



Campus Curricula Committee Meeting Agenda

November 3, 2014

2:30-4:00 p.m., Room 110H Bertelsmeyer Hall

Review of submitted Course Change forms:

File #4108 Chemistry 3459: Accelerated Physical Chemistry Laboratory
File #4107 Chemistry 5100: Laboratory Safety & Hazardous Materials
File #2560.1 IS&T 5885: Human Computer Interaction
File #1862.5 IS&T 6887: Research Methods in Business and IST
File #4114 Mechanical Engineering 5420: Signal Processing for Instrumentation
File #4115 Marketing 5320: Marketing for Non-Profits

Review of submitted Experimental Course forms:

File #4116 Biological Sciences 2001.TBD: Sleep: Function and Dysfunction
File #4124 Biological Sciences 5001.TBD: Stem Cell Biology and Regenerative Medicine
File #4122 Business 5001.TBD: Financial Statement Analysis
File #4117 Math 1001.TBD: Success for Calculus
File #4131 Music 3001.TBD: Mechanics of Music

RP&A Proposed Motion on Prerequisites

BS Curriculum Standard – Dr. Tom Schuman reporting (see attachment)

Course Inventory Change Request

New Course Proposal

Date Submitted: 08/19/14 3:05 pm

Viewing: **CHEM 3459 : Accelerated Physical Chemistry Laboratory**

File: 4108

Last edit: 10/10/14 10:40 am

Changes proposed by: woelkk

Programs referencing this course	CHEM-BS: Chemistry BS				
Requested Effective Change Date	Spring 2015				
Department	Chemistry				
Discipline	Chemistry (CHEM)				
Course Number	3459				
Title	Accelerated Physical Chemistry Laboratory				
Abbreviated Course Title	Accelerated PChem Lab				
Catalog Description	A combined and accelerated version of Chem 3419 and Chem 3429 consisting of exploratory physical chemistry experiments.				
Prerequisites	Preceded or accompanied by both Chem 3420 and Chem 1100.				
Field Trip Statement					
Credit Hours	LEC: 0	LAB: 2	IND: 0	RSD: 0	Total: 2
Required for Majors	Yes				
Elective for Majors	No				
Justification for new course:	This accelerated course will allow the chemistry department to accommodate more students in the limited PChem laboratory space without sacrificing the quality of the learning experience (when compared to the individually taught labs Chem 3419 and Chem 3439).				
Semesters previously offered as an experimental course					

In Workflow

1. RCHEMIST Chair
2. CCC Secretary
3. Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. Ishelton
11. Peoplesoft

Approval Path

1. 08/19/14 4:13 pm
woelkk: Approved for RCHEMIST Chair
2. 08/19/14 4:22 pm
kleb6b: Approved for CCC Secretary
3. 08/27/14 10:52 am
kleb6b: Approved for Pending CCC Agenda post
4. 08/29/14 9:07 am
kleb6b: Rollback to CCC Secretary for CCC Meeting Agenda
5. 09/04/14 10:34 am
kleb6b: Approved for CCC Secretary
6. 10/10/14 10:41 am
imorgan: Approved for

Co-Listed
Courses:

Sciences DSCC
Chair

Course Reviewer **kleb6b (08/29/14 9:07 am):** Rollback: Correct Work Flow
Comments

Key: 4108

Course Inventory Change Request

New Course Proposal

Date Submitted: 08/19/14 2:01 pm

Viewing: **CHEM 5100 : Laboratory Safety & Hazardous Materials**

File: 4107

Last edit: 10/10/14 10:41 am

Changes proposed by: woelkk

Requested Spring 2015

Effective Change
Date

Department Chemistry

Discipline Chemistry (CHEM)

Course Number 5100

Title Laboratory Safety & Hazardous Materials

Abbreviated Lab Safety & Haz Mat
Course Title

Catalog Description A systematic study of safe laboratory operations and pertinent regulations of state and federal agencies.

Prerequisites Graduate standing.

Field Trip
Statement

Credit Hours LEC: 1 LAB: 0 IND: 0 RSD: 0 Total: 1

Required for
Majors Yes

Elective for
Majors No

Justification for
new course: It is critically important that incoming graduate students receive and have documented a comprehensive laboratory safety and hazardous materials training. The training is essential for all new graduate students working in chemistry laboratory environments and thus should be mandatory.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer **kleb6b (08/29/14 9:07 am):** Rollback: Correct Work Flow
Comments

In Workflow

1. **RCHEMIST Chair**
2. **CCC Secretary**
3. **Sciences DSCC Chair**
4. **Pending CCC Agenda post**
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. Ishelton
11. Peoplesoft

Approval Path

1. 08/19/14 2:02 pm
woelkk: Approved for RCHEMIST Chair
2. 08/19/14 3:51 pm
kleb6b: Approved for CCC Secretary
3. 08/27/14 10:53 am
kleb6b: Approved for Pending CCC Agenda post
4. 08/29/14 9:07 am
kleb6b: Rollback to CCC Secretary for CCC Meeting Agenda
5. 09/04/14 10:36 am
kleb6b: Approved for CCC Secretary
6. 10/10/14 10:42 am
imorgan: Approved for

Key: 4107

Sciences DSCC
Chair

Course Inventory Change Request

Date Submitted: 10/01/14 7:40 am

Viewing: **IS&T 5885 : Human Computer Interaction**

File: 2560.1

Last edit: 10/01/14 1:11 pm

Changes proposed by: barryf

Catalog Pages referencing this course	Business Administration Engineering Management Information Science and Technology
Programs referencing this course	BUS&MS-BS: Business and Mgmt Systems BS E&S COM-MI: Elect & Social Commerce Minor INORGPS-MS: Industrial Organizational Psychology MS IST-BS: Information Science and Tch BS IST-MS: Info Science & Tech MS SCTCPL-MI: Science, Tech,& Politics Minor
Other Courses referencing this course	In The Prerequisites: IS&T 5886 : Human-Computer Interaction Prototyping IS&T 5887 : Human-Computer Interaction Evaluation IS&T 6887 : Research Methods in Business and IST

Requested Effective Change Date	Spring 2015-Fall 2014
Department	Business and Information Technology
Discipline	Info Science & Technology (IS&T)
Course Number	5885
Title	Human Computer Interaction
Abbreviated Course Title	Human Computer Interact

Catalog Description	Introduction to the field of Human-Computer Interaction (HCI). Students examine issues and challenges related to the interaction between people and technology. The class explores the social and cognitive characteristics of people who use information systems. Students learn techniques for understanding user needs, interface prototyping, & and -interface evaluation evaluation .				
Prerequisites	Psych 1101 .				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	Yes				

In Workflow

1. RINFSCTE Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. Ishelton
11. Peoplesoft

Approval Path

1. 10/01/14 1:02 pm
siauk: Approved for RINFSCTE Chair
2. 10/01/14 1:11 pm
kleb6b: Approved for CCC Secretary
3. 10/07/14 10:05 am
barryf: Approved for Social Sciences DSCC Chair

Elective for
Majors

Yes

Justification for
change:

Instructor now covers the few necessary Psychology concepts in class, so
prerequisite is not needed.

Note: The course is required for IST M.S. students; it is elective for undergraduate
students.

Semesters
previously
offered as an
experimental
course

Co-Listed
Courses:

Course Reviewer
Comments

Key: 2560

Course Inventory Change Request

Date Submitted: 10/01/14 7:41 am

Viewing: **IS&T 6887 : Research Methods in Business and IST Human-Computer Interaction**

File: 1862.5

Last approved: 04/25/14 3:06 pm

Last edit: 10/01/14 7:41 am

Changes proposed by: barryf

Catalog Pages referencing this course	Business Administration Information Science and Technology Psychology				
Programs referencing this course	INORGPS-MS: Industrial Organizational Psychology MS TCH CM-MIG: Technical Communication Minor				
Requested Effective Change Date	Fall 2015 2014				
Department	Business and Information Technology				
Discipline	Info Science & Technology (IS&T)				
Course Number	6887				
Title	Research Methods in Business and IST Human-Computer Interaction				
Abbreviated Course Title	HCI -Research Methods Bus&IST				
Catalog Description	This course covers quantitative and qualitative research methods for exploring the interaction between people and information technologies. The course covers techniques and tools for carrying out literature reviews, forming research goals, designing research, conducting data analyses; and preparing manuscripts and live presentations.				
Prerequisites	Preceded or accompanied by IS&T 5885.				
Field Trip Statement					
Credit Hours	LEC: 3-1.5	LAB: 0-1.5	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for Majors	Yes - No				
Justification for change:	Instructor has eliminated the need for the HCI prerequisite. The course has changed to an all-lecture format.				

In Workflow

1. RINFSCTE Chair
2. RBUSADMN Chair
3. CCC Secretary
4. Social Sciences DSCC Chair
5. Pending CCC Agenda post
6. CCC Meeting Agenda
7. Campus Curricula Committee Chair
8. FS Meeting Agenda
9. Faculty Senate Chair
10. Registrar
11. Ishelton
12. Peoplesoft

Approval Path

1. 10/01/14 1:03 pm
siauk: Approved for RINFSCTE Chair
2. 10/01/14 1:54 pm
siauk: Approved for RBUSADMN Chair
3. 10/01/14 1:55 pm
kleb6b: Approved for CCC Secretary
4. 10/07/14 10:05 am
barryf: Approved for Social Sciences DSCC Chair

History

1. Apr 25, 2014 by barryf (1862.1)

Co-list of BUS 6887 is being added and should be created by this form.

Semesters
previously
offered as an
experimental
course

Co-Listed **BUS 6887-- Research Methods in Business and IST**
Courses:

Course Reviewer
Comments

Key: 1862

Course Inventory Change Request

New Course Proposal

Date Submitted: 09/15/14 4:08 pm

Viewing: **MECH ENG 5420 : Signal Processing for Instrumentation and Control**

File: 4114

Last edit: 09/15/14 4:08 pm

Changes proposed by: nisbett

Requested Spring 2015

Effective Change
Date

Department Mechanical & Aerospace Engineering

Discipline Mechanical Engineering (MECH ENG)

Course Number 5420

Title Signal Processing for Instrumentation and Control

Abbreviated
Course Title Signal Processing

Catalog
Description The course presents fundamental techniques for analysis and processing of experimental data and real-time signals. Continuous- and discrete-time development of signal spectra, Fourier Transform, convolution, filter design, and system identification. The emphasis is on practical problems that arise in instrumentation and control applications.

Prerequisites Math 3304; Mech Eng 3411 or permission of instructor for non-Mech Eng majors.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Required for
Majors No

Elective for
Majors Yes

Justification for
new course: This course has been offered twice, and covers material that is of use in the control field of mechanical engineering.

Semesters
previously
offered as an
experimental
course Fall 2010, Fall 2012

Co-Listed
Courses:

In Workflow

1. RMECHENG Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. Ishelton
11. Peoplesoft

Approval Path

1. 09/16/14 6:39 am
drallmei:
Approved for
RMECHENG Chair
2. 09/19/14 7:44 am
kleb6b: Approved
for CCC Secretary
3. 09/22/14 3:01 pm
sraper: Approved
for Engineering
DSCC Chair

Course Reviewer

Comments

Key: 4114

Course Inventory Change Request

New Course Proposal

Date Submitted: 10/01/14 6:03 pm

Viewing: **MKT 5320 : Marketing for Non-Profits**

File: 4115

Last edit: 10/02/14 8:03 am

Changes proposed by: barryf

Requested Spring 2015

Effective Change
Date

Department Business and Information Technology

Discipline Marketing (MKT)

Course Number 5320

Title Marketing for Non-Profits

Abbreviated Course Title
Mktg for Non-Profits

Catalog Description
Illustrates the importance of creating synergy within a marketing campaign. Speaking with "one voice" allows a brand to make a stronger impact; students will work with a local non-profit to improve their marketing message at each customer touch point. Students will analyze a marketing plan and work to improve it, including brochures & donation letters.

Prerequisites
At least Junior standing.

Field Trip
Statement

Credit Hours
LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Required for
Majors
No

Elective for
Majors
Yes

Justification for
new course:
Offered successfully twice.
Note that Title is different from that used for the Experimental Course, but the content is the same.

Semesters
previously
offered as an
experimental
course
Sum 13, Sum 14

Co-Listed
Courses:

In Workflow

1. RBUSADMN

Chair

2. CCC Secretary

3. Social Sciences

DSCC Chair

4. Pending CCC

Agenda post

5. CCC Meeting

Agenda

6. Campus Curricula

Committee Chair

7. FS Meeting

Agenda

8. Faculty Senate

Chair

9. Registrar

10. Ishelton

11. Peoplesoft

Approval Path

1. 10/01/14 6:52 pm

siauk: Approved
for RBUSADMN
Chair

2. 10/02/14 8:03 am

kleb6b: Approved
for CCC Secretary

3. 10/07/14 10:03

am
barryf: Approved
for Social
Sciences DSCC
Chair

Course Reviewer

Comments

Key: 4115

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/22/14 10:35 am

Viewing: **BIO SCI 2001.TBD : Sleep: Function and Dysfunction**

File: 4116

Last edit: 09/22/14 10:52 am

Changes proposed by: shannonk

Requested Spring 2015

Effective Change
Date

Department Biological Sciences

Discipline Biological Sciences (BIO SCI)

Course Number 2001

Topic ID TBD

Experimental Title
Sleep: Function and Dysfunction

Experimental Abbreviated
Course Title
Sleep and Behavior

Instructors Matt Thimgan

Experimental Catalog Description
Students will learn the genes, proteins, and anatomy that govern sleep regulation. The course will also cover how sleep deprivation changes the body and degrades health and performance as well as sleep disorders that may disrupt sleep.

Prerequisites Bio Sci 1213.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Justification for new course: Course is in instructor's area of expertise. Department has need for lower level elective course as many electives are upper level.

Semester(s) previously taught
Sp 2013, Sp 2014

Co-Listed
Courses:

Course Reviewer
Comments

In Workflow

1. RBIO LSCI Chair
2. CCC Secretary
3. Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. Registrar

Approval Path

1. 09/22/14 10:44 am
aronstam:
Approved for
RBIO LSCI Chair
2. 09/22/14 10:52 am
kleb6b: Approved
for CCC Secretary
3. 10/10/14 10:36 am
imorgan:
Approved for
Sciences DSCC
Chair

Key: 4116

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/30/14 8:24 am

Viewing: **BIO SCI 5001.TBD : Stem Cell Biology and Regenerative Medicine**

File: 4124

Last edit: 10/10/14 10:38 am

Changes proposed by: aronstam

Requested Fall 2015

Effective Change
Date

Department Biological Sciences

Discipline Biological Sciences (BIO SCI)

Course Number 5001

Topic ID TBD

Experimental
Title Stem Cell Biology and Regenerative Medicine

Experimental
Abbreviated
Course Title Stem Cell Biology

Instructors Julie Semon

Experimental
Catalog
Description Fundamentals of stem cell biology and regenerative medicine, including niche biology, tissue specificity, epigenetics, tissue regeneration, and political and ethical considerations.

Prerequisites Bio Sci 2213.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Justification for
new course: Progenitor cell biology is a growing field of great importance in medicine. The instructor is engaged in stem cell research. This material is not covered in depth in any other BioSci course.

Semester(s)
previously taught none

Co-Listed
Courses:

Course Reviewer
Comments **kleb6b (09/30/14 7:51 am):** Rollback: Edit Experimental Catalog Description down to 160 characters.

In Workflow

1. RBIOOLSCI Chair

2. CCC Secretary

3. Sciences DSCC
Chair

4. Pending CCC
Agenda post

5. CCC Meeting
Agenda

6. Campus Curricula
Committee Chair

7. Registrar

Approval Path

1. 09/30/14 8:25 am
aronstam:

Approved for
RBIOOLSCI Chair

2. 09/30/14 8:27 am
kleb6b: Approved
for CCC Secretary

3. 10/10/14 10:39
am
imorgan:

Approved for
Sciences DSCC
Chair

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 10/01/14 7:32 am

Viewing: **BUS 5001.TBD : Financial Statement Analysis**

File: 4122

Last edit: 10/01/14 1:10 pm

Changes proposed by: barryf

Requested Spring 2015

Effective Change
Date

Department Business and Information Technology

Discipline Business (BUS)

Course Number 5001

Topic ID TBD

Experimental Financial Statement Analysis
Title

Experimental Financial Statement Anal
Abbreviated
Course Title

Instructors Chiu, Yu-Hsien

Experimental Catalog Description This course covers the analysis and interpretation of financial statements for profitability analysis, credit analysis, and other business analyses that rely on financial data. The quality of the financial statement information will be discussed, followed by the introduction of fundamental techniques of financial statement analysis.

Prerequisites FIN 2150 or Graduate Standing.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Justification for new course: Planned for both undergraduate and graduate students.

Semester(s) previously taught

Co-Listed
Courses:

Course Reviewer
Comments

In Workflow

1. RBUSADMN Chair
2. CCC Secretary
3. Social Sciences DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. Registrar

Approval Path

1. 10/01/14 1:00 pm
siauk: Approved
for RBUSADMN
Chair
2. 10/01/14 1:10 pm
kleb6b: Approved
for CCC Secretary
3. 10/07/14 10:05
am
barryf: Approved
for Social
Sciences DSCC
Chair

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 09/22/14 11:54 am

Viewing: **MATH 1001.TBD : Success for Calculus**

File: 4117

Last edit: 09/22/14 11:54 am

Changes proposed by: imorgan

Requested Fall 2015

Effective Change
Date

Department Mathematics & Statistics

Discipline Mathematics (MATH)

Course Number 1001

Topic ID TBD

Experimental
Title Success for Calculus

Experimental
Abbreviated
Course Title Success for Calculus

Instructors Barb Wilkins

Experimental
Catalog
Description This course focuses on the use of college algebra and trigonometry skills within the context of calculus, providing students with the opportunity to improve their preparedness for future calculus coursework. Pass/Fail only.

Prerequisites Consent of instructor.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 1 IND: 0 RSD: 0 Total: 4

Justification for
new course: This course is proposed as a component of the calculus redesign, which is part of the University strategic plan. Many students who appear to be qualified to take calculus struggle for various reasons; the purpose of this course is to address their issues so they will have a better chance of succeeding the next time. We plan to use the course number MATH 1190 when the course becomes permanent.

Semester(s)
previously taught

Co-Listed
Courses:

Course Reviewer
Comments

In Workflow

1. **RMATHEMA**
Chair
2. **CCC Secretary**
3. **Sciences DSCC**
Chair
4. **Pending CCC**
Agenda post
5. CCC Meeting
Agenda
6. Campus Curricula
Committee Chair
7. Registrar

Approval Path

1. 09/22/14 12:13
pm
sclark: Approved
for RMATHEMA
Chair
2. 09/22/14 1:07 pm
kleb6b: Approved
for CCC Secretary
3. 10/10/14 10:42
am
imorgan:
Approved for
Sciences DSCC
Chair



DATE: August 26, 2014

TO: Missouri S&T Curriculum Committee

FROM: Jeffrey D. Cawlfeld, Vice Provost for Undergraduate Studies

RE: Proposed New Course: Success for Calculus (Math 1190)

JDC 8/26/14

In February 2014, the Missouri University of Science and Technology -- Student Success Committee requested an update on the progress of the calculus redesign initiative. Paul Runnion gave the committee a detailed overview of the plans for the redesign, including the proposed introduction of a new Success for Calculus course. As a committee, we were particularly interested in the Success for Calculus course because of its potential impacts on student success and retention. We are aware that many students struggle to successfully complete the calculus sequence, often retaking one or more of the calculus courses, and some of these students end up in a cycle where they repeat Calculus I multiple times. This course is designed to keep students from getting into that cycle of failure, and we are excited by the potential of this course to positively impact our students.

As co-chair of the committee, I have had the opportunity to review the Experimental Course proposal for Success for Calculus (Math 1190). The proposal reflects what Paul presented to our committee in February, and I am pleased to see this proposal moving forward. Although I cannot speak for every individual member of the committee, I believe the Student Success Committee overwhelmingly supports this proposal, and we look forward to observing the implementation and refinement of this course.

Thank you for your consideration in this matter.

Course Inventory Change Request

New Experimental Course Proposal

Date Submitted: 10/07/14 10:15 am

Viewing: **MUSIC 3001.TBD : Mechanics of Music**

File: 4131

Last edit: 10/07/14 10:48 am

Changes proposed by: denises

Requested Spring 2015

Effective Change
Date

Department Arts, Languages, & Philosophy

Discipline Music (MUSIC)

Course Number 3001

Topic ID TBD

Experimental Mechanics of Music
Title

Experimental Mechanics of Music
Abbreviated
Course Title

Instructors Deborah Sinn

Experimental How music is constructed - including topics on tuning, notation, and repertoire.
Catalog Musical apps will be used to encourage participation and to help with
Description comprehension of the material. No musical background required.

Prerequisites None.

Field Trip
Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Justification for
new course: Maxwell C. Weiner Professor

Semester(s)
previously taught

Co-Listed
Courses:

Course Reviewer
Comments

In Workflow

1. RPHILOSO Chair
2. CCC Secretary
3. Arts & Humanities DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. Registrar

Approval Path

1. 10/07/14 10:26 am
lance: Approved for RPHILOSO Chair
2. 10/07/14 10:48 am
kleb6b: Approved for CCC Secretary
3. 10/07/14 6:34 pm
ivliyeva: Approved for Arts & Humanities DSCC Chair

BS minimum requirements proposal

Several comparator university degree requirements, taken from their undergraduate catalogs (attached Excel file and catalog page copies), were compared. The comparator schools were Colorado School of Mines, California Institute of Technology, Georgia Institute of Technology, Cornell, Mizzou, Purdue, Rennselaer Polytechnic Institute, Worcester Polytechnic Institute, New Mexico Institute of Mining and Technology, Stevens Institute, and University of Maryland College Park. Taken as an advisory group, minimum BS degree requirements should resemble those of the current Missouri University of Science and Technology BA degree requirements as a template, minus foreign language.

The original minimum BS degree graduation requirements were:

Minimum degree credit hours: 120

Communications: English 20 () and 60 (); 1 writing intensive course in major OR 2 writing emphasized courses in major; 1 writing intensive course out of major OR 2 writing emphasized courses out of major
Humanities: 9 credit hours in addition to communications requirement

Social sciences: 12 credit hours

Mathematics and Science: two courses at college algebra or higher; 12 credit hours

Minimum cumulative GPA of 2.0

I had presented more options, as observed in the comparator university population:

More than half of all the comparator schools also have physical education activity/course graduation REQUIREMENTS. These varied in scope from university to university, e.g., whether the credits and grades were included in the GPA calculation. Most utilize pass/fail requirements that are not included in the GPA calculation and the requirements are typically two courses but ROTC, varsity or team sports athletics participation can be applied toward the requirement. Mizzou and Missouri S&T do not currently have a physical education requirement.

Several comparator schools had 'capstone,' 'breadth,' 'multidisciplinary,' or seminar requirements, as shown in the Excel file. These were typically from 0.5 credit hours up to one course, but up to 6 credit hours required, for all degrees at those universities. We could add the currently planned 'experiential component' (as a one course requirement) to our BS degree minimum degree requirements as analogous to these comparator university requirements.

Computer science as an introduction to programming was required by two of the universities as part of their minimum degree requirements.

While the proposed appeared to fit within all current degree programs, they apparently did not. The requirements were revisited, per the below from Engineering and Business Schools.

If a degree program did not meet the minimum, e.g., by inclusion of optional requirement(s), then all degree programs could be grandfathered until a degree change is initiated toward that degree plan. Any new BS degree program would be required to meet minimum BS degree requirements.

General Education Communications Requirements

Each department will provide students with opportunities to enhance their writing and speaking skills (beyond the required English 20 class) by requiring that they complete at least two Communications Intensive courses, at least one of which should be in the student's major. Communication Intensive (CI) courses may be focused on writing, speaking, or combinations thereof. Two Communications Emphasized (CE) courses may be used at the equivalent of one CI course (for example, four CE courses would substitute for two CI courses, but two of the CE courses must be in the student's major). These requirements will be formally tracked and monitored by the CAPS advising system to ensure that each graduating student is meeting the Communications component of the General Education requirement.

Engineering Basic Requirements

Chemistry & Physics

- Lab Safety & Hazardous Materials (Chem 4)
- General Chemistry (Chem 1)
- General Chemistry Laboratory (Chem 2)
- Engineering Physics I (Phys 23)

Engineering

- Careers in Engineering Seminar (FE 10)
- Engineering Design w/ Computer Appl. (IDE 20)

Humanities & Social Sciences

Mathematics

- Pre-calculus classes, if needed*
- Calculus for Engineers I (Math 14)
- Calculus for Engineers II (Math 15)

- Exposition & Argumentation (English 20)
- Humanities/Social Science Elective**
- Humanities/Social Science Elective**

* A math placement test is taken prior to your first semester at Missouri S&T. Some students place directly into calculus the first semester, while others take algebra and/or trigonometry before taking calculus.

** Missouri S&T engineering students are required to take several humanities and social sciences courses, including history (History 112, 175, 176 or Political Science 90), economics (Econ 121 or 122) and several electives. You'll take two of these courses freshman year.

Engineering Degree Requirements

All Engineering degree programs must be consistent with the following minimum requirements.

The requirements of the degree program shall consist of 128-132 credit hours. Additional hours may be required for specific choices of electives or Emphasis Areas. Courses that are at a lower level of coverage than the required courses in the curriculum (e.g. algebra, trigonometry, Intro to Physics, etc.) may not be counted toward the degree program credit hours. An average of at least two grade points per credit hour must be obtained for all credits counted toward the degree. In addition, an average of at least two grade points per credit hour must be obtained for all credits taken in the student's major department.

The degree program shall include all courses in the Common Engineering Freshman Year, as listed in the current catalog under the Freshman Engineering Program.

The degree program shall include a minimum of 21 credit hours as follows:

- [ENGLISH 20](#)
- [HISTORY 112](#), [HISTORY 175](#), [HISTORY 176](#), or [POL SCI 90](#)
- [ECON 121](#) or [ECON 122](#)
- The remaining courses must be chosen from the list of approved humanities/social sciences courses, published on the website for the Office of Undergraduate Studies (<http://ugs.mst.edu>). Departments may further specify the requirements for these electives.

B.S. Business & Management Systems

(120 Credit Hours)

Business Core & Business Electives (30 credit hours)

Business Core (18 credit hours)

Business Electives (12 credit hours)

10 Minors Available that BUS/Free Electives may contribute for*

*An Information Science & Technology Minor is available with one elective

Common Department Core Classes (27 credit hours)

Information Technology (12 credit hours)

Business, Finance & Management (12 credit hours)

Entrepreneurship Capstone (3 credit hours)

General Education & Free Electives (63 credit hours)

Sciences, Psychology (10 credit hours)

Mathematics- Algebra, Calculus, Statistics (10 credit hours)

Humanities, History, Government, Economics (18 credit hours)

Communication Skills (15 credit hours)

Free Electives (9 credit hours)

Thus, minimum BS degree graduation requirements that do not impact current programs:

Minimum degree credit hours: 120

Communications: 1 writing intensive course in major OR 2 writing emphasized courses in major; 1 writing intensive course out of major OR 2 writing emphasized courses out of major

Humanities plus Social Sciences: 21 credit hours (must be content approved by the department and school)

Mathematics and Science: college algebra or higher; may include psychology; 18 credit hours

Minimum cumulative GPA of 2.0