S. Biology subplans (B.S. biology deletions.docx) and replace them with two subplans (EEOB proposal.docx and MCDB proposal.docx). The B.S. Biology/Teaching Biology subplan will be retained.

The new B.S. Biology/EEOB concentration combines the requirements of Ecology & Evolutionary Biology and Organismal Biology concentrations while expanding the educational opportunities for students, simplifies options available to students while offering the breath of both original concentrations, and reducing the necessity for students to choose between two related options. The new EEOB curriculum aligns with other such programs nationally. Cell biology, genetics, and neurobiology concentrations contain significant overlapping requirements. The new B.S. Biology/MCDB simplifies those requirements into one concentration, removes confusion when students are deciding on a course of study, better addressed the undergraduate educational needs for students entering into this area of the biological sciences, aligns with the graduate MCDB program, and is recognized nationally as an established course of study in the molecular biosciences.

3) Forms for changes to all biology degrees are attached to reflect the addition of BIOL 105 to all degree requirements and a requirement for admission to all biology majors and the increase in credit hours for BIOL 350 and BIOL 360 to four credits. Additional changes to the B.S. Molecular Biosciences degree at Edwards are also being proposed and are included in the attached form (MB proposal.docx).

BIOL 105 is a one credit on-line course modeled after PSYC 102, Orientation Seminar in Psychology, and will serve to introduce prospective biology majors to information about majoring in the biological sciences (various degree options, requirements, etc.), academic advising, research opportunities, careers in the biological sciences, and preparation for such careers. Completion of BIOL 105, a S/U course, will better inform students of the opportunities within the biological sciences. The essential information contained within BIOL 105 will enhance students’ ability to successfully complete a biology degree and, therefore, the completion of BIOL 105 will be required as part of the admissions requirements for all biology majors.

The additional changes will strengthen the core curriculum in the B.S. Molecular Biosciences degree while offering greater flexibility in satisfying the elective requirements.

b. Change to Existing Theatre Design – BFA

**CURRENT REQUIREMENTS**

**B.F.A. in Theatre Design Degree Requirements**

The program leading to the B.F.A. degree in theatre design is offered cooperatively by the School of the Arts and the Department of Theatre. A minimum of 120 hours is required, including 75 hours of major program course work.

**Foundations: Art and Design** (12 hours)

- ART 101 Drawing I (3)
- ART 102 Drawing II (3)
- ART 103 Art Concepts and Practice (3)
- ART 104 Art Principles and Practice (3)

**Core Theatre Courses** (30 hours)

- THR 100 Introduction to the Theatre (3) or THR 106 Acting I (3)
- THR 215 Approaching Design (3)
- THR 216 Scenic Production (2)
- THR 220 Costume Production (2)
- THR 224 Lighting Production (2)
- THR 308 Script Analysis (3)
- THR 508 Fundamentals of Directing (3)
- THR 520 History of Period Style I (3)
- THR 521 History of Period Style II (3)
THR 525 History of Theatre I (3)
THR 526 History of Theatre II (3)

**Theatre Design Concentration.** (33 hours)
- THR 116 Scenographic Techniques (3)
- THR 316 Beginning Scene Design (3)
- THR 320 Beginning Costume Design (3)
- THR 324 Beginning Lighting Design (3)
- Theatre design electives from an approved list (9)
- History of art (HA 150 and HA 151) (6)
- History of art or architecture electives (6)

**College Courses.** (30 hours)
- ENGL 101, ENGL 102, and ENGL 203, ENGL 209, ENGL 210, ENGL 211, or ENGL 360 (9)
- Humanities courses (6)
- Social sciences courses (6)
- Natural sciences or mathematics courses (6)
- 1 additional course chosen from humanities, social sciences, or natural sciences (3)

**General Electives.**
Additional credit hours of general electives are needed to meet the minimum total hours required for graduation.

**Major Hours & Major GPA**

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

**Major Hours**
Satisfied by 33 hours of major courses.

**Major Hours in Residence**
Satisfied by a minimum of 15 hours of KU resident credit in the major.

**Major Junior/Senior Hours**
Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

**Major Junior/Senior Graduation GPA**
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.

**PROPOSED REQUIREMENTS**

**B.F.A. in Theatre Design Degree Requirements**

The program leading to the B.F.A. degree in theatre design is offered cooperatively by the School of the Arts and the Department of Theatre. It requires 6 hours of foundational coursework, 63 additional hours in the major, and completion of the KU Core, as well as additional general electives, for a total of 120 hours. A minimum of 120 hours is required, including 75 hours of major program course work.

**Foundations: Art and Design** (42 6 hours)
- ART 101 Drawing I (3)
- ART 102 Drawing II (3)
- ART 103 Art Concepts and Practice (3)
- ART 104 Art Principles and Practice (3)
Core Theatre Courses (30 hours)
- THR 100 Introduction to the Theatre (3) or THR 106 Acting I (3)
- THR 215 Approaching Design (3)
- THR 216 Scenic Production (2)
- THR 220 Costume Production (2)
- THR 224 Lighting Production (2)
- THR 308 Script Analysis (3)
- THR 508 Fundamentals of Directing (3)
- THR 520 History of Period Style I (3)
- THR 521 History of Period Style II (3)
- THR 525 History of Theatre I (3)
- THR 526 History of Theatre II (3)

Theatre Design Concentration. (33 hours)
- THR 116 Scenographic Techniques (3)
- THR 316 Beginning Scene Design (3)
- THR 320 Beginning Costume Design (3)
- THR 324 Beginning Lighting Design (3)
- Theatre design electives from an approved list (9)
- History of art (HA 150 and HA 151) (6)
- History of art or architecture electives (6)

General Education Requirements

Completion of the KU Core

College Courses. (30 hours)
- ENGL 101, ENGL 102, and ENGL 203, ENGL 209, ENGL 210, ENGL 211, or ENGL 360 (9)
- Humanities courses (6)
- Social sciences courses (6)
- Natural sciences or mathematics courses (6)
- 1 additional course chosen from humanities, social sciences, or natural sciences (3)

General Electives.
Additional credit hours of general electives are needed to meet the minimum total hours required for graduation.

Major Hours & Major GPA

While completing all required courses, majors must also meet each of the following hour and grade-point average minimum standards:

Major Hours
Satisfied by 33-69 hours of major courses.

Major Hours in Residence
Satisfied by a minimum of 15 hours of KU resident credit in the major.

Major Junior/Senior Hours
Satisfied by a minimum of 12 hours from junior/senior courses (300+) in the major.

Major Junior/Senior Graduation GPA
Satisfied by a minimum of a 2.0 KU GPA in junior/senior courses (300+) in the major. GPA calculations include all junior/senior courses in the field of study including F’s and repeated courses. See the Semester/Cumulative GPA Calculator.
c. PROPOSED NEW MINOR IN MIDDLE EAST STUDIES

MINOR REQUIREMENTS:
Global and International Studies - Middle East Studies Minor
18 credit hours, 12 of which must be taken at the 300-level or above.

Core Courses (6 credit hours): These courses provide an overview of the culture, society and religion of the region.
- REL 350: Islam (3/H/NW/W)
- Either POLS 661: Politics of the Middle East (3/NW/S/W) or HIST 328: The Modern Middle East (3/H/NW)

Electives (12 credit hours) These courses allow students to deepen their knowledge of the countries and issues in the region. They can choose either a humanities or a social sciences emphasis, as outlined below but must take at least one three-credit-hour course from the other emphasis.

Regularly offered and upcoming elective options are:

Social science emphasis: (minimum 3 credit hours)
- ANTH 303: Peoples & Cultures of North Africa & the Middle East
- ANTH 372: Religion, Power, & Sexuality in Arab Societies
- GIST 201: Israeli-Palestinian Conflict
- GIST 624: Social Movements in the Middle East
- GIST 424: Nationalism(s) in Turkey
- GIST 530: Politics and Society in the Contemporary Persianate World
- POLS 661: Politics of the Middle East
- POLS 663: Protest and Revolution
- POLS 667: Islam and Politics (Spring 2014)
- POLS 670: United States Foreign Policy
- SOC 532: Sociology of the Middle East

Humanities emphasis: (minimum 3 credit hours)
- AAAS 102: Arabic and Islamic Studies
- AAAS 415: Women and Islam
- AAAS 433: Islamic Literature
- AAAS 543: Language & Culture in Arabic-Speaking Communities
- AAAS 545: Unveiling the Veil
- GIST 535: Literature and Society in the Contemporary Middle East
- GIST 503: From Harem to the Streets: Gender in the Middle East (Spring 2014)
- HIST 327: The Premodern Middle East
- HIST 328: The Modern Middle East
- HIST 480: Traveler’s Tales of the Middle East (Fall 2013)
- HIST 481: From Harem to the Streets: Gender in the Middle East
- HIST 510: Topics In: Popular Revolutions in the Middle East
- HIST 570: The Middle East after World War II
- REL 311 Hebrew Scriptures
- REL 355: Muslim Societies
- REL 447: Islamic Law in the Digital Age
- REL 551: Shari’a, Democracy and Society
- REL 557: Modern Islamic Reform Movements

Language Option: A student pursuing a Middle East Studies minor may also use one 300-level or above Arabic, Farsi, Turkish, or Hebrew course as an elective that counts toward three credit hours within the “Humanities emphasis.”

Rationale:
The minor will provide in-depth knowledge of the Middle East that will complement diverse majors in the social sciences and the professions—political science, business, journalism, etc. The combination of a social science or professional major with a Middle East Studies minor will prepare students for careers in international business, government, and non-governmental organizations.
The new KU Core not only requires students to expand their cultural understanding and global awareness, but also gives them time to complete a minor. The requirement will lead students to one of our many excellent courses on the Middle East, and these courses are likely to inspire many to select the Middle East as a minor field.

- A minor in Middle East Studies would pair well with majors in Business, Journalism, Political Science, Economics, and many other fields, giving KU graduates an advantage in international business and international relations focused on this part of the world.

- Universities with Middle East Studies programs tend to have high academic reputations. Developing a Middle East Studies program would put us in good academic company, and enhance our ability to recruit high-ability students.

The program will not only serve undergraduates looking for an international minor to complement their professional or social science training, but will also provide a foundation for the development of an undergraduate major in Middle East Studies.