Meeting of the College Academic Council
College of Liberal Arts & Sciences
210 Strong Hall
May 8, 2007 – 4:00 p.m.

AGENDA

I. APPROVAL OF THE APRIL 10, 2007 CAC MINUTES

II. REPORT OF THE COMMITTEE ON GRADUATE STUDIES (CGS)
   Presented by Danny Anderson, submitted by Lindsey McCombs
   A. Curricular Changes for Approval:
      MATH 886, SPAN 784

III. REPORT OF COMMITTEE ON UNDERGRADUATE STUDIES & ADVISING (CUSA)
    Presented by Anthony Walton, CUSA Chair, submitted by Carol Miner
    A. Curricular Changes for Approval:
       ABSC 560, BIOL 676, CHEM 641, CHEM 646, CHEM 647, CHEM 648, CHEM 649, COMS 130, COMS 131, ECON 582, LA&S 290, LA&S 291, PHSX 201, PSYC 625, REES 221, SOC 420, SOC 615
    B. Degree Requirements for Approval:
       1. Principal Course Changes
       2. New Brazilian Studies Minor
       3. Proposal for New Minor in Social & Behavioral Sciences Methodology
    C. Report of Action:
       1. LA&S 101, LA&S 292, LA&S 301
       2. Change to existing Psychology Major
       3. Changes to existing B.A. Chemistry Major
       4. Change to existing B.S. Chemistry Major – Physical Chemistry Option
       5. Change to existing B.S. Chemistry Major – Biochemistry Option
       6. Change to existing B.S. Chemistry Major – Chemical Physics Option
       7. Change to existing B.S. Chemistry Major – Environmental Chemistry Option
       8. Change to existing B.S. Chemistry Major
       9. Change to existing Chemistry Minor
    D. Old Business
       - MATH 221, MATH 243 & MATH Wording

IV. RECOMMENDATION FROM COMMITTEE ON UNDERGRADUATE STUDIES AND ADVISING (CUSA)
   ONPLUS/MINUS GRADING SYSTEM
I. APPROVAL OF THE APRIL 10, 2007 CAC MINUTES

College of Liberal Arts & Sciences
College Academic Council
April 10, 2007
Minutes

- The meeting was called to order by Dean Steinmetz.

- CAC voted and approved the March 13, 2007 minutes.

- CAC voted and approved BIOL 750, BIOL 752, BIOL 753, BIOL 776, BIOL 811, BIOL 812, BIOL 813, BIOL 814, BIOL 815, BIOL 902, BIOL 918, BIOL 925, ENGL 779.

- CAC voted and approved the M.A. and Ph.D. in Molecular Biosciences.

- CAC voted and approved AAAS 557, GEOG 557, HEBR 330, HEBR 340, PHIL 320, SLAV 564, SOC 161.

- CAC tabled MATH 221, MATH 243, MATH 291, pending clarification.

- The meeting was adjourned at 4:25 p.m.
II. REPORT OF THE COMMITTEE ON GRADUATE STUDIES (CGS)
Presented by Danny Anderson, submitted by Lindsey McCombs

B. Curricular Changes for Approval:

**NEW COURSE**

**MATH 886 STOCHASTIC PROCESSES II (3)**
This is a second course in stochastic processes, focused on stochastic calculus with respect to a large class of semi-martingales and its applications to topics selected from classical analysis (linear PDE), finance, engineering, and statistics. The course will start with basic properties of martingales and random walks and then develop into the core program on Ito’s stochastic calculus and stochastic differential equations. These techniques provide useful and important tools and models in many pure and applied areas. Prerequisite: MATH 727 and MATH 865.

**CHANGE: COURSE TITLE, PREREQUISITE, COURSE DESCRIPTION**

**SPAN 784 SPANISH-AMERICAN MODERNISM (3)**
(OLD) A study of the poetry and prose of the modernist movement in Spanish America. Prerequisite: A survey of Spanish American literature from Marti to the present. LEC

**SPAN 784 SPANISH-AMERICAN MODERNISM AND VANGUARDS (3)**
(NEW) A study of the poetry and/or prose of *modernismo* and the vanguards in Spanish America. Prerequisite: One course in Spanish American literature or permission of instructor. LEC

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III. REPORT OF COMMITTEE ON UNDERGRADUATE STUDIES & ADVISING (CUSA)
Presented by Anthony Walton, CUSA Chair, submitted by Carol Miner

B. Curricular Changes for Approval:

**CHANGE: PREREQUISITE**

**ABSC 560 THE JUVENILE JUSTICE SYSTEM: A BEHAVIORAL AND LEGAL PERSPECTIVE (3) S**
(OLD) An overview of the juvenile justice system, including the history, development, and current controversy over children's rights in the legal system examined in light of relevant principles of behavioral science and behavioral systems of rehabilitation. Topics include delinquency, miscreancy, status offenses, dependent-neglected children, child abuse, juvenile court procedures and personnel (e.g., probation officers), and rehabilitative programs. Prerequisite: ABSC/ HDFL 140. (Formerly HDFL 560.)

**ABSC 560 THE JUVENILE JUSTICE SYSTEM: A BEHAVIORAL AND LEGAL PERSPECTIVE (3) S**
(NEW) An overview of the juvenile justice system, including the history, development, and current controversy over children's rights in the legal system examined in light of relevant principles of behavioral science and behavioral systems of rehabilitation. Topics include delinquency, miscreancy, status offenses, dependent-neglected children, child abuse, juvenile court procedures and personnel (e.g., probation officers), and rehabilitative programs. Prerequisite: ABSC 100 (Formerly HDFL 560.)
NEW COURSE

BIOL 676
MAMMALIAN NEUROANATOMY (3) N
Lectures, video tape demonstrations, and laboratory dissection of mammalian nervous system with some attention to human material. Major emphasis on nervous system structure as it relates to function. For neurobiology and pre-health science majors. Prerequisite or Corequisite: A course in neurobiology (BIOL 435, BIOL 650), or permission of the instructor.

NEW COURSE

CHEM 641
BIOLOGICAL PHYSICAL CHEMISTRY LABORATORY (2) U
A course particularly for biology, biochemistry, and premedical students. Experiments in physical chemistry illustrating the fundamental principles of quantum mechanics, spectroscopy, thermodynamics, and kinetics as applied to chemical systems. Prerequisite: CHEM 640.

CHANGE: COURSE DESCRIPTION, TITLE, CREDIT

CHEM 646
INTRODUCTION TO PHYSICAL CHEMISTRY (4) N
(OLD) An introduction to the basic principles of quantum mechanics, atomic and molecular structure, spectroscopy, thermodynamics, change of state, chemical equilibria, statistical thermodynamics, and chemical kinetics. Prerequisite: CHEM 188, PHSX 211 and PHSX 212, and MATH 121 and MATH 122.

(NEW) An introduction to the basic principles of quantum mechanics, atomic and molecular structure, molecular rotations and vibrations, group theory, spectroscopy, and statistical mechanics. Prerequisite: CHEM 188; PHSX 211 and PHSX 212; and MATH 121 and MATH 122; and completion of, or concurrent enrollment in MATH 290 or consent of instructor.

CHANGE: COURSE DESCRIPTION, PREREQUISITE

CHEM 647
PHYSICAL CHEMISTRY I LABORATORY (2) U
(OLD) One four-hour laboratory and one one-hour lecture per week. Experiments in physical chemistry, with emphasis on thermodynamics and kinetics. Prerequisite: CHEM 646 or CHEM 640 or concurrent enrollment in CHEM 646 or CHEM 640.

(NEW) Experiments in physical chemistry, with emphasis on the fundamental principles of quantum mechanics and spectroscopy as applied to chemical systems. Prerequisite: CHEM 646.

CHANGE: COURSE DESCRIPTION, PREREQUISITE, TITLE, CREDIT

CHEM 648
MOLECULAR PHYSICAL CHEMISTRY (3) N
(OLD) A course building on the principles introduced in CHEM 646, emphasizing the quantum chemistry, spectroscopy, group theory, and the thermodynamics of molecular systems, as well as their application to the structure and properties of gases, liquids, solids, materials, and other areas of modern physical chemistry. Prerequisite: CHEM 646 and MATH 123 or consent of instructor.

(NEW) Emphasizes the thermodynamics of molecular systems with application to the structure and properties of gases, liquids, solids, materials, statistical thermodynamics, chemical kinetics, and reaction dynamics. Prerequisite: CHEM 646; MATH 223 and MATH 290 or consent of instructor.
CHANGE: COURSE DESCRIPTION, PREREQUISITE

CHEM 649 PHYSICAL CHEMISTRY II LABORATORY (2) U
(OLD) One four-hour laboratory and one one-hour lecture per week. Experiments in physical chemistry, with emphasis on spectroscopy. Prerequisite: CHEM 648 or concurrent enrollment in CHEM 648.

CHEM 649 PHYSICAL CHEMISTRY II LABORATORY (2) U
(NEW) One four-hour laboratory and one one-hour lecture per week. Experiments in physical chemistry, with emphasis on the fundamental principles of chemical thermodynamics and kinetics. Prerequisite: CHEM 648 or consent of instructor.

CHANGE: COURSE DESCRIPTION

COMS 130 SPEAKER-AUDIENCE COMMUNICATION (3) U
(OLD) Study of rhetorical theory and its application to the preparation, presentation, and criticism of oral discourse in audience situations. Special consideration of listening behavior and of the ethical conduct of speech in a free society. This course fulfills the College oral communication requirement. Not open to students with credit in COMS 150/COMS 151.

COMS 130 SPEAKER-AUDIENCE COMMUNICATION (3) U
(NEW) Study of rhetorical theory and its application to the preparation, presentation, and criticism of oral discourse in audience situations. Special consideration of listening behavior and of the ethical conduct of speech in a free society. This course fulfills the College oral communication requirement.

CHANGE: COURSE DESCRIPTION

COMS 131 SPEAKER-AUDIENCE COMMUNICATION, HONORS (3) U
(OLD) The study of rhetorical theory and its application to the preparation, presentation, and criticism of oral discourse in audience situations. Special consideration of listening behavior and of the ethical conduct of speech in a free society. This course fulfills the College oral communication requirement. Not open to students with credit in COMS 150/151. This is an honors section of COMS 130 open only to students in the Honors Program.

COMS 131 SPEAKER-AUDIENCE COMMUNICATION, HONORS (3) U
(NEW) The study of rhetorical theory and its application to the preparation, presentation, and criticism of oral discourse in audience situations. Special consideration of listening behavior and of the ethical conduct of speech in a free society. This course fulfills the College oral communication requirement. This is an honors section of COMS 130 open only to students in the University Honors Program.

CHANGE: TITLE

ECON 582 ECONOMIC GROWTH AND DEVELOPMENT (3) S
(OLD) An introduction to economic growth and development in high and low income countries, problems of development, and development policy. Prerequisite Econ 104 or Econ 142.

ECON 582 ECONOMIC DEVELOPMENT (3) S
(NEW) An introduction to economic growth and development in high and low income countries, problems of development, and development policy. Prerequisite Econ 104 or Econ 142.

NEW COURSE

LA&S 290 APPROACHES TO TEACHING SCIENCE AND MATHEMATICS I (1)
Science and Mathematics students explore teaching as a career by teaching lessons in elementary classrooms in order to obtain first hand experience planning and implementing
inquiry-based curriculum. This course is open to any student who has completed or is concurrently enrolled in a science or mathematics course at KU.

**NEW COURSE**

**LA&S 291**

APPROACHES TO TEACHING SCIENCE AND MATHEMATICS II (1)

Science and Mathematics students continue to explore secondary teaching as a possible career choice by teaching several lessons in a middle school classroom. The students build upon and practice lesson design skills that were developed in LA&S 290, in which they taught in elementary classrooms. Prerequisite: LA&S 290.

**NEW COURSE**

**PHSX 201**

TRANSITION TO GENERAL PHYSICS (1) N

Classical mechanics and thermodynamics with calculus for students who have had a prior algebra-based course. Prerequisite: PHSX 114, either MATH 116 or 121, and permission of the department.

**NEW COURSE**

**PSYC 625**

EXPERIMENTAL PSYCHOLOGY: COGNITIVE NEUROPSYCHOLOGY (6) U

Lectures and laboratory work on human cognition and cognitive neuropsychology research methods. Overview of current central and peripheral nervous system psychophysiological tools. Experience in designing and implementing cognitive neuropsychology research. Prerequisite: PSYC 104 or consent of instructor.

**NEW COURSE**

**REES 221**

SOCIETIES AND CULTURES OF EURASIA, HONORS (3) S

Examines the unique cultures and societies of the Eurasian region (Georgia, Azerbaijan, Armenia, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan and to a lesser degree, Russia, Mongolia and Afghanistan). For the better part of the 20th Century, this distinct region of the world was hidden beneath the communist veneer of the Soviet Union. With the collapse of the USSR, the countries of this region are returning to their historic roots, and this course introduces students to the history, politics, economics, literature and general culture of these countries. Open only to students admitted to the University Honors Program or by permission of instructor.

**NEW COURSE**

**SOC 420**

ARMED FORCES AND SOCIETY (3) U

Examines the military as a social institution. Students analyze both the internal organization and practices of the armed forces and the relationships between the military and other social institutions. It considers the historical forces that have shaped the present. Thus, past events and policies as well as current ones are covered in the course. The primary focus of this course is on the American military and its relationship to American society, but considers the armed forces of other societies. Prerequisite: SOC 104 or permission of instructor.

**NEW COURSE**

**SOC 615**

TECHNIQUES OF DEMOGRAPHIC ANALYSIS (4) U

Examines concepts of demographic measurement and analysis for the study of changes in size, composition and distribution of populations. Students learn to measure and analyze basic population components such as fertility, mortality, migration and health using rates, standardization, decomposition of differences and life tables. Provides an opportunity to develop quantitative skills in the context of human life course processes that might be extended to include the study of employment, incarceration, education and other phenomena. Involves some reliance on calculus, substantial use of statistical software and an extended research project. Course includes a laboratory component. Prerequisite: SOC 510 or equivalent, or permission of instructor.
B. Degree Requirements for Approval:

1. Principal Course Changes

ACTION: New Course

PHIL 320      PHILOSOPHICAL ISSUES IN THE LIFE SCIENCES  3 HR H

DESCRIPTION
A philosophical analysis of theoretical and ethical issues that arise in the practice of the life sciences. The conceptual foundation of the life sciences—evolutionary theory and genetics—will be discussed. The use of statistical and non-human-animal models will be critically explored. Ethical issues to be examined will include problems that arise in human and other animal experimentation, obligations to the environment, proper use of patents, and conflicts in professional duties

JUSTIFICATION
Phil. 320 would provide a junior/senior Principal Course (HR) opportunity of particular interest to the very large number of CLAS undergraduates in the many Life Sciences programs at the University. Its introduction would—assuming the shift of Phil. 288 to Phil. 384 (with changed Principal course status)—constitute the third of the Department of Philosophy’s three junior/senior Principal Courses.

ACTION: New Course

PHIL 384 (formerly 288 - HR)  ANCIENT PHILOSOPHY  3 HR H

DESCRIPTION
A survey of the thought of the principal philosophers of ancient Greece, with emphasis on the pre-Socratics, Plato, and Aristotle.

JUSTIFICATION
Reason for request regarding presently numbered Phil. 288 (384) and Phil. 292 (386): These are comparable courses, each historical in character, and each suitably offering appropriate Principal Course opportunities to CLAS undergraduates (at presently only one of the two, Phil. 288 (384) serves as an HR Principal Course.) The level of difficulty in each is such as to suggest that each be set at the junior/senior level, and so serve as a junior/senior Principal Course. Were the two courses to count as junior/senior Principal courses they would constitute the Department of Philosophy first two and (only two) junior/senior Principal Courses.

ACTION: New Course

PHIL 386 (formerly 292 - not a PC)  MODERN PHILOSOPHY FROM DESCARTES TO KANT  3 HR H

DESCRIPTION
A survey of the writings of such principal philosophers of the modern period as Descartes, Spinoza, Leibniz, Hobbes, Locke, Berkeley, Hume, and Kant.

JUSTIFICATION
Reason for request regarding presently numbered Phil. 288 (384) and Phil. 292 (386): These are comparable courses, each historical in character, and each suitably offering appropriate Principal Course opportunities to CLAS undergraduates (at presently only one of the two, Phil. 288 (384) serves as an HR Principal Course.) The level of difficulty in each is such as to suggest that each be set at the junior/senior level, and so serve as a junior/senior Principal Course. Were the two courses to count as junior/senior Principal courses they would constitute the Department of Philosophy first two and (only two) junior/senior Principal Courses.

2. New Brazilian Studies Minor

PROPOSAL
This is a proposal for an undergraduate minor in Brazilian Studies, because there is no current minor in this area. If approved, this minor will have a program consisting of six, three-credit courses (for a total of 18 credit hours) in which students pursue studies in Brazilian Studies beyond the three first semesters of basic language classes. In consultation with departmental advisors, students combine their coursework in several academic areas, such as language, business, economics, geography, history, theatre and film, and political science.
**Prerequisites:**
- Successful completion of Portuguese 212 Intermediate Brazilian Portuguese I, or equivalent placement.

**3 Required Courses from the following:**
- PORT 216: Intermediate Brazilian Portuguese II or PORT 220 Intensive Brazilian Portuguese (The latter open only to students abroad)
- PORT 300: Brazilian Culture
- PORT 320: Introduction to Portuguese and Brazilian Literature
- PORT 340: Textual Analysis and Critical Reading
- PORT 490: Intensive Advanced Portuguese (Open only to students abroad)

**3 Electives from among the following courses:**
- GEOG 597: Geography of Brazil.
- HIST 579: History of Brazil
- PORT 347: Brazilian Studies
- PORT 348: Portuguese Language and Brazilian Culture for Business
- PORT 365: Studies in Brazilian Film
- PORT 394: Special Readings in Brazilian Studies
- PORT 471: Studies in Brazilian Culture and Civilization
- PORT 475: Studies in Brazilian Literature
- PORT 565: Studies in Brazilian Film

**Depending on their content, the following courses may substitute for the above by petition**
- ECON 582: Economic Growth & Development
- IBUS 303: Business, Culture and Society: Latin America (with at least 1/3 of focus on Brazil and a paper on Brazil)
- HIST 371: Violence and Conflict (with at least 1/3 of focus on Brazil and a paper on Brazil)
- HIST 372: Violence and Conflict (with at least 1/3 of focus on Brazil and a paper on Brazil)
- HIST 580: Economic History of Latin America (with at least 1/3 of focus on Brazil and a paper on Brazil)
- POLS 659: Political Dynamics of Latin America (with at least 1/3 of focus on Brazil and a paper on Brazil)
- TH&F 585: Latin American Film (with at least 1/3 of focus on Brazil and a paper on Brazil)

**JUSTIFICATION**
KU does not currently have an undergraduate minor in Brazilian Studies. Brazil is one of the four countries in the BRIC group – Brazil, Russia, India and China –, which are foreseen as world economic powers by the year 2050. Brazil occupies approximately half of Latin America and it has a population of approximately 190 million, the 5th largest in the world, and it is the leading country in the Mercosur, an area of strategic interest to the US. Consequently a minor focused on Brazil will benefit our students and teachers as well as fit into KU’s current goal to internationalize its campus.

An undergraduate minor in Brazilian Studies will strengthen a number of departments and areas of study like our Department of Spanish and Portuguese, the Center for Latin American Studies, the School of Business to mention some, all of which have an interest in a strong Latin American program to compete for funding from agencies like the US Dept of Education, National Endowment for the Humanities, Fulbright Commission, Ford and Rockefeller Foundations and many others funding institutions. Potential students outside KU and at KU have consulted regularly with the faculty in Spanish and Portuguese about working on a minor in Brazilian Studies or in Portuguese to combine with their majors in other departments.
Proposal for New Minor in Social & Behavioral Sciences Methodology

To: CUSA committee

From: Todd Little, Director, Quantitative Training Program, Department of Psychology
Philip Schrodt, Professor of Political Science
Joann Keyton, Professor of Communication Studies
Jonathan Templin, Assistant professor of Psychology
Kristopher Preacher, Assistant Professor of Psychology

Re: Proposed Undergraduate Minor in Social and Behavioral Sciences Methodology (SBSM)

Introduction: Utilizing current course offerings, this proposal is to implement an undergraduate Minor in Social and Behavioral Sciences Methodology (SBSM) at the University of Kansas. The proposed Minor will be administratively governed by a curriculum committee consisting of Todd D. Little, chair, Philip Schrodt, and Joann Keyton. As of this writing, most departments in the CLAS have already endorsed having their students pursue the Minor if it is approved by CUSA: Applied Behavioral Science, Communication Studies, Linguistics, Political Science, Psychology, Public Administration, Sociology, and Speech Language and Hearing have voted to participate in the proposed Minor and the Department of Mathematics has endorsed this endeavor (see letters of support). Although many of core courses are provided by the faculty in the Psychology Department’s Quantitative Training Program, the goal and general orientation of this Minor is truly interdisciplinary and implies broader, college-wide participation and availability. The reason that the bulk of the courses are offered through Psychology is because Psychology has a dedicated quantitative training specialty with 3 FTE who, as quantitative specialists, only teach quantitative courses. Faculty members from other programs have been recruited to contribute courses that would serve the Minor. Specifically, the College’s recruitment efforts for hiring faculty to teach quantitative methods in the social sciences has brought in a number of qualified persons and as these individual become established at KU we expect that they will want to develop courses that are oriented to this Minor.

Purpose: The SBSM Minor is designed to provide undergraduates with advanced training in quantitative and qualitative methodology as applied in the behavioral social sciences. The goal of this Minor is to provide opportunities for qualified undergraduates in the behavioral and social sciences to develop critical analytic and research skills in their fields of study. The proposed 18-unit Minor is truly interdisciplinary in nature because the key research component of the Minor is supported by faculty from all participating departments.

Motivation: This Minor is intended to fulfill a number of valued initiatives in the College of Liberal Arts and Sciences, the University of Kansas, and various academic disciplines that are part of the behavioral and social sciences.

1) In accordance with the undergraduate research initiative, the proposed Minor will provide a conduit for channeling undergraduates into high quality undergraduate research activities.
2) In accordance with sweeping calls for greater interdisciplinary collaboration, the proposed Minor will be a central gathering point that will bring students and faculty from various behavioral and social science disciplines together to work toward a common goal.
3) In accordance with tuition enhancement goals of increasing the quantitative expertise at KU, the proposed Minor will provide a training platform that will allow undergraduates to achieve a level of quantitative skill and expertise that is equivalent to approximately that of a beginning graduate student. Much like programs that permit high school students to enroll and participate in college-level courses as preparation for college, the proposed Minor will allow undergraduates to participate in graduate-level courses that will provide them with greater post-graduate opportunities than typical graduating students (see student benefits).
4) In accordance with discipline-wide calls for greater training and development of quantitative experts, the proposed Minor will provide rich exposure to the ‘next level’ of quantitative research and will encourage more students to choose careers in quantitative methodology. The proposed Minor has invited the attention of the American Psychological Association’s Task Force on Increased Quantitative Expertise as a potential model for other universities that have quantitative training programs.

Benefits to KU undergraduates: The proposed Minor will provide qualified KU undergraduates with an opportunity to learn and develop extremely critical and marketable skills in applied quantitative/statistical data analysis. Students who graduate with this Minor will enjoy a) greater opportunities for advanced graduate training either in a substantive area of interest or in a specialization in quantitative techniques and b) a competitive edge in the job market because they will possess analytic (and the corresponding logical) skills needed for interpreting and understanding behavioral and social science data, such as those encountered in the fields of government intelligence, corporate marketing, and educational testing. In 2006, one psychology major unofficially completed the requirements of the proposed Minor. He applied to the
top six quantitative Ph.D. programs in the U.S. and was accepted to each program. We expect that most students who participate in the SBSM Minor will have similar success. As part of this student’s education, he also conducted an honors thesis and presented his work at a national conference. Although many of these students will have ample opportunity to write an honors thesis and present their work at conferences, these valuable activities are not requirements of the Minor. Instead, we expect these activities to result naturally from their pursuit of the SBSM Minor.

Prerequisites: Because of the structure of the Minor, students will be encouraged to begin pursuit of the Minor at end of their sophomore year or the beginning of their junior year. A minimum KU GPA of 3.0 is recommended for admittance to the Minor, but this is not required. Students must have completed a course in elementary statistics prior to pursuing the SBSM Minor (e.g., COMS 356; MATH 365, 526; POLS 306; PSYC 300; PUAD 332; SOC 510).

Minor requirements: This Minor will require 18 units minimum of Minor-specific training:

1) PSYC 650 Statistics for the Behavioral and Social Sciences I (4)
2) PSYC 651 Statistics for the Behavioral and Social Sciences I (4)
3) Directed Reading/Independent Study/Research Practicum, or equivalent (3 min.) Offered within the program where students will be mentored
For example, ABSC 698/COMS 499/ POLS 493/ PSYC 480 or 481/
PUAD 693 or 695/SPLH 498, 499/SOC 481
4) Additional Elective 600-level offerings in a specialized methodology course (3 min.)

A number of specialized methodology courses will be offered regularly to support the Minor. Each course is a 4 unit course because it consists of 3 hours of lecture and a 1 hour lab where practice with applying the techniques is done:

COMS 655: Survey of Qualitative Research Methods (4) – to be introduced in 2007
POLS 6xx: Methods of Time Series Analysis (4) – to be introduced in 2008
PSYC 692: Test Theory (4)
PSYC 693: Multivariate Analysis (4)
PSYC 694: Multilevel Modeling I (4)
PSYC 695: Categorical Data Analysis (4)
PSYC 696: Structural Equation Modeling I (4)
SOC 6xx: Techniques of Demographic Analysis (4) – to be introduced in 2009

More courses will be offered depending on the needs of participating departments and the availability of qualified faculty to teach such courses. However, the current set of available courses cover a broad set of advanced techniques that will be relevant to the student’s training goals and needs

Only one course taken to fulfill the requirements of this Minor may be used to fulfill the requirement of any major in participating CLAS departments or programs.

Justification for cross-listing these courses at the undergraduate and graduate levels. All of the PSYC courses needed for the Minor have been approved by the CUSA subcommittee for cross-listing with graduate level course of the same topic (the COMS, POLS, and SOC courses will be submitted for approval soon). Each course on the use of quantitative analytic techniques in the behavioral and social sciences covers very specific content that is presented in a lecture/tutorial manner. Well-written textbooks are available for each of the content areas presented. Moreover, each course has a lab session in which the material presented in lecture is practiced and one-on-one consultation with a qualified teaching assistant is provided. Undergraduates who have taken these courses in the past have performed just as well as the 1st and 2nd year graduate students, even without the existence of the lab component that was recently added to each of these courses when they were proposed and approved by CUSA.

Proposed catalog description:

Minor in Social and Behavioral Sciences Methodology (SBSM)

The Minor in Quantitative Behavioral and Social Sciences is a program that provides undergraduate students a broadened and coordinated platform for advanced training in research methodology and practical research experience.
Students electing to minor in SBSM are provided with an opportunity to receive advanced training in quantitative and qualitative methods as applied in the behavioral and social sciences. This Minor allows students to develop graduate-level expertise in applied statistical methods. Students who graduate with this Minor acquire skills that will significantly enhance their career opportunities in areas related to their primary major (e.g., sociology, political science, psychology, a foreign language).

Pre-Requisites for the Minor
Because of the structure of the Minor requirements, students should begin pursuit of the Minor at the end of their Sophomore year or the beginning of their Junior year. A minimum GPA of 3.0 is recommended for admittance to the Minor, but this is not required.

Students must have completed a course in elementary statistics prior to pursuing the SBSM Minor (e.g., COMS 356; MATH 365, 526; POLS 306; PSYC 300; PUAD 332; SOC 510). Any equivalent course may be approved with the consent of the program director.

Requirements for the Minor
Students must complete a minimum of 18 hours of coursework and research experience (minimum 3 units of directed reading/independent study and/or research practicum). The sum of these credits is realized when the following requirements are fulfilled:

1) A year-long required sequence in the fundamentals of statistical analysis: PSYC 650 and PSYC 651.
2) A minimum of 3 hours of guided research units within the context of a faculty mentor’s program of research.
3) At least one additional graduate-level course on a more specialized methodological topic (3 credit hours, minimum). The specific course(s) to be taken would be determined based on the student’s research needs (point 2 above) and overall career objectives.

Only one course taken to fulfill the requirements of the Minor may be used to fulfill requirements of the student’s major.

Key courses that service the SBSM Minor

Already available courses:

PSYC 650  Statistical Methods in Behavioral and Social Science Research I  (4)
Elementary distribution theory; t-test; simple regression and correlation; multiple regression and multiple correlation; curvilinear regression; logistic regression; general linear model. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as PSYC 790 will have different course requirements. Prerequisite: a beginning course in statistics (e.g., PSYC 300, MATH 365, POLS 306, COMS 356, SOC 510, or equivalent), or consent of instructor. LEC

PSYC 651  Statistical Methods in Behavioral and Social Science Research II  (4)
Continuation of PSYC 651. One-way analysis of variance, linear trends, contrasts, post hoc tests; multi-way analysis of variance for crossed, blocked, nested, and incomplete designs; analysis of covariance; repeated measures analysis of variance; general linear model. Applications across the social, educational, and behavior sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as PSYC 791 will have different course requirements. Prerequisite: PSYC 650 (a grade of B or better recommended), or consent of instructor. LEC.

PSYC 692  Test Theory  (4)
This is an introductory course that takes a unified approach (from classical and modern test theory) to the topic of measurement in the behavioral and social sciences. Content covered includes the construction and administration of psychological tests (e.g., intelligence, achievement, and personality); practice in test construction, administration, and validation; and how to assess the reliability and generalizability of an instrument. Applications across the social and behavior sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as PSYC 892 will have different course requirements. Prerequisites: PSYC 650 and 651 (a grade of B or better recommended), or consent of instructor. LEC.
PSYC 693  Multivariate Analysis (4)
Introduction to the central methods used in the analysis of multivariate data. Includes linear transformations, multivariate analysis of variance, multivariate multiple regression, discriminant analysis, canonical correlation, factor analysis, and an introduction to methods for clustering and classification. Applications across the behavior and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as PSYC 893 will have different course requirements. Prerequisites: PSYC 650 and 651 (a grade of B or better recommended), or consent of instructor. LEC

PSYC 694  Multilevel Modeling I (4)
Introduction to statistical methods for modeling multilevel (hierarchically structured) data. Topics include a review of ordinary least squares regression analysis, random effects ANOVA, intraclass correlation, multilevel regression, testing and probing interactions, maximum likelihood estimation, model assumptions, model evaluation, and the analysis of longitudinal data. Emphasis will be on the theory underlying multilevel modeling techniques and hands-on application using software. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as PSYC 894 will have different course requirements. Prerequisites: PSYC 650 and 651 (a grade of B or better recommended), or consent of instructor.. LEC

PSYC 695  Categorical Data Analysis (4)
Introduction to multivariate analyses of count data, including error models, statistical inference, loglinear models, logit models, logistic regression, homogeneity, symmetry, and selected other topics. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as PSYC 895 will have different course requirements. Prerequisites: PSYC 650 and 651 (a grade of B or better recommended), or consent of instructor. LEC

PSYC 696  Structural Equation Modeling I (4)
Introduction to statistical methods for modeling latent variables. Topics include a review of latent variables, covariance structures analysis, mean structures analysis, confirmatory factor analysis (CFA), structural equation modeling (SEM), multiple group CFA, longitudinal CFA, longitudinal SEM, and hierarchical CFA. Applications across the behavioral and social sciences are emphasized. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as PSYC 896 will have different course requirements. Prerequisites: PSYC 650 and 651 (a grade of B or better recommended), or consent of instructor. LEC

In preparation:

COMS 655  Survey of Qualitative Methods (4)
Survey of methods for collecting and analyzing qualitative data, including participant observation, interviews, and, focus groups. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as COMS 855 will have different course requirements. Prerequisites: COMS 356 or equivalent, or consent of instructor. LEC

POLS 691  Time Series Analysis (4)
This course is a general introduction to statistical methods for analyzing time series data. The course will initially consider difference equations and basic autoregressive models, time-series cross-sectional estimation, and event history/hazard models. Additional topics, depending on student interests, may include vector autoregression, cointegration models, Poisson regression, and transfer function analysis. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as POLS 906 will have different course requirements. Prerequisites: PSYC 650 and 651 (a grade of B or better recommended), or consent of instructor. LEC

SOC 6xx  Techniques of Demographic Analysis (4)
This course is designed to introduce students to concepts of demographic measurement and analysis for the study of changes in size, composition and distribution of populations. Students will learn how demographers measure and analyze basic population components such as fertility, mortality, migration and health. Course consists of three hours of lecture and a required one-hour lab session where computing applications are taught. Students taking this course as SOC 8xx will have different course requirements. Prerequisites: SOC 510, or consent of instructor. LEC
Attached are letters of support from

Research Training Coordinator, John Augusto
Honors Program Director, Stanley Lombardo
Lifespan Institute Director, Steve Warren
Chair of Applied Behavioral Science, Edward Morris
Chair of Communication Studies, Robin Rowland
Chair of Economics, Joe Sicilian
Chair of Linguistics, Sara Rosen
Chair of Psychology, Greg Simpson
Chair of Political Science, Elaine Sharp
Chair of Public Administration, John Nalbandian
Chair of Sociology, William Staples
Chair of Speech Language and Hearing, Hugh Catts
Chair of Mathematics, Jack Porter

Note: at an earlier time, we referred to the Minor as Quantitative Behavioral and Social Sciences (QBSS – the title that the letter writers reference); however, with the inclusion of qualitative methods, we have renamed it Social and Behavioral Sciences Methodology (SBSM).

C. Report of Action:

1. LA&S 101, LA&S 292, LA&S 301

<table>
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<th>Topic</th>
<th>Description</th>
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| **LA&S 101** | **LEARNING COMMUNITIES SEMINAR: HAWK LINK: SOPHOMORE TRANSITIONS** (1) U  
Focuses on sophomore adjustment and retention, by helping to develop educational planning, identity formation and personal and professional direction and achievement. Examines work skills, career values and major career exploration through campus and community involvement. |
| **LA&S 101** | **LEARNING COMMUNITIES SEMINAR: OPENING SKINNER'S BOX: ETHICS AND PSYCHOLOGICAL RESEARCH OF THE 21ST CENTURY** (1)  
This seminar uses the text Opening Skinner's Box, which analyzes several psychological studies of the 21st century. Students contemplate issues such as the Stanford Prison Project and the Milgram experiment, asking the essential question of ethics in performing research with human subjects. |
| **LA&S 101** | **LEARNING COMMUNITIES SEMINAR: INTRODUCTION TO HUMANITIES** (1)  
Explores the role of humanities in a liberal education, and explores interdisciplinary approaches to understanding and analysis of texts, and offers perspectives and methods of humanities study; intended for freshmen and for students interested in majoring in humanities disciplines. |
| **LA&S 292** | **TOPICS AND PROBLEMS ON: RESEARCH METHODS AND INFORMATION LITERACY** (1)  
An introduction to the research process and methods for retrieving information in a library or through online sources. Students will learn how to think critically about research, select a topic, and retrieve information on a variety of topics. Focus of the class is on developing the following critical thinking and information literacy skills: understanding the research process; selecting relevant print and electronic sources;
effectively using Web search engines and KU's electronic resources to find information; and evaluating, organizing, and correctly citing the information found.

**NEW TOPIC**

**LA&S 301 LEARNING COMMUNITIES SEMINAR: CHANCELLOR'S LC: END OF GLOBAL POVERTY (1)**

The goal of this learning community is to create an understanding of global poverty and its affect on society and individual development. This community is for upper-level honors students.

2. **Change to existing Psychology Major**

**PROPOSAL**

Add PSYC 625. Experimental Psychology: Cognitive Neuropsychology (6 hours) as a substitute for PSYC 310. Add PSYC 625 as a substitute for PSYC 310 for the admissions requirements to the psychology major.

**JUSTIFICATION**

Give a brief, but complete, explanation of the reasons for making the proposal. PSYC 618, 620, 622, and 624 already substitute for PSYC 310. This is the same type of Experimental Psychology course, but with an emphasis on Cognitive Neuropsychology.

3. **Changes to existing B.A. Chemistry Major**

**PROPOSAL**

We have recently submitted to CUSA a package of course changes in our physical chemistry curriculum. One of these is the creation of a new course: CHEM 641 Biological Physical Chemistry Laboratory (2). We request the following changes to the course requirements for the BA in Chemistry, the BA in Chemistry with biological emphasis, and the BA in Chemistry with environmental emphasis.

**Old Requirement:**

- CHEM 640 (or 646) Physical Chemistry (3-4)
- CHEM 647 Physical Chemistry Laboratory I (2)

**New Proposed Requirement:**

- CHEM 640 Biological Physical Chemistry (3) and CHEM 641 Biological Physical Chemistry Laboratory (2)
- or
- CHEM 646 Physical Chemistry I (3) and CHEM 647 Physical Chemistry Laboratory I (2)

**JUSTIFICATION**

Our current first semester physical chemistry laboratory (CHEM 647) is taken both by students in CHEM 640 (Biological physical Chemistry) and 646 (our course primarily for BS majors and Chem. Engs.). Because we are changing the curriculum for CHEM 646, so that it is no longer compatible with 640 and because the students in CHEM 640 are not required to have as high a math level as those in CHEM 646, it will be no longer appropriate to have these two groups of students in the same laboratory course. We are creating a new course, CHEM 641, that is designed to replace CHEM 647 for students taking CHEM 640. Because CHEM 640 is the primary required physical chemistry course taken by our BA majors, we need to change the BA course requirements appropriately.

Under this new plan CHEM 641 and 647 will be taught by one faculty member in much the same way CHEM 647 is currently taught. However, they will have separate enrollment, so a different set of experiments and separate grading. Further, this will allow for some joint 2 hour lectures early in the semester to cover in detail common concepts including safety, error analysis, keeping a laboratory notebook, and report writing, but can meet separately for one hour each later in the semester for discussions of specific experiments.

Note that this degree program change is contingent on approval for our package of physical chemistry curriculum reforms that has been recently submitted to CUSA.
4. Change to existing B.S. Chemistry Major – Physical Chemistry Option

PROPOSAL
We have recently submitted to CUSA a package of course changes in our physical chemistry curriculum. In these changes, the number of hours for CHEM 646 has been changed from 4 to 3 and the number of hours for CHEM 648 has been changed from 3 to 4. Because of this, we request the following changes to the course requirements for BS Chemistry Major and the BS Chemistry Majors options with emphasis in biochemistry, chemical physics and environmental.

Old Requirement:

CHEM 646 Physical Chemistry I (4)
CHEM 647 Physical Chemistry I Laboratory (2)
CHEM 648 Physical Chemistry II (3)
CHEM 649 Physical Chemistry II Laboratory (2)

New Proposed Requirement:

CHEM 646 Physical Chemistry I (3)
CHEM 647 Physical Chemistry I Laboratory (2)
CHEM 648 Physical Chemistry II (4)
CHEM 649 Physical Chemistry II Laboratory (2)

JUSTIFICATION
Because we are proposing a rearrangement of the content in our two-semester physical chemistry sequence for BS majors (and Chemical Engineers), this necessitates a change in our requirements for the BS Chemistry Major and its various options (biochemistry, chemical physics, environmental). Currently CHEM 646 is a 4-hour course and CHEM 648 is 3 hours. Because much of the content in 648 is being moved to 646 and that in 646 to 646, it is necessary to change the hours accordingly.

5. Change to existing B.S. Chemistry Major – Biochemistry Option

PROPOSAL
Change to Chemistry Major, B. S.: Biochemistry Option

Requirements for the B. S. in chemistry with the Biochemistry option have included the following mathematics and biochemistry course requirements:

MATH 123 Linear Algebra and Multivariate Calculus (5 credit hours)
BIOL 658 Biochemistry I (3 credit hours)
BIOL 659 Biochemistry Laboratory (3 credit hours)
BIOL 665 Biochemistry II (3 credit hours)

The new requirements will include:

MATH 223 Vector Calculus (3 credit hours)
MATH 290 Elementary Linear Algebra (2 credit hours)
BIOL 636 Biochemistry I (3 credit hours)
BIOL 637 Introductory Biochemistry Laboratory (3 credit hours)
BIOL 638 Biochemistry II (3 credit hours)

Requirements for the B. S. in chemistry with the Biochemistry option have included in the biology option group:

BIOL 404 Introduction to Genetics
The new requirements will replace this with:

BIOL 350 Principles of Genetics

JUSTIFICATION
The mathematics department has restructured its courses. MATH 223 and 290 cover the same material that was previously in MATH 123. The Biology Division has renumbered its courses. BIOL 350, 636, 638 and 637 are the same courses that were previously BIOL 404, 658, 665 and 659. There is no change in content required for our majors with these changes.

6. Change to existing B.S. Chemistry Major — Chemical Physics Option

PROPOSAL
Change to Chemistry Major, B. S.: Chemical Physics Option

Requirements for the B. S. in chemistry with the chemical physics option have included the following mathematics and biochemistry requirements:

- MATH 123 Linear Algebra and Multivariate Calculus (5 credit hours)
- BIOL 658 Biochemistry I (3 credit hours)

The new requirements will include:

- MATH 223 Vector Calculus (3 credit hours)
- MATH 290 Elementary Linear Algebra (2 credit hours)
- BIOL 636 Biochemistry I (3 credit hours)

JUSTIFICATION
The mathematics department has restructured its courses. MATH 223 and 290 cover the same material that was previously in MATH 123. The Biology Division has renumbered its courses. BIOL 636 is the same course that was previously BIOL 658. There is no change in content required for our majors with these changes.

7. Change to existing B.S. Chemistry Major — Environmental Chemistry Option

PROPOSAL
Change to Chemistry Major, B. S.: Environmental Chemistry Option

Requirements for the B. S. in chemistry with the environmental chemistry option have included the following mathematics requirement:

- MATH 123 Linear Algebra and Multivariate Calculus (5 credit hours)

The new requirements will include:

- MATH 223 Vector Calculus (3 credit hours)
- MATH 290 Elementary Linear Algebra (2 credit hours)

JUSTIFICATION
The mathematics department has restructured its courses. MATH 223 and 290 cover the same material that was previously in MATH 123. There is no change in content required for our majors with these changes.

8. Change to existing B.S. Chemistry Major

PROPOSAL
Change to Chemistry Major, B. S.

Requirements for the B. S. in Chemistry have included the following mathematics and biochemistry requirements:

- MATH 123 Linear Algebra and Multivariate Calculus (5 credit hours)
BIOL 658 Biochemistry I (3 credit hours)

The new requirements will include:

MATH 223 Vector Calculus (3 credit hours)
MATH 290 Elementary Linear Algebra (2 credit hours)
BIOL 636 Biochemistry I (3 credit hours)

JUSTIFICATION
The mathematics department has restructured its courses. MATH 223 and 290 cover the same material that was previously in MATH 123. The Biology Division has renumbered its courses. BIOL 636 is the same course that was previously BIOL 658. There is no change in content required for our majors with these changes.

9. Change to existing Chemistry Minor

PROPOSAL
We have recently submitted to CUSA a package of course changes in our physical chemistry curriculum. One of these is the creation of a new course: CHEM 641 Biological Physical Chemistry Laboratory (2). We request the following changes to the course requirements for the Chemistry Minor.

Old Requirement:

Elective Group I Choose 1 (5-6 hours)

CHEM 640 (3) [or 646 (4)] and CHEM 647 (2)
CHEM 516 (3) and 517 (2)

Elective group II Choose 1 (3-4 hours)

CHEM 640 (3) or CHEM 646 (4)
CHEM 516 (3)
CHEM 667 (3)
CHEM 690 (3)

New Proposed Requirement:

Elective Group I (Choose 1) 5 hours

(1) CHEM 640 (3) and CHEM 641 (2)
(2) CHEM 646 (3) and CHEM 647 (2)
(3) CHEM 516 (3) and 517 (2)

Elective group II Choose 1 (3 hours)

CHEM 640 (3) or CHEM 646 (3)
CHEM 516 (3)
CHEM 667 (3)
CHEM 690 (3)

JUSTIFICATION
Our current first semester physical chemistry laboratory (CHEM 647) is taken both by students in CHEM 640 (Biological physical Chemistry) and 646 (our course primarily for BS majors and Chem. Engs.). Because we are changing the curriculum for CHEM 646, so that it is no longer compatible with 640 and because the students in CHEM 640 are not required to have as high a math level as those in CHEM 646, it will be no longer appropriate to have these two groups of students in the same laboratory course. We are creating a new course, CHEM 641, that is designed to replace CHEM 647 for students taking CHEM 640.

Under this new plan CHEM 641 and 647 will be taught by one faculty member in much the same way CHEM 647 is currently taught. However, they will have separate enrollment, so a different set of experiments and separate grading. Further, this will allow for some joint 2 hour lectures early in the semester to cover in detail common
concepts including safety, error analysis, keeping a laboratory notebook, and report writing, but can meet separately for one hour each later in the semester for discussions of specific experiments.

This change also reflects the fact that we are proposing to change the number of hours in CHEM 646 from 4 to 3.

Note that this degree program change is contingent on approval for our package of physical chemistry curriculum reforms that has been recently submitted to CUSA.

D. Old Business

- MATH 221, MATH 243 & MATH Wording

All honor math courses prerequisites include the statement “invitation of the Department of Mathematics”. The Honor math courses are designed for strong students who wish to study mathematics in more depth and who are seeking mathematical challenge. The Math Department sends personal e-mail invitations to selected students. The students are selected based on the recommendation of the instructors in the prerequisite courses. Incoming students are invited based on the selection criteria summarized in http://www.math.ku.edu/academics/undergraduate/calculus-sequences.html. This method of selection of students is common practice in math courses at both college and middle and high schools. The Math Department wants to use this method for the new proposed courses, Math 221, Honors Applied Differential Equations, Math 243, Honors Vector Calculus and Math 291, Honors Elementary Differential Equations.

NEW COURSE

MATH 221 APPLIED DIFFERENTIAL EQUATIONS (HONORS) (3) N
Linear Ordinary Differential Equations, Laplace Transforms, Systems of Equations, Enrichment Applications. Prerequisites: Math 122 or Math 142 or equivalent, and invitation from the Department of Mathematics. Not open to students with credit in Math 320.

NEW COURSE

MATH 243 VECTOR CALCULUS (HONORS) (3) N
Multivariable Calculus, Multiple Integration, Vector Calculus, Enrichment Applications. Prerequisites: Math 122 or Math 142 or equivalent, and invitation from the Department of Mathematics.

NEW COURSE

MATH 291 ELEMENTARY LINEAR ALGEBRA (HONORS) (2) N
Systems of Linear Equations, Matrices, Vector Spaces, Linear Transformations, Enrichment Applications. Prerequisites: Math 122 or Math 142 or equivalent, and invitation from the Department of Mathematics. Not open to students who have taken MATH 590.
IV. PLUS/MINUS GRADING SYSTEM

Committee on Undergraduate Study and Advising
CUSA

On April 10, 2007, the Committee on Undergraduate Study and Advising (CUSA) unanimously recommended to the College Academic Council that the College of Liberal Arts and Sciences adopt use of plus and minus grades for all undergraduate courses (numbered 000 to 699):

1. Effective Fall Semester, 2008, instructors in undergraduate courses in the College may use the grades A, A-, B+, B-, C+, C-, D+, D, D-, F.

2. An A will count 4 grade points in calculating the GPA, A- 3.7, B+ 3.3, B 3, B- 2.7, C+ 2.3, C 2, C- 1.7, D+ 1.3, D 1, D- 0.7, and F 0.

3. CUSA or another committee will conduct a thorough review of plus and minus grading beginning in the Fall semester of 2010 (or two years after the semester of implementation of plus-minus grading).

Supporting Information

I. History of deliberation of proposed changes
II. Reasons for recommending the changes
III. Potential complications of the change
IV. Recommendations for ameliorating potential problems.

I. History of Deliberation of Proposed Changes

1.) Dean Steinmetz, in the course of meeting with Departments throughout the college, heard from many different groups about a desire for plus and minus grading for undergraduate courses within the college.

2.) CUSA discussed this issue at the meeting in February, and a task force of CUSA was formed, consisting of Anthony Walton, CUSA Chair, Robert Carlson, Academic Standards Subcommittee Chair, and Chris Crandall, Advising and Awards Subcommittee Chair.

3.) A proposal was drafted by Prof. Walton, and comments were sought and incorporated into the draft.

4.) The draft proposal was presented to CUSA at a meeting on March 27, and a lengthy discussion followed. No vote was taken, but there was no dissent that such a proposal should be put forward to CAC. There was extensive discussion about how to make the proposal work, what it would take to be effective and worthwhile.

5.) A meeting on April 2 was held, attended the task force members, two student representatives and Kim McNeley, Assistant Dean, Student Academic Services, CLAS. The two student representatives, one a member of CUSA and the Advising and Awards subcommittee, and the other a member of College Assembly and the Dean's Task Force on Undergraduate Education, had a variety of questions. The sense of the meeting was that a good of explaining of the proposal and its intended effect will be essential for its acceptance by students. Both of the student members endorsed the proposal, but did express anxiety about its implementation. The task force agreed that a thorough educational campaign would be necessary to allay students' concerns, and to smooth out the implementation of the change among faculty.

6.) A final draft proposal was written, and presented to CUSA on April 10. After further discussion, the version included in this document passed unanimously.
II. Reasons for recommending the changes

1. Instructors have found that use of only 5 levels of excellence forces them to lump students together whose performance in a course differs substantially. For example, when using a straight scale, this is noticeably true in the C range, where the percentage difference from the lowest C (70.0001%) to the highest (79.9999%) is over 14% of the total score earned, while the difference between the highest C and the lowest B (at 80.0001%) is trivial in percentage terms and well below the sensitivity of the measurement.

2. It is unfair to the best-performing students in each category to lump them with other students whose work earned 10 to 15% less credit. Implementation of plus and minus grades would allow more precise distinctions, and will reflect favorably on students who fall at the top of each of the current categories. This system allows for a more just and accurate grade for students, who deserve this distinction.

3. While boundaries between lower and higher grades will remain, the disadvantage of falling below a boundary is smaller. Students whose performance is only slightly worse than another student will get a slightly lower grade, not a significantly lower grade.

4. Plus and minus grades will encourage greater academic effort of all students, not just those close to boundaries, through the end of the semester. This will discourage "skating" at the end of the semester, where important work may be done.

5. Generally, plus and minus grades will send more useful messages to students (and anyone who reviews transcripts) about student performance. Precise information about student performance is in the best interests of all students and of KU in general, in addition to employers, graduate and professional schools, and the like.

6. The more precise grades will send a more precise feedback to the student. Because of this greater precision, students who are receiving, for example, a B+ student will recognize the small size of performance required to obtain an A-, and similarly a B- student will be informed of their relative nearness to a C+. Students can then take appropriate steps in light of the information.

III. Potential complications of the change

A system of applying plus and minus grades was established in the Spring of 1988 by vote of the College Assembly, but was stopped from taking effect in a subsequent vote. Opposition to the use of plus and minus grades came from students who raised the following points:

1. Plus and minus grades are intended to reverse grade inflation.
2. A plus-minus grading scheme is a disadvantage to KU students, compared to students at institutions that do not use pluses and minuses.
3. Accuracy of grading is not improved by use of plus and minus grades.
4. System will be applied inconsistently; there will be many different grading scales at KU at once.
5. Students will make choices based upon grading scale, which will decrease exploration of different topics.
6. The existence of eleven borderlines instead of four will increase the number of changes of grades. [And perhaps increase the number of requests for changes of grade and grade appeals].
7. Introduction of plus-minus grading changes grading rules in the middle of the education of some students.
8. Plus-minus grading would lower motivation of students to do well in class.
9. Might be unfair to students.
10. Would make students more competitive about grades; already too competitive.

CUSA and the Task Force generated these comments on the points of opposition:

On point 1, the current proposal encourages faculty and instructors who give grades to see that the course GPA does not change when they switch to use of plus and minus grades. While it may not be possible to avoid changes of GPA in practice, and the number of grade points individual students earn in a particular course may increase or decrease, it is not the intent of CUSA to attempt to eliminate grade inflation by means of allowing plus and minus grades. CUSA
encourages making this proposal GPA-neutral, that is, that the overall GPA of the College and of individual classes should remain much the same as it is now.

On point 2, it is clear that a B+ will not put a student at a disadvantage compared to the B he or she would have gotten under the current system. An A- would be a disadvantage compared to an A, but the distinction would make any As the student has earned more valuable. Existence of A- grades makes the 4.0 GPA more difficult to achieve. However, the existence of A- makes the 4.0 more valuable, without significantly diminishing the superb academic accomplishment and future opportunities of the student whose few A- grades mar his or her transcript. In the debate about plus and minus grades in 1988, the point was made that in practice, more plus grades are assigned than minus grades. If so, plus-minus grading would place KU students at a competitive advantage with respect to (the few) schools that do not assign plus and minus grades.

On points 3, 4, and 5. Accuracy in grading is a significant issue, and grading scales are currently inconsistent from class to class. Some students already make course choices based upon the grading practices in courses. Plus and minus grading would be neutral on making grades more accurate and consistent, it only makes grading more precise. It is important to remember that finer distinctions lower the costs to the student of inaccurate grading. Compare the effect dropping from a B to a C to the effect of dropping from a B- to a C+. To the extent that professors can make these distinctions—and the strong sense of the CUSA and the task force was that they could—then inaccuracy will go down, not up. Because of the greater possibility of making distinctions, the average "inaccuracy" that is caused by having a few, very large categories of grading, would be reduced.

On point 6, CUSA felt that increased requests for reconsideration, grade appeals, and grade changes total to a small cost to pay for more precise grading. The views were also expressed that with smaller stakes, the number of grade appeals or requests for reconsideration might actually drop and that changes in the number of requests for grade change would return to existing levels over time. Faculty would have to be informed about the possibility of this consequence.

On point 7, the proposal allows one year of lead time, and that lead time could be increased, if it would eliminate a perception of unfairness. No reasonable change can affect all individual students favorably; the proposed change will have a favorable effect on the student body collectively.

On point 8, CUSA believes that students would actually be motivated to work harder throughout the semester because students will still be able to improve their scores later in the term—instead of accepting a “solid B” and focusing their effort elsewhere, students will have the opportunity to improve to a B+ (or the need to avoid slipping to a B–). Improved comprehension owing to greater effort is an advantage to the student and to KU.

On point 9, CUSA strongly believes that increased precision of grading will increase fairness to students as whole. That is not to say that getting an A– rather than an A will be advantageous to a student, but that same student may well get a B+, not a B, in some other course. The current system discriminates against harder-working and more able students at each letter-grade level. Fairness is one of the strongest arguments in favor of the change to plus and minus grading.

Point 10 is speculative and not possible to evaluate.
IV. Recommendations for ameliorating potential problems

CUUA and the Task Force recommends that:

1. Implementing plus-minus grading does not change the requirements that a student must maintain a 2.0 GPA to remain in good standing and must achieve a 2.0 GPA in all courses to graduate with a Bachelor’s degree. The presence of a D- as a possible grading option does not change the requirement that students should perform at a 2.00 level to be in good standing, or to receive a degree from KU.

2. Similarly, implementation of plus-minus grading does not change the sense that a D (or D-) is the minimum grade necessary to achieve credit in a course.

3.) Instructors are enjoined to take reasonable steps to ensure that use of plus and minus grades does not affect the course grade-point average. The purpose of plus and minus grading is to increase precision and improve feedback. Concerns about grade inflation are irrelevant to plus and minus grading, and CUAA does not intend or endorse using this as an opportunity to change grades—the standards for grading should remain essentially the same.

4.) Instructors will NOT be required to use plus and minus grades. Instead, the proposal merely allows those faculty who wish to use the more finely grained grading scale to do so. Instructors who wish to use a A, B, C, D, F scale may do so.

5.) Instructors must use the grading scale specified in their syllabus, whether that includes plus and minus grades or not. Once a grading scale is specified, instructors are not at liberty to change it to the detriment of students or to the advantage of individual students.