

COLLEGE OF ARTS AND SCIENCES

COURSE AND CURRICULUM CHANGES

To be considered at the College Faculty Meeting

April 3, 2014
Eisenhower 015

4:00 p.m.

Undergraduate/Graduate
Non-Expedited

Contact Person: Jeffrey Smith
532-6900
e-mail: solt@ksu.edu

Units outside the College of Arts and Sciences affected:
Human Ecology

Please provide the sponsors of a proposal change with any information regarding fiscal or programmatic impact on your department, program or students

NON-EXPEDITED COURSE PROPOSALS

Courses Numbered 000-599

Art

ADD: ART 404 – Minor in Art-Capstone. (0) I, II. Students prepare an essay explaining their program of study in their particular minor, reflecting on how their classes cohered and met the core objectives within Art. Taken in conjunction with the last three credit hours in the 18-hour minor in Art. Pr.: 15 credits of Art that fulfills the ART minor. Co-Req: Final 3 credits of Art for the Art Minor.

RATIONALE: This course is needed for the Art Minor as a vehicle for students to hand in their reflection paper on the minor. The students will sign up for this course in conjunction with their last 3 credits in the minor.

IMPACT: None

EFFECTIVE DATE: Fall 2014

Biology

FROM: BIOL 340 – Structure and Function of the Human Body. (8) I, II. Anatomy and physiology of the organ systems of the human body. Laboratory includes physiology experiments, study of anatomy from human cadavers, dissection experience, x-rays, and slide work. Note: Five hours lecture and two three-hour lab sessions a week. Pr.: ~~Cumulative GPA of 2.75 or better; BIOL 198 taken at K-State (with a B grade or better) or transferred introductory biology credit plus at least one of the following introductory natural sciences courses, taken at K-State, with a B grade or better: CHM 110 (with CHM 111), CHM 210, PHYS 113, or any K-State biology course that has BIOL 198 as a prerequisite.~~

TO: BIOL 340 – Structure and Function of the Human Body. (8) I, II. Anatomy and physiology of the organ systems of the human body. Laboratory includes physiology experiments, study of anatomy from human cadavers, dissection experience, x-rays, and slide work. Note: Five hours lecture and two three-hour lab sessions a week. Pr.: Cumulative GPA of 3.0; CHM 110/CHM111, CHM 210, or CHM 230 (or transfer equivalent); BIOL 198 taken at K-State (with a B or better) or transferred biology class plus at least one of the following introductory courses taken at K-State, with a B grade or better: CHM 110/111, CHM 210, or 230; PHYS 113, PHYS 213, or any K-State biology course that has BIOL 198 as a prerequisite. Sophomore standing.

RATIONALE: These changes in requirements will give the students a better understanding of the minimum background information needed and the level of understanding required to do well in this class.

IMPACT: Human Ecology

EFFECTIVE DATE: Spring 2015

Chemistry

ADD: CHM 316 – Environmental Science: A Chemistry Perspective Laboratory. (1) I. A laboratory course to supplement the material of CHM 315. Three hours lab per week. CoR: CHM 315. K-STATE 8: Natural and Physical Sciences.

K-State 8 RATIONALE: The students will make observations and hand on quantitative measurements of chemical and physical phenomena relevant to environmental science.

RATIONALE: A laboratory class supplementing the material covered in class in CHM 315 – Environmental Science: a Chemistry Perspective would provide students with hands on experience in the chemical measurements discussed in the course. It will enhance learning through active experimentation, allowing for direct observation of many chemical and physical phenomena covered in the course.

IMPACT: None

EFFECTIVE DATE: Fall 2014

History

ADD: HIST 516 – The Modern Middle East. (3) I, II, S. History of Islam and the broader Middle East including North Africa since 1500. Topics covered include the rise of early modern empires, closer contact with Western Europe and East Asia, the impact of Western imperialism, state-sponsored defensive reforms, the development of religious modernism, social movements and constitutionalism, the emergence of nationalism, oil-dependent economies and rentier states, the origins of religious activism, and the contemporary struggle for civil rights. Pr.: Sophomore standing recommended. K-State 8: Historical Perspectives; Global Issues and Perspectives.

K-State 8 RATIONALE: The course provides students with a historical perspective on a region of global importance.

RATIONALE: This course is intended to serve as a critical introduction to the History of Islam, the Middle East and North Africa since 1500. It permits more thorough and detailed exploration of the history of this region in the modern period than is possible in HIST 112 (World History from 1450). The course will also fill a serious gap in the History Department's existing upper level course offerings. There is currently no history course described in the catalog with the Middle East, North Africa or Islam as its primary focus.

IMPACT: None

EFFECTIVE DATE: Fall 2014

ADD: HIST 517 – Iranian People Since Antiquity. (3) I, II, S. Critical introduction to the history, geography, society, politics, economy and culture of Iran (historical Persia) from prehistoric times to the present day. Pr.: Sophomore standing recommended. K-State 8: Historical Perspectives; Global Issues and Perspectives.

K-State 8 RATIONALE: The course provides students with a historical perspective on a region of global importance.

RATIONALE: This course is intended to serve as a critical introduction to the history of the Iranian plateau from antiquity to the modern period. It permits more thorough and detailed exploration of the history of this region in West Asia than is possible in the survey-level World History class. The course will fill a gap in the department's existing upper-level course offerings on this important region.

IMPACT: None

EFFECTIVE DATE: Fall 2014

ADD: HIST 584 – France and its Empire, 1815-Present. (3) I, II, S. Emphasis on the development of French democracy and France's place in the world. Covers the world wars and French imperialism as well as social and gender change in French history. Pr.: Sophomore standing recommended. K-State 8: Historical Perspectives; Global Issues and Perspectives.

K-State 8 RATIONALE: The course provides a historical perspective on a region of global importance.

RATIONALE: This class restores coverage of modern French history to the department's offerings, complementing and completing our sequence of courses in French history.

IMPACT: No impact, though may be of interest to French majors and minors who may be interested in modern French history and culture.

EFFECTIVE DATE: Fall 2014

Music, Theatre, and Dance

ADD: MUSIC 281 – West African Drumming and Percussion. (2) I, II. Explores several styles of drumming and African Xylophone playing from the Ga, Dagara, and Ewe traditions from Ghana and other parts of West Africa. Instruction includes but is not limited to playing techniques and musical structure for drumming and Xylophone playing as associated with common recreational dances. No prior experience is necessary. All musical instruments are supplied for class. Students may use their own instruments. K-State 8: Aesthetic Experience and Interpretive Understanding.

RATIONALE: To enhance the music environment and the university experience by diversifying the curriculum with world music styles, thus offering additional world music experiences otherwise not available to this campus community.

IMPACT: None

EFFECTIVE DATE: Fall 2014

ADD: THTRE 275 – Script Analysis. (3) I, II. Examination of the play script to develop a common vocabulary and method for analyzing a script. K-State 8: Aesthetic Interpretation.

K-State 8 RATIONALE: While managers in the theatre are involved in business practices, they must also be very aware and sensitive to the artistic product they are promoting and facilitating, as well as ways to translate the artists' message and communicate it to the public.

RATIONALE: Theatre students need to know how to read a script, how to take it apart into its separate components, and then understand how all the parts relate back to each other. While they each have specific individual aspects of a script they focus on as an actor, director, designer, or manager, this course will teach students a method for approaching script analysis so everyone in the department is speaking the same "language" as well as understanding of how each area of the theatre uses it in different ways. Please note that Script Analysis is a different

process entirely than Dramatic Structure which is about genres of plays, styles or dramatic theories.

IMPACT: None

EFFECTIVE DATE: Fall 2014

ADD: THTRE 366 – Fundamentals of Theatre Management. (3) I, II. Non-profit theatre management, including budgeting, marketing, box office, and development practices, plus examination of relevant history. K-State 8: Aesthetic Interpretation; Empirical and Quantitative Reasoning.

K-State 8 RATIONALE: While managers in the theatre are involved in business practices, they must also be very aware and sensitive to the artistic product they are promoting and facilitating, as well as ways to translate the artist's message and communicate it to the public.

RATIONALE: The exploration of the areas of management in the theatre: marketing, box office, front of the house, and business management. Includes examination of relevant history and technology in these areas. This area at the basic introductory level has not been available to our majors and faculty felt that it needs to be added to our core requirements.

IMPACT: None

EFFECTIVE DATE: Fall 2014

ADD: THTRE 599 – Senior Seminar. (3) I, II. Students in their final year of study will develop skills for professional presentation and create a portfolio or audition based on the standards developed for the URTA National Unified Auditions/Interviews.

RATIONALE: Theatre students in their final year of study need to prepare for entry into the theatre profession. Students will create a culminating presentation dependent upon their concentration of study of either a portfolio or audition based on the standards developed for the URTA National Unified Auditions/Interviews.

IMPACT: None

EFFECTIVE DATE: Fall 2014

Philosophy

FROM: PHILO 125 – Introduction to Philosophy of Science. (3) I. II. Examines the nature of science and how it differs from pseudo-sciences such as astrology, and raises questions about the nature of reality and social value of science. K-State 8: Empirical and Quantitative Reasoning.

TO: PHILO 125 – Introduction to Philosophy of Science. (3) I. II. Examines the nature of science and how it differs from pseudo-sciences such as astrology, and raises questions about the nature of reality and social value of science. K-State 8: Empirical and Quantitative Reasoning; Ethical Reasoning and Responsibility.

RATIONALE: An “E--Ethical Reasoning and Responsibility” K-State 8 tag should be added for this course because a significant portion of this course is dedicated to exploring ethical issues in the pursuit and application of science. For example, this course explores such questions as whether it is ethical to pursue certain scientific questions, what the ethical obligations of scientists are regarding gender in science, and the application of science in the public sphere. A major goal of the course is to provide students an understanding of the roles of values in scientific inquiry and testing. For example, this course typically includes some discussion of type I and type II errors and explores how different values and ethical considerations for prioritizing the avoidance of one type of error over another would justify different choices of experimental design and test. This course typically also discusses the values inherent in the choice of statistical inference methods, e.g. the choice between maximal likelihood and Bayesian methods often involves value commitments embedded in the purpose of the model (prediction, prediction under intervention, or convergence to the truth) and in the assumptions one is entitled to make in setting priors. Hence, the course concerns moral and other normative questions about scientific practice, about the social practices of scientists, and about the products of scientific work.

IMPACT: None

EFFECTIVE DATE: Fall 2014

Sociology, Anthropology, and Social Work

ADD: ANTH 301 – Initiation to Anthropology. (3) I. Identify and apply the core elements of the anthropological perspective while learning professional and academic writing and presentation skills. Pr.: Declared Anthropology Major/Minor or Instructor Permission. K-State 8: Social Sciences.

RATIONALE: After carefully assessing our program and surveying our current majors, minors, and alums, we concluded that our program needs improvement

in 3 areas: 1. Career advising and preparation, 2. Research opportunities for undergraduates, and 3. A stronger sense of community among majors and minors. We designed ANTH 301 as a required course as students enter the major/minor to immediately ground them in the anthropological perspective and to connect them with students, alumni and faculty who can offer career guidance and opportunities.

K-STATE 8 RATIONALE: Students will learn and apply core elements of the anthropological perspective, including qualitative ethnographic field methods.

IMPACT: None

EFFECTIVE DATE: Spring 2015

ADD: ANTH 333 – Plagues: The Co-Evolutionary History of Humans and Pathogens. (3) I, even years. ANTH 333 (“Plagues: Humans & Pathogens”) will explore the proximate (mechanistic/physiological) and ultimate (evolutionary) causes of disease from a biocultural and historical perspective. K-STATE 8: Natural and Physical Sciences; Historical Perspectives.

RATIONALE: To date, there is no class offered at Kansas State University that explores the coevolution of humans and disease. This is a relevant class as it teaches evolutionary principles and disease from an anthropological and historical perspective. As a 300-level class, ANTH 333 will provide students with the knowledge and the critical capacity to understand the interactions between humans and pathogens in the past as well as today.

K-State 8 RATIONALE: Plagues will carefully review the principles of evolutionary biology as they apply to the co-evolution of humans and pathogens. Evolutionary theory is central to the understanding of the evolution of life, and natural systems. Thus, this class fulfills the natural and physical sciences K-State-8 area description. In addition, the class reviews the coevolution of humans and pathogens within a historical context. As such, the class allows students to study and understand how past events have affect the course of this co-evolution. Historical knowledge of the conditions that have led to changes in disease patterns among human populations will allow the students to contextualize past and present epidemics.

IMPACT: Biology 330 (Public Health Biology) covers the “Fundamental concepts of human infectious and organic diseases with emphasis on disease etiology and mechanisms, collection of epidemiological data, and the influences upon, and consequences of, governmental public health policy”. However, BIOL 330 focuses on immediate (non-evolutionary) causes of diseases and public health policy. In contrast with that class, Plagues emphasizes the evolutionary causes of disease, and the relation between humans and pathogens from an

evolutionary, historic, and anthropological perspective. Plagues does not review public health, or public health policy which is at the core of BIOL 330.

EFFECTIVE DATE: Fall 2014

NON-EXPEDITED COURSE PROPOSALS

Courses Numbered 600-999

Mathematics

Add: MATH 725 – The Mathematics of Data and Networks I. (3) I. Develops the mathematical tools necessary for studying and handling large data-sets and networks. Includes matrix, graph, and probability theory, dimensionality reduction, clustering, maximum likelihood, Bayesian networks, sparsification, modularity, information theory, hidden Markov chains, branching processes, electrical networks, internet mathematics, random walks, random graphs, random matrices, and search algorithms. Pr.: (recommended) Math 551, MATH 222.

RATIONALE: This class was offered in the past in the Mathematics Department as a Topics course and has a record of attracting students from other departments. Our intention is to formalize it so that it can be chosen as an elective in the context of a Master's level Certificate of Data Analytics, currently under development at the University.

Raw data might be collected in the real world or might result from computer simulations. Hence, it may sometimes come already interconnected into a network structure. Alternatively, a natural graph structure can be gainfully superimposed to it. Many mathematical tools have been developed to study and understand such structures. Our goal is to aid basic understanding of how these tools work. These topics will appeal to students in Mathematics as well as students in applied sciences such as Engineering, Biology, Ecology, and Political Science.

IMPACT: Statistics

EFFECTIVE DATE: Fall 2014

ADD: MATH 726 – The Mathematics of Data and Networks II. (3) II. Continuation of Math 725. Develops the mathematical tools necessary for studying and handling large data-sets and networks. Includes matrix, graph, and probability theory, dimensionality reduction, clustering, maximum likelihood, Bayesian networks, sparsification, modularity, information theory, hidden Markov chains, branching processes, electrical networks, internet mathematics, random walks, random graphs, random matrices, and search algorithms. Pr.: (recommended) MATH 551, MATH 222.

RATIONALE: This class was offered in the past in the Mathematics Department as a Topics course and has a record of attracting students from other

departments. Our intention is to formalize it so that it can be chosen as an elective in the context of a Master's level Certificate of Data Analytics, currently under development at the University.

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IMPACT: Statistics

EFFECTIVE DATE: Fall 2014

Philosophy

ADD: PHILO 610 – Special Topics in Logic. (3) On demand. Examination of one or more advanced topics in mathematical or philosophical logic, such as: modal, temporal, and epistemic logics; counterfactuals; intuitionistic and other sub-classical logics; higher-order and other super-classical logics; formal semantics of natural language; or theories of truth. Pr.: PHILO 110 or PHILO 320, or consent of instructor.

RATIONALE: PHILO 610 is a new course, covering various topics in logic not normally covered in our extant logic sequence, but useful for students going on to graduate school, as for example, Modal Logic and Deontic Logic. As topics covered will depend on the particular students enrolled in any given semester, we need a new vehicle in which to provide this variable content.

IMPACT: None

EFFECTIVE DATE: Fall 2014

CURRICULUM CHANGES

Undergraduate (Non-Expedited)

Art

ART Minor

ADD:

Minor in Art – 18 credits

Requirements

Art History – 3 credits

Choose ART 195 (Survey of Art History I)

Or

ART 196 (Survey of Art History II)

ART 404 – Minor in Art – 0 credits

Students must enroll in ART 404 when taking their final 3 credits for the minor.

Foundation courses – 3 credits

Choose at least one course from this list:

ART 102 Ceramics for Non-Majors

ART 103 Jewelry and Design Processes for Non-Majors

ART 180 2D Design

ART 190 Drawing I

ART 200 3D Design

ART Electives – 6 credits

Any Art or Art History classes (choose those that are the pre-requisites for the 500/600-level classes that you wish to take to complete the minor).

Upper Level Studio Classes – 6 credits

Take 6 credits at 500 level or above of Studio Art credits (please note that these classes have multiple pre-requisites).

RATIONALE: As stated in the NASAD handbook, “the minors option provides tremendous opportunities to develop art knowledge and skills at a basic collegiate level among large numbers of educated citizens”. We are proposing an Art Minor that would be 18 credits which would include at least 3 credits of Art History. The bulk of the courses will be studio credits where students not only produce work, but learn to analyze theirs and others’ works of art through regular critique sessions. Our minor is constructed in such a way as to allow for multiple

outcomes. For instance, a student could decide to take all their studio courses in one area to gain a proficiency in that area or they could take 9 credits of Foundations studio classes with 6 credits of upper level classes in one or two areas, thus giving them a comprehensive overview of the Visual Arts. We feel that both outcomes are valid choices and that the flexibility of the minor will allow students to construct the type of minor that best combines with their major course of study and with their long term goals.

Each student will be required to write a two to five page paper reflecting on the courses they chose to complete for the minor, what this unique combination of courses contributed to their overall education and address the three questions below.

- 1). How have you broadened your understanding and awareness of art?
- 2). Describe how you have gained either a good level of competency in a particular area of Art, OR gained a “comprehensive overview of the discipline”?
- 3). Show how you have learned to critically engage art using analysis and critique.

This paper will be used in our assessment of the program and to be awarded a minor, students in their last class for the minor will be required to complete this paper as part of their course work for ART 405, a new no credit course that will be used to keep track of the minors. There will also be a Department Steering committee on The Minor in Art which will assess the minor based on these papers.

Our accrediting organization, “NASAD, encourages art and design programs in higher education to offer minors in art/design for undergraduate students”. And they note that this “may be especially appropriate for students with substantial interest in art/design, but who intend to pursue careers in other fields.

We continually entertain inquiries from students from as diverse fields and colleges as Journalism, Business and Mechanical Engineering as to whether or not we have an Art Minor. And Architectural Engineers, Apparel/Textiles and Interior Designers who already take some of our courses as part of their majors, may also decide to add a Minor in Art were it available. NASAD also mentions that “The minor in art/design is strongly recommended for individuals preparing to be general elementary school teachers, or liberal arts and sciences teachers at the junior high or high school level”.

Since our mission at K-State is to offer the public a quality education, the addition of a minor would meet the goals of fulfilling a need where there is already high demand. Students who have more than one area of expertise, who are more

multi-disciplinary, are better prepared to meet the various needs of future employers. And the ability to think creatively and to innovate is a highly prized asset to any organization. Although the Art Major has one of the highest numbers of majors in the College of Arts and Sciences, we believe that adding the minor will help us to serve an even larger percentage of the K-State student body without causing undue stress on our resources. We need to protect the areas that do not have resources to be able to handle this demand, so upper level classes in Graphic Design will not be available for students doing the Art Minor. We are only including classes in disciplines that already have spaces available at the upper level. And of course, art majors will have priority on getting into the Art classes, so Minors in Art will need to fit the courses in dependent on space availability. This may mean that they need to take some of the entry-level courses during summer or intersession, when there is less demand from our majors.

IMPACT: This new minor will allow students from other Colleges and disciplines to add Art to their credentials and still meet their four year graduation goal.

EFFECTIVE DATE: Spring 2015

Biochemistry and Molecular Biophysics

B.A. in Biochemistry, Medical Biochemistry Track

FROM:

TO:

<p>Biochemistry seeks to understand the molecular events of life processes. It applies chemical and physical techniques to elucidate the structure and organization of molecules, particularly macromolecules that are responsible for the structural organization as well as operation and control of all cellular processes. The emerging knowledge has broad importance and consequences for all areas of the life sciences.</p> <p>Bachelor's degree requirements General requirements for undergraduate major: A total of 120 credit hours are required for graduation. The BA program, Medical Track, is obtained by following the curriculum of the College of Arts and Sciences.</p> <p>To graduate, a student must have a grade of C or better in all science and mathematics courses required for the degree, including transfer courses, as specified below. In addition, to graduate a student</p>	<p>Biochemistry seeks to understand the molecular events of life processes. It applies chemical and physical techniques to elucidate the structure and organization of molecules, particularly macromolecules that are responsible for the structural organization as well as operation and control of all cellular processes. The emerging knowledge has broad importance and consequences for all areas of the life sciences.</p> <p>Bachelor's degree requirements General requirements for undergraduate major: <u>A total of 121 credit hours are required for graduation.</u> The BA program, Medical Track, is obtained by following the curriculum of the College of Arts and Sciences.</p> <p>To graduate, a student must have a grade of C or better in all science and mathematics courses required for the degree, including transfer courses, as specified below. In addition, to</p>
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<p>must have a 2.2 GPA in required science and mathematics courses taken at K-State.</p> <p>BIOCH 110 - Biochem & Society Credits: (3)</p> <p>BIOCH 521 - Gen Biochemistry Credits (3) BIOCH 522 - Gen Biochemistry Lab Credits (2) BIOCH 571 - Medical Biochemistry Credits: (3) BIOCH 756 - Biochem I Lab Credits (2) BIOCH 757/758/766/767 - Biochem II Lab Credits (2)</p> <p>BIOL 198 - Principles of Biology Credits: (4) BIOL 450- Modern Genetics Credits: (4) BIOL 455 - General Microbiology Credits: (4) BIOL 541- Cell Biology Credits: (3)</p> <p>CHM 210 - Chemistry I Credits: (4) CHM 230 - Chemistry II Credits: (4) CHM 371 - Chemical Analysis Credits: (4) CHM 350 - Gen Org Chem Credits: (3) CHM 351- Gen Org Lab Credits: (2)</p> <p>MATH 220 - Analytic Geometry and Calculus Credits: (4) MATH 221 - Analytic Geometry and Calculus II Credits: (4)</p> <p>PHYS 113 - General Physics I Credits: (4) PHYS 114 - General Physics II Credits: (4)</p> <p>STAT701 Fundamentals of Biostatistics Credits (3)</p> <p>*Upper-division biochemistry, chemistry, biological science, statistics, computer science, analytical geometry and calculus III, or differential equations elective Credits: (20)</p> <p>Note: The courses above satisfy the mathematics and natural science requirements shown in the general requirements for the BA degree.</p> <p>A&S requirements Credits (32) For BA degree: Level 4 Foreign language Credits (4) <u>Total hours required for graduation (120 credit hours)</u></p>	<p>graduate a student must have a 2.2 GPA in required science and mathematics courses taken at K-State.</p> <p>BIOCH 110 - Biochem & Society Credits (3)</p> <p>BIOCH 521 - Gen Biochemistry Credits (3) BIOCH 522 - Gen Biochemistry Lab Credits (2) BIOCH 571 - Medical Biochemistry Credits: (3) <u>(BIOCH 755 - Biochemistry I Credits: (3))[#]</u> <u>(BIOCH 799 - Biochemistry Research (1-3))[#]</u></p> <p>BIOL 198 - Principles of Biology Credits: (4) BIOL 450 - Modern Genetics Credits: (4) BIOL 455 - General Microbiology Credits: (4) BIOL 541 - Cell Biology Credits: (3) <u>BIOL 670 - Immunology Credits: (4)</u></p> <p>CHM 210 - Chemistry I Credits: (4) CHM 230 - Chemistry II Credits: (4) CHM 371 - Chemical Analysis Credits: (4) CHM350 - Gen Org Chem Credits: (3) CHM351 - Gen Org Lab Credits: (2)</p> <p>MATH 220 - Analytic Geometry and Calculus Credits: (4)</p> <p>PHYS 113 - General Physics I Credits: (4) PHYS 114 - General Physics II Credits: (4)</p> <p><u>STAT 340 - Biometrics I Credits (3)</u> <u>(STAT 341 - Biometrics II Credits (3))[#]</u></p> <p>*Upper-division biochemistry, chemistry, biological science, statistics, computer science, analytical geometry and calculus III, or differential equations elective Credits: (20)</p> <p><u>[#] The Medical Biochemistry BA plan requires one of the following three classes: STAT 341 (Biometrics II), BIOCH 755 (Biochemistry I) or BIOCH 799 (Biochemistry Research).</u></p> <p>Note: The courses above satisfy the mathematics and natural science requirements shown in the general requirements for the BA degree.</p> <p>A&S requirements Credits (32) For BA degree: Level 4 Foreign language Credits (4) <u>Total hours required for graduation (121 credit hours)</u></p>
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RATIONALE: **This is a non-expedited curriculum change.** Biochemistry and Molecular Biophysics (BMB) seeks to modify the existing B.A. degree in Biochemistry, Medical Biochemistry Track. This program was created in 2012 to provide a framework for students who require specialized training in biochemistry in preparation for careers in medicine or related fields. BMB faculty designed the program following recommendations of the American Association of Medical Colleges (AAMC) and the American Society of Biochemistry and Molecular Biology (ASBMB). We propose some changes after more internal discussions and consultations with Dr. Susan Watt, pre-Health advisor of the College of Arts & Sciences. Dr. Watt pointed out that in its current form the requirement for MATH 221 (Calculus II) dissuades many pre-med/pre-vet students from selecting the major. Her advice concurs with the conclusions of the AAMC and the ASBMB, and our revision substitutes other classes more relevant to future careers in health professions (statistics, biochemistry or research). Dr. Watt also advised the addition of BIOL 670 (Immunology) to the plan, which we endorse. Additional discussions with Dr. Gary Gadbury, head of Statistics lead us to eliminate STAT 701 in favor of STAT 340 (Biometrics I) and the option of STAT 341 (Biometrics II).

The proposal therefore involves the following overall modifications:

- change the requirement for STAT 701 to STAT 340 (Biometrics I; 3 credits)
- eliminate the requirement for MATH 221 (Calculus II; 4 credits), and instead require one of the three following classes in its place: STAT 341 (Biometrics I; 3 credits), BIOCH 755 (Biochemistry I; 3 credits) or BIOCH 799 (Biochemistry Research; 3 credits).
- add the requirement of BIOL 670 (Immunology; 3 credits).
- remove the requirements for Biochemistry I and II Laboratories (BIOCH 756; 2 credits, BIOCH 757; 2 credits). Their inclusion was a typographical error in the original submitted documentation, and not approved by faculty vote.

IMPACT: The changes potentially involve additional enrollment in STAT 340 (Biometrics I), and STAT 341, as one of three possible alternatives to MATH 221. BMB currently has 85 undergraduate majors, so we do not expect a dramatic increase in STAT 340/341: assuming one-third of these students elect to take it, in any individual year its enrollment may increase by ~10 students. The proposed changes also requires BIOL 670, but most pre-medical students already take this class, so we anticipate little impact on its enrollment. Aside from these ramifications we do expect that changes will affect other units.

EFFECTIVE DATE: Fall 2014

B.S. in Biochemistry, Medical Biochemistry Track

Add:

Biochemistry seeks to understand the molecular events of life processes. It applies chemical and physical techniques to elucidate the structure and organization of molecules, particularly macromolecules that are responsible for the structural organization as well as operation and control of all cellular processes. The emerging knowledge has broad importance and consequences for all areas of the life sciences.

Bachelor's degree requirements

General requirements for undergraduate major:

A total of 123 credit hours are required for graduation. The BS program, Medical Track, is obtained by following the curriculum of the College of Arts and Sciences.

To graduate, a student must have a grade of C or better in all science and mathematics courses required for the degree, including transfer courses, as specified below. In addition, to graduate a student must have a 2.2 GPA in required science and mathematics courses taken at K-State.

BIOCH 110 Biochem & Society Credits (3)

BIOCH 521 - Gen Biochemistry Credits (3)

BIOCH 522 - Gen Biochemistry Lab Credits (2)

BIOCH 571 - Medical Biochemistry Credits: (3)

BIOCH 755 Biochemistry I Credits: (3)[#]

BIOCH 765 Biochemistry II Credits: (3)[#]

BIOL 198 - Principles of Biology Credits: (4)

BIOL 450 Modern Genetics Credits: (4)

BIOL 455 General Microbiology Credits: (4)

BIOL 541 Cell Biology Credits: (3)

BIOL 670 Immunology Credits: (4)

CHM 210 - Chemistry I Credits: (4)

CHM 230 - Chemistry II Credits: (4)

CHM 371 - Chemical Analysis Credits: (4)

CHM350 Gen Org Chem Credits: (3)

CHM351 Gen Org Lab Credits: (2)

MATH 220 - Analytic Geometry and Calculus Credits: (4)

PHYS 113 - General Physics I Credits: (4)

PHYS 114 - General Physics II Credits: (4)

STAT 340 Biometrics I Credits (3)

STAT 341 Biometrics II Credits (3)

*Upper-division biochemistry, chemistry, biological science, statistics, computer science, analytical geometry and calculus III, or

differential equations elective Credits: (20)

Students may take any 700- or higher-level 3-credit BMB classes as alternatives to BIOCH 755 and BIOCH 765.

Note: The courses above satisfy the mathematics and natural science requirements shown in the general requirements for the BS degree.

A&S requirements Credits (32)

Total hours required for graduation (123 credit hours)

RATIONALE: **This is a non-expedited curriculum change.** Biochemistry and Molecular Biophysics (BMB) seeks to create a **B.S. degree** in Biochemistry, Medical Biochemistry Track. A Medical Biochemistry **B.A. degree** was created in 2012 to provide a framework for students who require pre-veterinary, pre-medical, pre-dental or pre-nursing training prior to pursuing those advanced degrees. We propose to add the B.S. program after more internal discussions and consultations with Dr. Susan Watt, pre-Health advisor of the College of Arts & Sciences. Dr. Watt pointed out that the requirements of the existing B.A. degree plan for MATH 221 (Calculus II) and Level 4 Foreign Language dissuade most pre-med/pre-vet students from selecting the major. This application will create a B.S. program that eliminates MATH 221 and the Level 4 language requirement, in favor of classes more relevant to future health professions (additional classes in statistics, biochemistry and/or research). The proposed changes are consistent with the recommendations of the American Association of Medical Colleges (AAMC) and the American Society of Biochemistry and Molecular Biology (ASBMB). Dr. Watt suggested inclusion of BIOL 670 (Immunology) in the plan, which we endorse, and Dr. Gary Gadbury, head of Statistics, advised us to replace STAT 701 with STAT 340 (Biometrics I) and STAT 341 (Biometrics II). Relative to the B.A. in Medical Biochemistry, the B.S. degree plan has the following overall modifications:

- eliminate the requirement for Calculus II (MATH 221; 4 credits), and instead require more comprehensive statistics (replaces STAT 701 with STAT 340 and STAT 341, Biometrics I & II), as well as more classes in biochemistry (BIOCH 755 and BIOCH 765; Biochemistry I and II;) and Immunology (BIOL 670; 3 credits).
- the B.S. degree plan does not contain a requirement for Level 4 language
- remove the requirements for Biochemistry I and II Laboratories (BIOCH 756; 2 credits, BIOCH 757; 2 credits). Their inclusion was a typographical error in the original submitted documentation, and not approved by faculty vote.

IMPACT: The changes potentially involve additional enrollment in STAT 340/341 (Biometrics I/II). BMB currently has 85 undergraduate majors, so we do not expect a dramatic increase in STAT 340/341 numbers: assuming one-third of these students elect to take it, in any individual year enrollment in either class may increase by ~10 students. The proposed change also requires BIOL 670 (Immunology), but most pre-medical students already take this class, so we anticipate little impact on its enrollment. Aside from these ramifications we do expect that changes will affect other units.

EFFECTIVE DATE: Fall 2014

Chemistry

FROM:

TO:

Existing Chemical Science Program	Proposed Chemical Science Program
Chemical science program Chemistry (25-27 credit hours)	Chemical science program Chemistry (25-27 credit hours)
CHM 200 - Frontiers in Chemistry Credits: (0) CHM 531- Organic Chemistry I Credits: (3) CHM 532- Organic Chemistry Laboratory Credits: (2) CHM 550 -Organic Chemistry II Credits: (3) CHM 566 – Instrumental Methods of Analysis Credits: (3) CHM 596 – Physical Methods Laboratory Credits: (1-2) Choose from the following: Or CHM 220 - Honors Chemistry I Credits: (5) and CHM 250- Honors Chemistry II Credits: (5) CHM 210 -- Chemistry I Credits: (4) and CHM 230- Chemistry II Credits: (4) and CHM 371 -Chemical Analysis Credits: (4) Choose from the following: CHM 500 -General Physical Chemistry Credits: (3) Or CHM 585 -Physical Chemistry I Credits: (3) Biochemistry (5 credit hours) BIOCH 521 - General Biochemistry Credits: (3) BIOCH 522 -General Biochemistry Laboratory Credits: (2) Mathematics (8 credit hours) MATH 220 -Analytic Geometry and Calculus I Credits: (4) MATH 221- Analytic Geometry and Calculus II Credits: (4) Physics (8 credit hours) PHYS 113- General Physics I Credits: (4) PHYS 114 -General Physics II Credits: (4)	CHM 200 - Frontiers in Chemistry Credits: (0) CHM 531- Organic Chemistry I Credits: (3) CHM 532 -Organic Chemistry Laboratory Credits: (2) CHM 550 -Organic Chemistry II Credits: (3) Choose from the following: Or CHM 220 - Honors Chemistry I Credits: (5) and CHM 250- Honors Chemistry II Credits: (5) CHM 210 -Chemistry I Credits: (4) and CHM 230 - Chemistry II Credits: (4) and CHM 371 -Chemical Analysis Credits: (4) <u>Choose from the following:</u> <u>CHM 315 – Environmental Science: A Chemistry</u> <u>Perspective Credits: (3)</u> <u>and</u> <u>CHM 316 – Environmental Science: A Chemistry</u> <u>Perspective Laboratory Credits: (1)</u> <u>Or</u> <u>CHM 566 – Instrumental Methods of Analysis Credits:</u> <u>(3)</u> <u>and</u> <u>CHM 596 – Physical Methods Laboratory Credits: (1-2)</u> Choose from the following: CHM 500 - General Physical Chemistry Credits: (3) Or CHM 585 -Physical Chemistry I Credits: (3) Biochemistry (5 credit hours) BIOCH 521- General Biochemistry Credits: (3) BIOCH 522 -General Biochemistry Laboratory Credits: (2) Mathematics (8 credit hours) MATH 220 -Analytic Geometry and Calculus I Credits: (4) MATH 221 - Analytic Geometry and Calculus II Credits: (4) Physics (8 credit hours) PHYS 113 -General Physics I Credits: (4) PHYS 114 - General Physics II Credits: (4)
Total credit hours required for graduation: (120)	Total credit hours required for graduation: (120)

RATIONALE: Approximately half of our Chemical Science majors are dual majors. These students require more practical training related to their future

careers. The Instrumental Analysis course and Physical Methods laboratory currently offered in the curriculum provide fundamental or theoretical training. Addition of the Environmental Science course and its laboratory would allow these students the option to choose more practical training with an emphasis on environmental chemistry.

IMPACT: None

EFFECTIVE DATE: Fall 2014

College of Arts and Sciences

Degree Requirements BA/BS

FROM:

TO:

<p>Bachelor of Arts and Bachelor of Sciences</p> <p>College of Arts and Sciences basic requirements</p> <p>The aim of these requirements is to provide breadth in the major areas of knowledge outside of the student's field of specialization. Introductory and intermediate-level courses are available in departments in humanities, social sciences, and natural sciences. Basic requirements are to be fulfilled with courses chosen by students in consultation with their advisor. The requirement in the humanities enables students to appreciate and understand creative and conceptual human endeavor.</p> <p>The requirement in the social sciences improves the student's ability to analyze and understand human social systems. The requirement in the natural sciences develops the student's knowledge of the principles of scientific method as they are applied in the life and physical science.</p> <p>Up to two courses from one department may be used to fulfill the distribution requirements for humanities and the social sciences. They may be used at the same time to count towards the student's major. No course may be used to satisfy more than one specific requirement for humanities and social sciences. Only courses taken for 2 or</p>	<p>Bachelor of Arts and Bachelor of Sciences</p> <p>College of Arts and Sciences basic requirements</p> <p>The aim of these requirements is to provide breadth in the major areas of knowledge outside of the student's field of specialization. Introductory and intermediate-level courses are available in departments in humanities, social sciences, and natural sciences. Basic requirements are to be fulfilled with courses chosen by students in consultation with their advisor. The requirement in the humanities enables students to appreciate and understand creative and conceptual human endeavor.</p> <p>The requirement in the social sciences improves the student's ability to analyze and understand human social systems. The requirement in the natural sciences develops the student's knowledge of the principles of scientific method as they are applied in the life and physical science.</p> <p>Up to two courses from one department may be used to fulfill the distribution requirements for humanities and the social sciences. They may be used at the same time to count towards the student's major. No course may be used to satisfy more than one specific requirement for humanities and social sciences. Only courses taken for 2 or</p>
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more credit hours satisfy these requirements; courses in excess of 5 credit hours count as two courses.

At least 120 credit hours are required for graduation.

Humanities

Four courses, one course for each section, 11 credit hours minimum

Fine arts (one course, or at least two credits)

Purpose: to ensure some interpretive or expressive competence in a traditional nonliterary mode of artistic expression.

Choose from the following:

- Anthropology—ANTH 515, 516, or 517
- Art—ART 301, 305, 400, 560, or 636
- Art History—any course
- Art Technique—ART 200 to 799
- Dance—DANCE 120, 165, 171, 181, 460, 503, or 507
- Dean of Arts & Sciences—DAS 100
- Music—MUSIC 100, 112, 170, 210, 220, 230, 245, 250, 255, 280, 310, 385, 420, 424, 455, 480, 570, 601, or 650.
- Theatre—THTRE 260 to 799

Philosophy (one course)

Purpose: to ensure some interpretive or expressive competence in the fundamental conceptual issues of human thought and activity.

Choose any philosophy course except PHILO 110, 320, or 510.

Western heritage (one course)

Purpose: to ensure some interpretive or expressive competence regarding the institutions, traditions, and values that have shaped Western civilization.

Choose from the following:

- American Ethnic Studies—AMETH 160, 449, 450,

more credit hours satisfy these requirements; courses in excess of 5 credit hours count as two courses.

At least 120 credit hours are required for graduation.

Humanities

Four courses, one course for each section, 11 credit hours minimum

Fine arts (one course, or at least two credits)

Purpose: to ensure some interpretive or expressive competence in a traditional nonliterary mode of artistic expression.

Choose from the following:

- Anthropology—ANTH 515, 516, or 517
- Art—ART 301, 305, 400, 560, or 636
- Art History—any course
- Art Technique—ART 200 to 799
- Environmental Design – ENVD 210
- Dance—DANCE 120, 165, 171, 181, 460, 503, or 507
- Dean of Arts & Sciences—DAS 100
- Music—MUSIC 100, 112, 170, 210, 220, 230, 245, 250, 255, 280, 310, 385, 420, 424, 455, 480, 570, 601, or 650.
- Theatre—THTRE 260 to 799

Philosophy (one course)

Purpose: to ensure some interpretive or expressive competence in the fundamental conceptual issues of human thought and activity.

Choose any philosophy course except PHILO 110, 320, or 510.

Western heritage (one course)

Purpose: to ensure some interpretive or expressive competence regarding the institutions, traditions, and values that have shaped Western civilization.

Choose from the following:

<p>451, 452, 453, 454, 501, or 560</p> <ul style="list-style-type: none"> • Constitutional Law—POLSC 614, 615, or 799 • Dean of Arts & Sciences—DAS 300 • English—ENGL 230, 231, 233, or 234 (Western Humanities) • Foreign Civilizations—FREN 514, GRMN 530, SPAN 565, SPAN 566, or SPAN 572 • History—courses dealing with the Greco-Roman, Western European, or North American experience; HIST 515 • History of Sport (cross-listed with KIN 515) • Kinesiology—KIN 515 (cross-listed with HIST 515) • Music—MUSIC 245 • Political Thought—POLSC 301, 661, 663, 667, 671, or 675 • Sociology—SOCIO 507 • Theatre—THTRE 572 or 573 • Women’s Studies—WOMST 105, 205, 410, 480, 500, 551, or 610 <p>Literary or rhetorical arts (one course)</p> <p>Purpose: to ensure some interpretive or expressive competence in a traditional literary or rhetorical mode of artistic expression.</p> <p>Choose from the following:</p> <ul style="list-style-type: none"> • English—literature or creative writing—ENGL 220 to 799 except 300, 400, 415, 430, 435, 476, 490, 492, 499, 516, 600-604, 757, or 759 • Communication Studies—COMM 120, 325, or 480 • History of rhetoric—COMM 320, 330, 331, 430, 432, 434, 460, 725, 730, 732, 733, or POLSC 670 • Modern Languages—literature courses including literature in translation • Theatre—THTRE 370, 662, or 764 • Women’s Studies—WOMST 450 <p>Exception: Students in BS programs who take two courses in one foreign language may use these to satisfy the requirements for Western heritage and for literary and rhetorical arts.</p>	<ul style="list-style-type: none"> • American Ethnic Studies—AMETH 160, 449, 450, 451, 452, 453, 454, 501, or 560 • Constitutional Law—POLSC 614, 615, or 799 • Dean of Arts & Sciences—DAS 300 • English—ENGL 230, 231, 233, or 234 (Western Humanities) • Foreign Civilizations—FREN 514, GRMN 530, SPAN 565, SPAN 566, or SPAN 572 • History—courses dealing with the Greco-Roman, Western European, or North American experience; HIST 515 • History of Sport (cross-listed with KIN 515) • Kinesiology—KIN 515 (cross-listed with HIST 515) • Music—MUSIC 245 • Political Thought—POLSC 301, 661, 663, 667, 671, or 675 • Sociology—SOCIO 507 • Theatre—THTRE 572 or 573 • Women’s Studies—WOMST 105, 205, 410, 480, 500, 551, or 610 <p>Literary or rhetorical arts (one course)</p> <p>Purpose: to ensure some interpretive or expressive competence in a traditional literary or rhetorical mode of artistic expression.</p> <p>Choose from the following:</p> <ul style="list-style-type: none"> • English—literature or creative writing—ENGL 220 to 799 except 300, 400, 415, 430, 435, 476, 490, 492, 499, 516, 600-604, 757, or 759 • Communication Studies—COMM 120, 325, or 480 • History of rhetoric—COMM 320, 330, 331, 430, 432, 434, 460, 725, 730, 732, 733, or POLSC 670 • Modern Languages—literature courses including literature in translation • Theatre—THTRE 370, 662, or 764 • Women’s Studies—WOMST 450 <p>Exception: Students in BS programs who take two courses in one foreign language may use these to satisfy the requirements for Western heritage and for literary and</p>
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<p>Social science</p> <p>Four courses, 12 credit hours minimum, from at least three disciplines.</p> <p>Purpose: to acquaint students with the adaptation of scientific method to the analysis of human social systems.</p> <p>One course must be at 500 level or above, or carry a prerequisite in the same department.</p> <p>Three of the four courses must be from these areas:</p> <ul style="list-style-type: none"> • Cultural Anthropology—including archaeology • Economics—any course • Geography—any course except GEOG 221, 321, or 535 • History—any course • Mass Communications—MC 110, 112, 120, 180, 331, 396, 531, 576, 585, 600, 612, 623, or 670 • Political Science—any course • Psychology—any course • Sociology—any course • Social Work—SOCWK 510 <p>The fourth course must be from the above areas or from:</p> <ul style="list-style-type: none"> • American ethnic studies—AMETH 160, 499, 501, 550, or 650 • Anthropology—ANTH 345, 520, or 660 • Communication Studies—COMM 323, 326, 420, 425, 435, 526, 542, 550, 720, 726, 742, or 756 • Gerontology—GERON 315, 600, or 615 • Kinesiology—KIN 320, 330, 345, 346, or 435 • Linguistics—any course except LG 601 • Women’s Studies—WOMST 105, 205, 300, 450, 480, 500, 551, 590, or 610 <p>Natural sciences</p> <p>BS Degree: Four courses, 14 credit hours minimum.</p>	<p>rhetorical arts.</p> <p>Social science</p> <p>Four courses, 12 credit hours minimum, from at least three disciplines.</p> <p>Purpose: to acquaint students with the adaptation of scientific method to the analysis of human social systems.</p> <p>One course must be at 500 level or above, or carry a prerequisite in the same department.</p> <p>Three of the four courses must be from these areas:</p> <ul style="list-style-type: none"> • Cultural Anthropology—including archaeology • Economics—any course • Geography—any course except GEOG 221, 321, or 535 • History—any course • Mass Communications—MC 110, 112, 120, 180, 331, 396, 531, 576, 585, 600, 612, 623, or 670 • Political Science—any course • Psychology—any course • Sociology—any course • Social Work—SOCWK 510 <p>The fourth course must be from the above areas or from:</p> <ul style="list-style-type: none"> • American ethnic studies—AMETH 160, 499, 501, 550, or 650 • Anthropology—ANTH 345, 520, or 660 • Communication Studies—COMM 323, 326, 420, 425, 435, 526, 542, 550, 720, 726, 742, or 756 • Gerontology—GERON 315, 600, or 615 • Kinesiology—KIN 320, 330, 345, 346, or 435 • Linguistics—any course except LG 601 • Women’s Studies—WOMST 105, 205, 300, 450, 480, 500, 551, 590, or 610 <p>Natural sciences</p>
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<p>BA Degree: Three courses, 11 credit hours minimum.</p> <ol style="list-style-type: none"> 1. Life Sciences with a lab 2. Physical Sciences with a lab 3. Life or Physical Sciences, including additional Natural Science <p>Life science (one 3- or 4-hour course with laboratory) Purpose: to introduce students to the systematic study of organisms and their interrelationships.</p> <p>Choose from the following:</p> <ul style="list-style-type: none"> • Biochemistry—any course • Biology—any course • Paleobiology—GEOL 581 or 704 • Physical anthropology—ANTH 280, 281, 680, 684, 688, 691, 694, or 695 <p>Physical science (one course with laboratory) Purpose: to introduce students to the appropriate attitudes and methods that characterize the systematic study of matter and energy.</p> <p>Choose from the following:</p> <ul style="list-style-type: none"> • Biochemistry—BIOCH 265 to 799 • Chemistry—any course • Physical geography—GEOG 221, 235, 445, 535, 735, or 740 • Geology—any course except GEOL 581 or 704 • Physics—any course <p>Additional Natural Sciences (for 3rd requirement only)</p> <ul style="list-style-type: none"> • Kinesiology—KIN 220 or 310 <p>4. BS Degree Only: One course, 3 credit hour minimum) with a prerequisite in the same department chosen from:</p> <ul style="list-style-type: none"> • Life or Physical Sciences listed in #3 above • Biochemistry course with a chemistry prerequisite • Dean of Arts & Sciences—DAS 333 • Kinesiology—KIN 330, 335, or 650 • Psychology—PSYCH 470 or 480 (you may use only one of these) 	<p>BS Degree: Four courses, 14 credit hours minimum. BA Degree: Three courses, 11 credit hours minimum.</p> <ol style="list-style-type: none"> 1. Life Sciences with a lab 2. Physical Sciences with a lab 3. Life or Physical Sciences, including additional Natural Science <p>Life science (one 3- or 4-hour course with laboratory) Purpose: to introduce students to the systematic study of organisms and their interrelationships.</p> <p>Choose from the following:</p> <ul style="list-style-type: none"> • Biochemistry—any course • Biology—any course • Paleobiology—GEOL 581 or 704 • Physical anthropology—ANTH 280, 281, 680, 684, 688, 691, 694, or 695 <p>Physical science (one course with laboratory) Purpose: to introduce students to the appropriate attitudes and methods that characterize the systematic study of matter and energy.</p> <p>Choose from the following:</p> <ul style="list-style-type: none"> • Biochemistry—BIOCH 265 to 799 • Chemistry—any course • Physical geography—GEOG 221, 235, 445, 535, 735, or 740 • Geology—any course except GEOL 581 or 704 • Physics—any course <p>Additional Natural Sciences (for 3rd requirement only)</p> <ul style="list-style-type: none"> • Kinesiology—KIN 220 or 310 • <u>Entomology – ENTOM 301</u> <p>4. BS Degree Only: One course, 3 credit hour minimum) with a prerequisite in the same department chosen from:</p> <ul style="list-style-type: none"> • Life or Physical Sciences listed in #3 above • Biochemistry course with a chemistry prerequisite • Dean of Arts & Sciences—DAS 333 • Kinesiology—KIN 330, 335, or 650 • Psychology—PSYCH 470 or 480 (you may use only
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<ul style="list-style-type: none"> • BIOL 310 does not fulfill this requirement <p>NOTE: Only courses taken for 2 or more credit hours satisfy these requirements and courses in excess of 5 credit hours count as two courses.</p> <p>International studies overlay</p> <p>One course.</p> <p>Purpose: to equip students better to become citizens of a world where the most important problems are unavoidably defined in international terms and to understand cultures of the world outside the Western tradition.</p> <p>A student must take one course of which at least half is devoted to: economic, political, and social relations or interactions between or among different countries, in which the major focus is upon the interdependency of nations of the modern world; or contemporary features or historical traditions of non-Western cultures (excluding those dealing primarily with Greek, Roman, Western European, or North American experience).</p> <p>Students may satisfy the international studies requirement at the same time they satisfy requirements in the major, in the humanities, or the social sciences. These courses qualify:</p> <ul style="list-style-type: none"> • Anthropology—ANTH 200, 204, 220, 260, 345,505, 508, 511, 512, 514, 515, 516, 517, 523, 536, 545, 550, 604, 618, 630, 634, 673, 676, or 792 • Communication Studies—COMM 480, 756, or 780 • Dean of Arts and Sciences—DAS 507, or 525 • Economics—ECON 505, 507, 536, 681, or 682 • English—ENGL 280, or 580 • Geography—GEOG 100, 200, 201, 505, 620, 622, 640, 650, or 715 • History—HIST 112, 250, 303, 330, 332, 501, 504, 505, 509, 510, 514, 543, 544, 545, 560, 561, 562, 571, 576, 577, 578, 591, 592, 593, or 598 • Mass Communications—MC 572, 623, 662, or 725 	<p>one of these)</p> <ul style="list-style-type: none"> • BIOL 310 does not fulfill this requirement <p>NOTE: Only courses taken for 2 or more credit hours satisfy these requirements and courses in excess of 5 credit hours count as two courses.</p> <p>International studies overlay</p> <p>One course.</p> <p>Purpose: to equip students better to become citizens of a world where the most important problems are unavoidably defined in international terms and to understand cultures of the world outside the Western tradition.</p> <p>A student must take one course of which at least half is devoted to: economic, political, and social relations or interactions between or among different countries, in which the major focus is upon the interdependency of nations of the modern world; or contemporary features or historical traditions of non-Western cultures (excluding those dealing primarily with Greek, Roman, Western European, or North American experience).</p> <p>Students may satisfy the international studies requirement at the same time they satisfy requirements in the major, in the humanities, or the social sciences. These courses qualify:</p> <ul style="list-style-type: none"> • Anthropology—ANTH 200, 204, 220, 260, 345,505, 508, 511, 512, 514, 515, 516, 517, 523, 536, 545, 550, 604, 618, 630, 634, 673, 676, or 792 • Communication Studies—COMM 480, 756, or 780 • Dean of Arts and Sciences—DAS 507, or 525 • Economics—ECON 505, 507, 536, 681, or 682 • English—ENGL 280, or 580 • <u>Environmental Design – ENVD 210</u> • Geography—GEOG 100, 200, 201, 505, 620, 622, 640, 650, or 715 • History—HIST 112, 250, 303, 330, 332, 501, 504, 505, 509, 510, 514, 543, 544, 545, 560, 561,
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<ul style="list-style-type: none"> • Management—MANGT 690 • Marketing—MKTG 544 • Modern Languages—Any Level 4 or above language course in French, German, and Spanish, including translation courses • Political Science—POLSC 333, 505, 511, 540, 541, 543, 545, 549, 622, 623, 624, 626, 627, 629, 642, 643, 645, 647, 651, 652, 653, or 655 • Sociology—SOCIO 363, 505, 507, 522, 535, 618, 635, or 742 • Women’s Studies—WOMST 380 405, or 580 <p>Students may use the fourth course in a single foreign language sequence (other than Latin) to satisfy the international studies overlay requirement.</p> <p>Additional requirements for the BA</p> <p>Foreign language Level 4 (i.e., French 4, German 4, Spanish 4, etc.) or the equivalent of level 4 in a foreign language sequence offered by the Department of Modern Languages. (Conversation "4A" courses do not meet the level 4 requirement.)</p> <p>Purpose: to bring students to a point at which they are able to proceed on their own to a command of a second language—a key for access both to a foreign culture and to much primary and secondary material in many special fields.</p> <p>Exception: Students who take a language that is normally offered for only two semesters (Latin 141 and 142, for example) may complete their requirement by taking two additional semesters in another language.</p> <p>Mathematics (One 3-credit-hour course, 100-799 level, or any other course for which there is a mathematics prerequisite) Purpose: to give students a college-level competence in mathematical reasoning and analysis.</p> <p>Any course used to satisfy this requirement cannot be used</p>	<ul style="list-style-type: none"> 562, 571, 576, 577, 578, 591, 592, 593, or 598 • Mass Communications—MC 572, 623, 662, or 725 • Management—MANGT 690 • Marketing—MKTG 544 • Modern Languages—Any Level 4 or above language course in French, German, and Spanish, including translation courses • Political Science—POLSC 333, 505, 511, 540, 541, 543, 545, 549, 622, 623, 624, 626, 627, 629, 642, 643, 645, 647, 651, 652, 653, or 655 • Sociology—SOCIO 363, 505, 507, 522, 535, 618, 635, or 742 • Women’s Studies—WOMST 380 405, or 580 <p>Students may use the fourth course in a single foreign language sequence (other than Latin) to satisfy the international studies overlay requirement.</p> <p>Additional requirements for the BA</p> <p>Foreign language Level 4 (i.e., French 4, German 4, Spanish 4, etc.) or the equivalent of level 4 in a foreign language sequence offered by the Department of Modern Languages. (Conversation "4A" courses do not meet the level 4 requirement.)</p> <p>Purpose: to bring students to a point at which they are able to proceed on their own to a command of a second language—a key for access both to a foreign culture and to much primary and secondary material in many special fields.</p> <p>Exception: Students who take a language that is normally offered for only two semesters (Latin 141 and 142, for example) may complete their requirement by taking two additional semesters in another language.</p> <p>Mathematics (One 3-credit-hour course, 100-799 level, or any other course for which there is a mathematics prerequisite) Purpose: to give students a college-level competence in mathematical reasoning and analysis.</p> <p>Any course used to satisfy this requirement cannot be used</p>
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to satisfy any other general education requirement.

Additional requirements for the BS

Natural sciences (One course, 3 credit hours minimum, with a prerequisite in the same department; for this requirement, biochemistry courses with a chemistry prerequisite qualify as upper-level courses.)

Purpose: to give students who elect the bachelor of science degree an especially solid foundation in the natural sciences.

Courses that qualify are those listed earlier under natural sciences, and:

- Kinesiology—KIN 330, 335, or 650
- Psychology—PSYCH 470 or 480

Quantitative and abstract formal reasoning

Purpose: to give students training in a clear, non-ambiguous, simplified language for the efficient transfer and logical analysis of information—a language in which a good deal of discussion is conducted in the sciences.

A course that satisfies this requirement may at the same time be used to satisfy any major requirement for which it qualifies. Students may fulfill this requirement ONE of three ways:

1. Three courses, 9 credit hours minimum, selected from:
Computer science—CIS 111, 200 level or above
Mathematics—MATH 100 level or above
Philosophy—PHILO 110, 112, 320, or 510
Statistics—any course
2. One course and its Level II prerequisite, selected from:
Geography—GEOG 700 (with a statistics course)
Physics—PHYS 113 (with MATH 150)
 PHYS 223 (with MATH 221)
 PHYS 224 (with MATH 221)
 PHYS 325 (with MATH 222)
 PHYS 452 (with MATH 150)
Sociology—SOCIO 520 (with STAT 325)
Social work—SOCWK 330 and 530 (with MATH

to satisfy any other general education requirement.

Additional requirements for the BS

Natural sciences (One course, 3 credit hours minimum, with a prerequisite in the same department; for this requirement, biochemistry courses with a chemistry prerequisite qualify as upper-level courses.)

Purpose: to give students who elect the bachelor of science degree an especially solid foundation in the natural sciences.

Courses that qualify are those listed earlier under natural sciences, and:

- Kinesiology—KIN 330, 335, or 650
- Psychology—PSYCH 470 or 480

Quantitative and abstract formal reasoning

Purpose: to give students training in a clear, non-ambiguous, simplified language for the efficient transfer and logical analysis of information—a language in which a good deal of discussion is conducted in the sciences.

A course that satisfies this requirement may at the same time be used to satisfy any major requirement for which it qualifies. Students may fulfill this requirement ONE of three ways:

1. Three courses, 9 credit hours minimum, selected from:
Computer science—CIS 111, 200 level or above
Mathematics—MATH 100 level or above
Philosophy—PHILO 110, 112, 320, or 510
Statistics—any course
2. One course and its Level II prerequisite, selected from:
Geography—GEOG 700 (with a statistics course)
Physics—PHYS 113 (with MATH 150)
 PHYS 223 (with MATH 221)
 PHYS 224 (with MATH 221)
 PHYS 325 (with MATH 222)
 PHYS 452 (with MATH 150)
Sociology—SOCIO 520 (with STAT 325)
Social work—SOCWK 330 and 530 (with MATH

<p>100)</p> <p>3. Equivalent competency: Competency may be demonstrated by taking two Level II courses or a Level III course from:</p> <p>Level II courses (two courses): Computer science—CIS 200 Mathematics—MATH 150, 205, 210, or 312 Philosophy—PHILO 510 Statistics—STAT 325 or 340 or 350, 703</p> <p>Level III courses (one course): Computer science—CIS 300 Mathematics—MATH 220 Philosophy—PHILO 701 Statistics—STAT 341, 351, 704, or 705</p>	<p>100)</p> <p>3. Equivalent competency: Competency may be demonstrated by taking two Level II courses or a Level III course from:</p> <p>Level II courses (two courses): Computer science—CIS 200 Mathematics—MATH 150, 205, 210, or 312 Philosophy—PHILO 510 Statistics—STAT 325 or 340 or 350, 703</p> <p>Level III courses (one course): Computer science—CIS 300 Mathematics—MATH 220 Philosophy—PHILO 701 Statistics—STAT 341, 351, 704, or 705</p>
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RATIONALE: The courses (ENVD 210 and ENTOM 301) already meet the learning outcomes and the overarching goals of an Arts and Sciences degree. Moreover, when students transfer such courses from other institutions, we count them toward A&S degrees, but do not count such courses when offered by other colleges within our own university. Making this change would help students from other colleges fulfill the requirements in Arts & Sciences, if they change their major, and help dual degree candidates streamline their general requirements.

IMPACT: Architecture, Planning and Design and Agriculture
Entire curriculum, curriculum description or admission criteria must be shown below.

EFFECTIVE DATE: Fall 2014

Mathematics

Mathematics Minor

ADD:

<p>Program requirements</p> <hr/> <p>Introductory courses (12 credit hours):</p> <ul style="list-style-type: none"> o MATH 220 Analytic Geometry and Calculus I Credits: (4) o MATH 221 Analytic Geometry and Calculus II Credits: (4) o MATH 222 Analytic Geometry and Calculus III Credits: (4)
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Choose 2 of the following 3 options (6 credit hours):

- MATH 511 Introduction to Algebraic Systems Credits: (3)
- or
- MATH 512 Introduction to Modern Algebra Credits: (3)

- MATH 515 Introduction to Linear Algebra Credits: (3)
- or
- MATH 551 Applied Matrix Theory Credits: (3)

- MATH 520 Foundations of Analysis Credits: (3)
- or
- MATH 633 Advanced Calculus I Credits: (3)
- or
- MATH 630 Introduction to Complex Analysis Credits: (3)

Additional 6 credit hours selected from the following:

- MATH 240 Elementary Differential Equations Credits: (4)
- STAT 510 Introduction to Probability and Statistics Credits: (3)
- Any mathematics course or courses at the 500 level or above, including the courses not chosen above but excluding credit for both MATH 511 & MATH 512, both MATH 551 & MATH 515 or both MATH 520 & MATH 633. Credits: (0-6)

Note

Students must earn a grade of C or better in each math and stat course used to satisfy requirements for the minor.

Total credit hours: (24)

RATIONALE: There is currently no Mathematics Minor. We would like to provide guidance to interested students on what courses would give them an overview of mathematics and also provide them with an opportunity to document such study on their transcript. We anticipate significant demand from other majors already taking a number of math courses. For example here are some sample majors and what they would need:

Computer Science: Would have MATH 220, MATH 221, MATH 551, MATH 510, STAT 510. Would need 2 courses: MATH 222 & an Algebra or Analysis.

Mechanical Engineering or Statistics: Would have MATH 220, MATH 221, MATH 222, MATH 551, MATH 240 or STAT 510. Would need 2 courses: an Algebra or Analysis, one more 500 level.

Electrical or Computer Engineering: Would have MATH 220, MATH 221, MATH 222, MATH 240, STAT 510. Would need 2 courses: 2 from Algebra, Analysis, Linear Algebra.

Physics or Chemical Engineering: Would have MATH 220, MATH 221, MATH 222, MATH 240. Would need 3 courses.

Edmath: Would need at most one extra course.

IMPACT: Students could take the Statistics course STAT 510 in place of a 500 level Math course.

EFFECTIVE DATE: Spring 2015

Sociology, Anthropology, and Social Work

Anthropology BA/BS

FROM:

TO:

Entrance requirements for anthropology majors

Students interested in becoming anthropology majors should consult with faculty advisors. To be admitted as an anthropology major, a student must present evidence of having earned a cumulative GPA of at least 2.5 based on a minimum of 12 credit hours earned at K-State. Pre-anthropology majors will be advised in the program.

Students transferring from other institutions with a GPA of 2.5 or higher will be accepted as majors when they have fulfilled the above requirements.

To graduate with a bachelor's degree in anthropology, a student must fulfill program requirements and have a cumulative GPA of 2.5 or higher on all anthropology course work undertaken at Kansas State University.

Bachelor's degree requirements

In addition to the general BA or BS requirements, anthropology majors take a minimum of ~~30~~ hours in anthropology as follows:

Introductions to the four subfields (~~12~~ credit hours)

Entrance requirements for anthropology majors

Students interested in becoming anthropology majors should consult with faculty advisors. To be admitted as an anthropology major, a student must present evidence of having earned a cumulative GPA of at least 2.5 based on a minimum of 12 credit hours earned at K-State. Pre-anthropology majors will be advised in the program.

Students transferring from other institutions with a GPA of 2.5 or higher will be accepted as majors when they have fulfilled the above requirements.

To graduate with a bachelor's degree in anthropology, a student must fulfill program requirements and have a cumulative GPA of 2.5 or higher on all anthropology course work undertaken at Kansas State University.

Bachelor's degree requirements

In addition to the general BA or BS requirements, anthropology majors take a minimum of 34 hours in anthropology as follows:

Introductions to the four subfields (13 credit hours)

- ANTH 200 – Introduction to Cultural Anthropology **Credits:** (3)
- or
- ANTH 204 – A General Education Introduction to Cultural Anthropology **Credits:** (3)
- or
- ANTH 210 – Introduction to Cultural Anthropology, Honors **Credits:** (4)
- ANTH 220 – Introduction to Linguistic Anthropology **Credits:** (3)
- ANTH 260 – Introduction to Archeology **Credits:** (3)
- ANTH 280 – Introduction to Biological Anthropology **Credits:** (4)

Advanced electives (15 credit hours)

-
- Five advanced electives distributed among three or more subfields.
 - 15 hours at or above the 300 level. At least 9 of these must be at or above the 500 level.
 - Students are strongly encouraged to include at least one methods course:
 - ANTH 777 – Research Methods in Digital Ethnography **Credits:** (3)
 - ANTH 678 – Archaeological Laboratory Methods **Credits:** (3)
 - ANTH 679 – Archaeological Field Methods **Credits:** (3)
 - ANTH 694 – Osteology **Credits:** (3)
 - and
 - ANTH 695 – Laboratory in Osteology **Credits:** (1)
 - ANTH 730 – Field and Laboratory Techniques in Archaeology **Credits:** (1–9)
 - ANTH 792 – Field Methods in Linguistics **Credits:** (3)

Capstone course

- ANTH 200 – Introduction to Cultural Anthropology **Credits:** (3)
- or
- ANTH 204 – A General Education Introduction to Cultural Anthropology **Credits:** (3)
- or
- ANTH 210 – Introduction to Cultural Anthropology, Honors **Credits:** (4)
- ANTH 220 – Introduction to Linguistic Anthropology **Credits:** (3)
- ANTH 260 – Introduction to Archeology **Credits:** (3)
- ANTH 280 – Introduction to Biological Anthropology **Credits:** (4)

Initiation to Anthropology Course

- ANTH 301: Initiation to Anthropology Credits: (3)

Advanced electives (15 credit hours)

-
- Five advanced electives distributed among three or more subfields.
 - 15 hours at or above the 300 level. At least 9 of these must be at or above the 500 level.
 - Students are strongly encouraged to include at least one methods course:
 - ANTH 777 – Research Methods in Digital Ethnography **Credits:** (3)
 - ANTH 678 – Archaeological Laboratory Methods **Credits:** (3)
 - ANTH 679 – Archaeological Field Methods **Credits:** (3)
 - ANTH 694 – Osteology **Credits:** (3)
 - and
 - ANTH 695 – Laboratory in Osteology **Credits:** (1)
 - ANTH 730 – Field and Laboratory Techniques in Archaeology **Credits:** (1–9)
 - ANTH 792 – Field Methods in Linguistics **Credits:** (3)

<hr/> <ul style="list-style-type: none"> • ANTH 602 – Anthropological Theory Credits: (3) <p>Note</p> <hr/> <p>Many anthropology students prepare for the variety of occupations concerned with human relations by combining anthropological study with other training, frequently by majoring in two fields. Each program of study is worked out individually by a student and his or her advisor. Interested students may obtain additional information from the <i>Guide for Prospective Anthropology Majors</i>, which is available from the anthropology program coordinator.</p> <p>Total credit hours required for graduation: (120)</p>	<p>Capstone course</p> <hr/> <ul style="list-style-type: none"> • ANTH 602 – Anthropological Theory Credits: (3) <p>Note</p> <hr/> <p>Many anthropology students prepare for the variety of occupations concerned with human relations by combining anthropological study with other training, frequently by majoring in two fields. Each program of study is worked out individually by a student and his or her advisor. Interested students may obtain additional information from the <i>Guide for Prospective Anthropology Majors</i>, which is available from the anthropology program coordinator.</p> <p>Total credit hours required for graduation: (120)</p>
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RATIONALE: After carefully assessing our program and surveying our current majors, minors, and alums, we concluded that our program needs improvement in 3 areas: 1. Career advising and preparation, 2. Research opportunities for undergraduates, and 3. A stronger sense of community among majors and minors. We designed ANTH 301 as a required course as students enter the major/minor to immediately ground them in the anthropological perspective and to connect them with students, alumni and faculty who can offer career guidance and opportunities.

In addition, there was a minor error in which our Intro courses are listed as 12 hours when in fact they total 13 due to the required lab for ANTH 280 (a 4 credit class).

IMPACT: None

EFFECTIVE DATE: Spring 2015

Social Work BA/BS

FROM:

TO:

<p>Bachelor's degree requirements</p> <p>Tool and related courses required (13 credit hours)</p>	<p>Bachelor's degree requirements</p> <p>Tool and related courses required (13 credit hours)</p>
<ul style="list-style-type: none"> • ANTH 200 – Introduction to Cultural Anthropology Credits: (3) • or • ANTH 204 – A General Education Introduction to Cultural Anthropology Credits: (3) • BIOL 198 – Principles of Biology Credits: (4) • PSYCH 110 – General Psychology Credits: (3) • SOCIO 211 – Introduction to Sociology Credits: (3) <p>Tool and related courses elective (6 credit hours)</p>	<ul style="list-style-type: none"> • ANTH 200 – Introduction to Cultural Anthropology Credits: (3) • or • ANTH 204 – A General Education Introduction to Cultural Anthropology Credits: (3) • BIOL 198 – Principles of Biology Credits: (4) • PSYCH 110 – General Psychology Credits: (3) • SOCIO 211 – Introduction to Sociology Credits: (3) <p>Tool and related courses elective (6 credit hours)</p>
<ul style="list-style-type: none"> • ECON 110 – Principles of Macroeconomics Credits: (3) • or • ECON 120 – Principles of Microeconomics Credits: (3) • POLSC 110 – Introduction to Political Science Credits: (3) • or • POLSC 301 – Introduction to Political Thought Credits: (3) <p>Human behavior and the social environment content (6 credit hours)</p>	<ul style="list-style-type: none"> • ECON 110 – Principles of Macroeconomics Credits: (3) • or • ECON 120 – Principles of Microeconomics Credits: (3) • POLSC 110 – Introduction to Political Science Credits: (3) • or • POLSC 301 – Introduction to Political Thought Credits: (3) • or • <u>POLSC 115 – US Politics</u> Credits: (3) <p>Human behavior and the social environment content (6 credit hours)</p>
<ul style="list-style-type: none"> • SOCWK 315 – Human Behavior in the Social Environment I Credits: (3) • SOCWK 525 – Human Behavior and the Social Environment II Credits: (3) 	<ul style="list-style-type: none"> • SOCWK 315 – Human Behavior in the Social Environment I Credits: (3)

<p>Social work practice content (15 credit hours)</p> <hr/> <ul style="list-style-type: none"> • SOCWK 200 – Basic Skills for Working with People Credits: (3) • SOCWK 560 – Social Work Practice I Credits: (3) • SOCWK 561 – Social Work Practice II Credits: (3) • SOCWK 568 – Social Work Practice III Credits: (3) • SOCWK 570 – Social Work with Groups Credits: (3) <p>Research content (9 credit hours)</p> <hr/> <ul style="list-style-type: none"> • MATH 100 – College Algebra Credits: (3) • SOCWK 330 – Social Work Research Methods and Analysis I Credits: (3) • SOCWK 530 – Social Work Research Methods and Analysis II Credits: (3) <p>Social policy content (6 credit hours)</p> <hr/> <ul style="list-style-type: none"> • SOCWK 510 – Social Welfare as a Social Institution Credits: (3) • SOCWK 565 – Social Policy Credits: (3) <p>Field Practicum (14 credit hours)</p> <hr/> <ul style="list-style-type: none"> • SOCWK 550 – Field Practicum Preparation Credits: (2) • SOCWK 562 – Field Experience Credits: (10) • SOCWK 564 – Social Work Professional Seminar Credits: (2) <p>Total credit hours required for graduation: (120)</p>	<ul style="list-style-type: none"> • SOCWK 525 – Human Behavior and the Social Environment II Credits: (3) <p>Social work practice content (15 credit hours)</p> <hr/> <ul style="list-style-type: none"> • SOCWK 200 – Basic Skills for Working with People Credits: (3) • SOCWK 560 – Social Work Practice I Credits: (3) • SOCWK 561 – Social Work Practice II Credits: (3) • SOCWK 568 – Social Work Practice III Credits: (3) • SOCWK 570 – Social Work with Groups Credits: (3) <p>Research content (9 credit hours)</p> <hr/> <ul style="list-style-type: none"> • MATH 100 – College Algebra Credits: (3) • SOCWK 330 – Social Work Research Methods and Analysis I Credits: (3) • SOCWK 530 – Social Work Research Methods and Analysis II Credits: (3) <p>Social policy content (6 credit hours)</p> <hr/> <ul style="list-style-type: none"> • SOCWK 510 – Social Welfare as a Social Institution Credits: (3) • SOCWK 565 – Social Policy Credits: (3) <p>Field Practicum (14 credit hours)</p> <hr/> <ul style="list-style-type: none"> • SOCWK 550 – Field Practicum Preparation Credits: (2) • SOCWK 562 – Field Experience Credits: (10) • SOCWK 564 – Social Work Professional Seminar Credits: (2) <p>Total credit hours required for graduation: (120)</p>
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RATIONALE: POLSC 115 – US Politics offers relevant content for social workers and the program wishes it to also fulfill our Political Science requirement (in addition to 301 and 110). Presently, the Dean's Office approves this course when we ask them to; we hope to change this in the catalogue so that continual contact with and requests of the Dean's office are not necessary. In addition, it will provide our majors and transfer students' additional options for social science requirements.

IMPACT: Political Science

EFFECTIVE DATE: Fall 2014