

COLORADO SCHOOL OF MINES FACULTY SENATE MINUTES

March 24, 2009 - 2:00pm
Hill Hall 300

ATTENDEES: Collins, Davis, Drewes, Jesudason, McKinnon, Petr, Sacks, Steele

APOLOGIES: Dorgan, Ganesh, Hitzman, Martins, Voorhees

GUESTS: Chris Cocallas – Capital Planning and Construction
Wendy Harrison – Associate Provost
Scott Houser – Economics and Business
Rambert Nahm – Representative, ASCSM

McKinnon, Senate President, called the meeting to order and welcomed the guests.

COMMENTS FROM GUESTS:

- A. Cocallas discussed the status of the planned capital construction projects (See Old Business, Section A)
- B. Harrison reported that Colorado is still undecided on their budget and that campus administration is currently waiting their decision to assess the effects it will have on the campus budget. Harrison also reported that faculty hires are now being prioritized and that three of six of the essential hires have been completed. All department heads have also been asked to think of ways to spend less money.
Harrison also mentioned that there has been talk of adopting a pass/fail policy, but it is still in the early stage. Such a policy might encourage more students to audit classes at both the undergraduate and graduate level. This topic will be discussed at the next topic meeting on April 14th.
- C. Houser presented proposed changes to the Economics and Business curriculum (See [ATTACHMENT A](#)). The main goal of the changes was to eliminate the ability of students to take Principles of Economics, EBG201, as well as Microeconomics and Macroeconomics, EBG311 and EBG312. Giving credit towards a degree for all three courses is redundant as they cover much of the same material. The proposal also reduces the total number of credits need for a Major in Economics and Business from 135.5 to 132.5 by eliminating an elective. The full proposal can be seen in the attachment below. A motion to accept the proposal passed unanimously.
- D. Rambert reported that ASCSM is considering offering services to students that pass Readmission Committee hearings. He will have more to report at the next meeting.

FINANCIAL REPORT:

McKinnon reported that some funds were spent on the Faculty Forum as well as to send up to six students to a Sustainability Opportunities Summit. Only two students attended so there was little impact on the Senate's budget.

APPROVAL OF MINUTES:

The minutes of the February 24, 2009 and March 17, 2009 Senate Faculty Meetings were approved.

OLD BUSINESS:

- A. Planned Capital Construction Projects – Cocallas gave a presentation outlining the current planned capital construction projects on campus. He outlined three upcoming projects that are likely to be funded. These are, from most likely to be funded to least likely, the addition to Brown Hall, the new dormitory, and the parking garage.
The addition to Brown Hall is still currently funded and will roughly double the size of Brown Hall. The addition includes several classrooms, study areas, a lecture hall, an auditorium, a new engineering office, and more faculty offices.
The new dorms would be located near Brown Hall and would include 300 beds, 2 courtyards, and a meeting room. It should take about one year to build if funding is approved.
The garage is still in the planning stage and funding is not yet assured.
Cocallas also reported that he would soon be issuing a letter requesting anyone interested to join a committee with the goal of redrafting the master plan for campus. He would appreciate as much input as possible.
- B. Volk Gymnasium Access Issues – Graham presented a letter ([ATTACHMENT B](#)) for approval to be sent to the Athletics Director, Tom Spicer, regarding after hours access to Steinhauer Field House and Volk Gymnasium. A faculty member has been denied access due to liability issues, but it has been reported that other people have been allowed access as exceptions to this policy. The letter was approved unanimously and will be sent on to Tom Spicer to address this issue.
- C. FOCSA Missed Class Policy - The Undergraduate Council submitted proposed changes to the absenteeism policy listed in the bulletin ([ATTACHMENT C](#)). It was proposed that this document should be harmonized to the official FOCSA policy before approval. Davis will discuss the issue with the Undergraduate Council.
- D. Senators are requested to submit names of candidates to serve on the Senate as replacements for the Senators whose terms end this semester.

NEW BUSINESS:

- A. Approval of Graduation List – The Graduation List for the Spring 2009 Commencement was approved. Davis was opposed, however, and expressed that several students on the list cannot graduate this spring. He also inquired as to why this is a Senate duty and that as there are always students on the list that cannot graduate approving the list seems to serve no purpose. This issue will be discussed at the next Senate Meeting.
- B. Approval of New Energy Minor – The Proposed New Energy Minor ([ATTACHMENT D](#)) was approved unanimously.
- C. David Munoz, Associate Professor, Engineering, was unanimously elected to be the 2009 Faculty Senate Distinguished Lecturer.
- D. It was announced that Terry Parker, a candidate for Provost, would be speaking on Wednesday, March 25 at 1:30 in the Ted Adams Room. Senators are encouraged to attend.
- E. It was announced that Arthur Sacks would be speaking at the 2008 Faculty Senate Distinguished Lecture on Wednesday, March 25 at 4:00 in Petroleum Hall. Senators are encouraged to attend.

ANNOUNCEMENTS:

- A. The next Senate meeting will take place on April 14, 2009 in Hill Hall room 300.

The meeting adjourned at 4:00 pm.

ATTACHMENT A

To: Undergraduate Council
From: Scott Houser
Date: February 18, 2009
Re: Proposed economics major curriculum and economics and business minor changes

Core economics sequence for majors

Renumber Intermediate Microeconomics (411) to EBGN 301 and Intermediate Macroeconomics (412) to EBGN 302. These courses will have 201 and MATH 213 as prerequisites. Revise EBGN301 to introduce some topics previously covered in EBGN311. Add EBGN301 and EBGN302 to the list of EBGN courses that can be used to meet the H&SS General Education Restricted Electives requirement in place of EBGN311 and EBGN312. Renumber Econometrics (390) to EBGN303.

Introduce 2 new courses: Advanced Microeconomics Topics (EBGN 404) and Advanced Macroeconomics Topics (EBGN 405). Both new courses will be required for economics majors. Prerequisites for these courses will EBGN301, EBGN302 and EBGN303. Renumber Field Session (EBGN402) to EBGN403 to correspond to the new numbering of Econometrics.

Action: Renumber EBGN411, 412, 390 and 402. Revise course outline and learning objectives for 301. Revise course description for 302. Propose new courses (404 and 405). See attached course approval forms.

Changes to the economics major

Changing to the core economics requirement provides an opportunity to revise the degree requirements for economics majors. We propose the following changes to the economics major curriculum:

- add EBGN201
- delete EBGN311 and EBGN312
- add EBGN404 and EBGN405
- delete LAIS restricted electives (9 semester hours)
- add 6 semester hours of EBGN electives
- replace the requirement that at least 3 hours of EBGN electives must have EBGN411 and/or EBGN412 as a prerequisite with the requirement that at least 6 hours of EBGN electives must be 400-level or above.
- reduce the number of free electives from 21 semester hours to 18 semester hours
- reduce the total number of semester hours from 135.5 to 132.5
- delete the major options (Global Business option, Technology option)

ACTION: Revise bulletin copy describing major requirements (see attached bulletin changes)

The economics and business minor

Eliminating EBGN311 and EBGN312 requires changes to the minor in economics and business because these courses are required for the minor. We propose to change the minor to require EBGN201, either EBGN301 or EBGN302, and any four EBGN courses. We may develop separate minors for business and economics in the future.

ACTION: Revise bulletin copy describing minor requirements (see attached bulletin changes)

Changes to prerequisites

Retooling EBGN201 as a replacement for our micro/macro principles sequence (311/312) and renumbering other EBGN course requires changes to the prerequisites for several courses. All 300-level courses that had 201, 311 and/or 312 as EBGN prerequisites will have only 201 as the EBGN prerequisite.

Action: Change prerequisites for 13 courses (see attached course change proposals)

Course deletions

Delete EBGN401 History of Economic Thought and EBGN 445 International Business Finance (see attached course change proposals).

Economics and Business

Curriculum

All economics majors take forty-five percent of their courses in math, science, and engineering, including the same core required of all CSM undergraduates. Students take another forty percent of their courses in economics and business. The remaining fifteen percent of the course work

can come from any field. Many students complete minor programs in a technical field, such as computer science, engineering, geology or environmental science. A number of students pursue double majors.

To complete the economics major, students must take 45 hours of 300 and 400 level economics and business courses. Of these, 18 hours must be at the 400 level. At least 30 of the required 45 hours must be taken in residence in the home department. For students participating in an approved foreign study program, up to 19 hours of the 30 hours in residence requirement may be taken abroad.

Degree Requirements in Economics

Sophomore Year Fall Semester	lec.	lab.	sem.hrs.
EBGN201 Principles of Economics	3		3
PHGN200 Physics II	3.5	3	4.5
MATH213 Calc. for Scientists & Engineers III	4		4
EPIC251 or EPICS252 Design II	2	3	3
PAGN201 Physical Education III	2		0.5
Free Elective	3		3
Total			18

Sophomore Year Spring Semester	lec.	lab.	sem.hrs.
EBGN301 Intermediate Microeconomics	3		3
MATH323 Probability and Statistics	3		3
MATH225 Differential Equations	3		3
SYGN200 Human Systems	3		3
PAGN202 Physical Education IV	2		0.5
Free Electives	3		3
Total			15.5

Junior Year Fall Semester	lec.	lab.	sem.hrs.
EBGN302 Intermediate Macroeconomics	3		3
EBGN303 Econometrics	3		3
EBGN325 Operations Research Methods	3		3
EBGN Elective I*	3		3
MATH332 Linear Algebra or MATH348 Advanced Engineering Math	3		3
LAIS/EBGN H&SS GenEd Restricted Elective I	3		3
Total			18

Junior Year Spring Semester	lec.	lab.	sem.hrs.
EBGN321 Engineering Economics	3		3
EBGN409 Math Econ.** or EBGN Elective III*	3		3
EBGN Elective II*	3		3
LAIS/EBGN H&SS GenEd Restricted Elective II	3		3
Free Elective	3		3
Total			15

Summer Field Session	lec.	lab.	sem.hrs.
EBGN402 Field Session	3		3
Total			3

Senior Year Fall Semester	lec.	lab.	sem.hrs.
EBGN404 Adv. Micro Topics	3		3
EBGN405 Adv. Macro Topics	3		3
EBGN455 Linear. Prog'** or EBGN Elective III	3		3
LAIS/EBGN H&SS GenEd Restricted Elective III	3		3
Free Elective	3		3
Total			15

Senior Year Spring Semester	lec.	lab.	sem.hrs.
EBGN Elective IV*	3		3
EBGN Elective V*	3		3
EBGN Elective VI*	3		3
Free Electives	6		6

Total	15
Degree Total	132.5

*At least 2 EBGN elective courses must be at the 400-level or above

**Students must take either EBGN409 or EBGN455.

Minor Program

The minor in Economics requires that students complete 6 economics courses, for a total of 18 credit hours. Minors are required to take Principles of Economics (EBGN201) and either Intermediate Microeconomics (EBGN301) or Intermediate Macroeconomics (EBGN302). Students must complete 4 additional courses from the lists below. Students may choose courses from either the economics focus or the business focus list (or both). Regardless of their course selection, the minor remains "Economics and Business." Economics courses taken as part of the Humanities and Social Sciences electives can be counted toward the minor.

Area of Special Interest

The area of special interest in Economics and Business requires that students complete Principles of Economics (EBGN201) and 3 other courses in economics and business chosen from the lists below, for a total of 12 credit hours. Economics courses taken as part of the Humanities and Social Sciences electives can be counted toward the area of special interest.

Economics Focus

EBGN301 Intermediate Microeconomics
 EBG302 Intermediate Macroeconomics
 EBG303 Econometrics
 EBG310 Environmental and Resource Economics
 EBG315 Business Strategy
 EBG320 Economics and Technology
 EBG330 Energy Economics
 EBG342 Economic Development
 EBG398 Special Topics
 EBG404 Advanced Micro Topics
 EBG405 Advanced Macro Topics
 EBG409 Mathematical Economics
 EBG437 Regional Economics
 EBG441 International Economics
 EBG443 Public Economics
 EBG470 Environmental Economics
 EBG495 Economic Forecasting
 EBG498 Special Topics

Business Focus

EBGN304 Personal Finance
 EBG305 Financial Accounting
 EBG306 Managerial Accounting
 EBG314 Principles of Management
 EBG321 Engineering Economics
 EBG325 Operations Research
 EBG345 Corporate Finance
 EBG398 Special Topics
 EBG452 Nonlinear Programming
 EBG455 Linear Programming
 EBG457 Integer Programming
 EBG459 Supply Chain Management
 EBG461 Stochastic Models in Management Science
 EBG498 Special Topics

February 1, 2009

PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

1. Course Number and Name:

EBGN301 – Intermediate Microeconomics

2. Addition, Change, Deletion, Pilot? **Change**

Renumber existing course:

The course is currently offered as EBG411. We wish to renumber this course to EBG301 to create a sequence of three foundation courses for economics majors: EBG301 Intermediate Microeconomics, EBG302 Intermediate Macroeconomics and EBG303 Econometrics. This change also conforms to common practice in undergraduate economics programs in which intermediate microeconomic theory is offered as a junior-level course.

Change prerequisites:

Current prerequisite: EBG311 and MATH213
Replace with new prerequisite: EBG201 and MATH213

3. Course/Learning Objectives:

- a. Apply the standard model of consumer choice to household decisions
- b. Use the consumer choice model to derive demand and measure consumer welfare in product markets and to analyze labor supply decisions
- c. Apply the theory of the firm to explain production decisions and to derive market supply
- d. Apply the competitive market model to taxation, international trade restrictions and other current policy discussions
- e. Use the general equilibrium model of competitive markets to demonstrate that competitive markets are usually efficient
- f. Use the general equilibrium model to analyze the implications of competitive markets for equity
- g. Apply the efficiency criteria from the general equilibrium model to analyze the market failures generated by externalities and public goods
- h. Use the standard model to demonstrate the static efficiency and equity implications of monopoly
- i. Analyze the pricing and production strategies of firms in imperfectly competitive markets

4. Catalog Description:

EBGN301: INTERMEDIATE MICROECONOMICS-(I,II) This course introduces the theoretical and analytical foundations of microeconomics and applies these models to the decisions and interactions of consumers, producers and governments. Develops and applies models of consumer choice and production with a focus on general equilibrium results for competitive markets. Examines the effects of market power and market failures on prices, allocation of resources and social welfare. Prerequisites: EBG201. 3 hours lecture; 3 semester hours.

5. Semester to be Offered: Fall and Spring

6. Course Outline/Topics:

- | | |
|---------|---|
| Week 1 | The tools of microeconomics |
| Week 2 | Competitive markets: quantity and price determination |
| Week 3 | Consumer choice: preferences and constraints |
| Week 4 | The theory of demand |
| Week 5 | The labor-leisure tradeoff and labor supply |
| Week 6 | Production: technical and economic efficiency |
| Week 7 | Costs of production |
| Week 8 | Firm and industry supply in competitive markets |
| Week 9 | General equilibrium |
| Week 10 | Efficiency and equity in competitive markets |
| Week 11 | Application the competitive model: taxation and international trade |
| Week 12 | Market failure from externalities and public goods |
| Week 13 | Monopoly |
| Week 14 | Pricing: price discrimination, bundling and versioning |
| Week 15 | Imperfect competition |

7. Delivery Mode/Pedagogy:

Lecture, discussion and in-class exercises.

8. Laboratory/Special Exercises:

In-class experiments and simulations to demonstrate economic models and processes.

9. Student Attributes Enhanced (from ABET 2000 Criteria and/or CSM Graduate Profile):

As identified in the Profile of the CSM Graduate, this course will develop a student's

“skills to communicate information, concepts and ideas effectively orally, in writing, and graphical,” it will increase the students ability to “think critically about a wide range of cross-disciplinary issues,” and will help students to “appreciate diverse approaches to understanding and solving society's problems.”

This course will address the following ABET 2000 Criteria:

- (a) an ability to apply knowledge of mathematics, science, and engineering;
- (g) an ability to communicate effectively;
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- (i) a recognition of the need to engage in lifelong learning;

10. Assessment Method (s) for Achieving Goals and Attributes:

Exams, problem sets, written reports on experiments and essays on applications of economic models to current economic issues and policy analyses.

11. Impact on Other Programs:

None

12. Impact on Library and/or Computing Center Resources and Services:

None.

13. Overlap/Duplication:

None

February 1, 2009

PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

1. Course Number and Name:

EBGN302– Intermediate Macroeconomics

2. Addition, Change, Deletion, Pilot? **Change**

Renumber existing course:

The course is currently offered as EBG412. We wish to renumber this course to EBG302 to create a sequence of three foundation courses for economics majors: EBG301 Intermediate Microeconomics, EBG302 Intermediate Macroeconomics and EBG303 Econometrics. This change also conforms to common practice in undergraduate economics programs in which intermediate macroeconomic theory is offered as a junior-level course.

Change prerequisites:

Current prerequisite: EBG311, EBG312 and MATH213
Replace with new prerequisite: EBG201 and MATH213

Revise Catalog Description:

EBGN302: INTERMEDIATE MACROECONOMICS-(I,II) Intermediate macroeconomics provides a foundation for analyzing both short-run and long-run economic performance across countries and over time. The course discusses macroeconomic data analysis (including national income and balance of payments accounting), economic fluctuations and the potentially stabilizing roles of monetary, fiscal and exchange rates policies, the role of expectations and intertemporal considerations, and the determinants of long-run growth. The effects of external and internal shocks (such as oil price shocks, resource booms and busts) are analyzed. Prerequisites: EBG201. 3 hours lecture; 3 semester hours.

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PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

1. Course Number and Name:

EBGN303 – Econometrics.

2. Addition, Change, Deletion, Pilot? **Change**

Renumber existing course:

The course is currently offered as EBG390. We wish to renumber this course to EBG303 to create a sequence of three foundation courses for economics majors: EBG301 Intermediate Microeconomics, EBG302 Intermediate Macroeconomics and EBG303 Econometrics.

Change prerequisites:

Current prerequisite: EBG311 and MATH323
Replace with new prerequisite: EBG201 and MATH323

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PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

1. Course Number and Name:

EBGN403 – Field Session

2. Addition, Change, Deletion, Pilot? **Change**

Renumber existing course:

The course is currently offered as EBG402. We wish to renumber this course to EBG403 to allow us to develop a 400-level core sequence that corresponds to the new 300-level core sequence (301, 302 and 303).

Change prerequisites:

Add Econometrics (EBGN303) as a prerequisite so that the core tools covered in this course are available for use in Field Session.

Current prerequisite: EBG411 and EBG412
Replace with new prerequisite: EBG301, EBG302 and EBG303

February 1, 2009

PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

1. Course Number and Name:

EBGN404 – Advanced Topics in Microeconomics

2. Addition, Change, Deletion, Pilot? **Addition**

3. Course/Learning Objectives:

- a. Use game theory to analyze the strategic decisions of firms in imperfectly competitive markets.
- b. Assess the validity of assumptions in standard economic models of consumer choice and extend these models to account for limited information, uncertainty and bounded rationality.
- c. Analyze intertemporal decisions by incorporating multiple planning horizons into models of household and firm behavior.
- d. Develop familiarity with micro-level economic data sets.
- e. Estimate empirical models of consumer and firm behavior.
- f. Build general equilibrium models of stylized economies and use these models to analyze the general equilibrium effects of market shocks and government policy.

4. Catalog Description:

EBGN404: ADVANCED TOPICS IN MICROECONOMICS-(I) Application of economic theory to microeconomic problems. This course will involve both theoretical and empirical modeling of consumers, producers and markets. Topics may include game theory, risk and uncertainty, the economics of information, intertemporal allocations and general equilibrium modeling. Prerequisites: EBG301, EBG302 and EBG303. 3 hours lecture; 3 semester hours.

5. Semester to be Offered: Fall

6. Course Outline/Topics:

- a. Micro data sources and techniques
- b. Confronting the assumptions of consumer theory
 - i. Bounded rationality
 - ii. Information constraints
 - iii. Consumer choice under uncertainty
- c. Intertemporal allocations
- d. Modeling imperfect competition
 - iv. Game theory
 - v. Production strategies for homogeneous product oligopolies
 - vi. Pricing strategies for heterogeneous product oligopolies
- e. General equilibrium modeling

7. Delivery Mode/Pedagogy:

Lecture, discussion and in-class exercises. Empirical and modeling projects will be undertaken in teams.

8. Laboratory/Special Exercises:

Econometric and programming projects will use software in the EB computer lab.

9. Student Attributes Enhanced (from ABET 2000 Criteria and/or CSM Graduate Profile):

As identified in the Profile of the CSM Graduate, this course will develop a student's "skills to communicate information, concepts and ideas effectively orally, in writing, and graphical," it will increase the students ability to "think critically about a wide range of cross-disciplinary issues," and will help students to "appreciate diverse approaches to understanding and solving society's problems."

This course will address the following ABET 2000 Criteria:

- (a) an ability to apply knowledge of mathematics, science, and engineering;
- (g) an ability to communicate effectively;
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- (i) a recognition of the need to engage in lifelong learning;

10. Assessment Method (s) for Achieving Goals and Attributes:

Team-based empirical projects and modeling assignments will be assessed by instructor and group members. Exams will focus on using the Exams, online problem sets, written reports on experiments, essays on applications to current economic issues.

11. Impact on Other Programs:

Required course for economics majors.

12. Impact on Library and/or Computing Center Resources and Services:

None. Econometric and other programming resources currently available in EB computer labs.

13. Overlap/Duplication:

None

February 1, 2009

PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

PREREQUISITE CHANGES

1. Course Number and Name:

EBGN310 – Environmental and Resource Economics
EBGN330 – Energy Economics

2. Addition, Change, Deletion, Pilot?

Change –

Current prerequisites: EBG201 or EBG311
Replace with new prerequisite: EBG201

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PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

PREREQUISITE CHANGES

1. Course Number and Name:

EBG310 – Environmental and Resource Economics
EBG330 – Energy Economics

2. Addition, Change, Deletion, Pilot?

Change –

Current prerequisites: EBG201 or EBG311
Replace with new prerequisite: EBG201

February 1, 2009

PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

PREREQUISITE CHANGES

1. Course Number and Name:

EBG315 – Business Strategy
EBG320 – Economics and Technology
EBG342 – Economic Development

2. Addition, Change, Deletion, Pilot?

Change –

Current prerequisite: EBG311
Replace with new prerequisite: EBG201

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PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

PREREQUISITE CHANGES

1. Course Number and Name:

EBG409 – Mathematical Economics

2. Addition, Change, Deletion, Pilot?

Change –

Current prerequisite: EBG411 and EBG412
Replace with new prerequisite: EBG301 and EBG302

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PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

PREREQUISITE CHANGES

1. Course Number and Name:

EBGN437 – Regional Economics
EBGN441 – International Economics
EBGN443 – Public Economics
EBGN470 – Environmental Economics

2. Addition, Change, Deletion, Pilot?

Change –

Current prerequisite: EBG411
Replace with new prerequisite: EBG301

February 1, 2009

PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

PREREQUISITE CHANGES

1. Course Number and Name:

EBGN495 – Economic Forecasting

2. Addition, Change, Deletion, Pilot?

Change –

Current prerequisite: EBG411, EBG412 and EBG390
Replace with new prerequisite: EBG301, EBG302 and EBG303

February 1, 2009

PROPOSAL TO UNDERGRADUATE COUNCIL
DIVISION OF ECONOMICS AND BUSINESS

1. Course Number and Name:

EBGN401 – History of Economic Thought
EBGN445 – International Business Finance

2. Addition, Change, Deletion, Pilot? **Deletion**

ATTACHMENT B

Letter to Tom Spicer Regarding Faculty Access to Steinhauer Field House

Dear Mr. Spicer,

One of CSM's Academic Faculty, Alexandra Newman, has come to the Senate requesting support for her request to you for access to the Steinhauer Field House after hours and on weekends for her personal use. We understand that her request for access goes beyond the general access that you have scheduled for the CSM faculty and staff.

The Senate's bylaws state that the Senate has its responsibility considerations of faculty welfare, broadly defined. We interpret Dr. Newman's desire to train as a track athlete throughout the year as beneficial to her welfare and performance as a faculty member. There is much scientific documentation, for instance, linking rigorous exercise to improved brain function and reduced stress levels. Hence, this appears to be an issue that the Senate could and should take up. We also note that the plaque on the Steinhauer Field House in recognition of the sponsorship that allowed its renovation states the following:

"Special Appreciation to the Schramm Foundation of Lakewood, CO whose important grant to the Colorado School of Mines provided the architectural program plan for the 1989-1990 renovation of Steinhauer Field House. This modern, multi-use facility for recreation and athletics advances the commitment of both the Schramm Foundation and Colorado School of Mines to the health and well-being of today's students and faculty."

Since the Field House was and is clearly meant to serve both students and faculty, notwithstanding the creation of the new Student Recreation Centre, Dr. Newman's request for extended access to a facility that the Schramm Foundation intended for faculty to use is not unreasonable.

On the other hand, the Senate is cognizant of the burden that would be placed on the administration of this Field House if each and every request for individual and specialized access to the facility was to be accommodated. Clearly, there has to be some coordination of policies of use of the facility, and it is our understanding that that coordination falls upon your office.

To that end, the Senate intends to limit its involvement to an inquiry as to your access policies for non student-athletes. We understand that several non student-athletes (such as previous student athletes whose eligibility has expired, track team affiliates that go beyond team coaches and training staff, and even certain faculty and Golden city employees) have access to the Volk Gymnasium and Steinhauer Field House after hours and on weekends. It is not clear to us why the exceptions are being made when the same type of exception is not being made for Dr. Newman. Could you please provide us with your policy on Volk Gymnasium and Steinhauer Field House access after hours for all users, including an explanation of why exceptions are being made for certain non student-athletes and why this type of exception cannot be made for Dr. Newman by April 10, 2009.

ATTACHMENT C

Undergraduate Council Proposed Bulletin Changes for Absenteeism

Absenteeism

Class attendance is required of all undergraduates unless the student has an official excused absence. Excused absences are granted (1) if a student is representing the School in an authorized activity, examples of which include athletic events, student professional society meetings, and program-sponsored competitions; and (2) if a student has a documented personal reason, examples of which include illness, injury, or a death in the immediate family.

Students who miss academic work (including but not limited to exams, homework, labs) while participating in school sponsored activities (case 1, above) must be given the opportunity to make up this work in a reasonable period of time without penalty. It is the responsibility of the student to initiate arrangements for such work. Students are expected to notify their professors in advance of excused absences connected with authorized activities because the schedule for such activities is generally well known. Failure of the student to provide reasonable notice to the professor is grounds for disallowing make-up work.

In all cases of excused personal absences (case 2, above) the student will be allowed to make up any work missed without penalty. Excessive personal absence, regardless of reason, may result in a reduced or failing grade in the course. Determination of excessive personal absence is a faculty prerogative based on consideration of course content and delivery.

The Dean of Students authorizes excused absences upon receipt of proper documentation. The Office of the Dean of Students will send a notice of excused absence to faculty members for (1) an absence for a school-sponsored activity involving teams of students, such as club sports, musical groups, and academic competitions; (2) an absence because of personal illness or injury; (3) an absence because of a life-threatening illness or death in the immediate family, i.e., a spouse, child, parent, grandparent, or sibling. Notices of authorized excused absences for student athletes in both regular season and post-season competitions are issued by the Athletics Department.

In all cases of unexcused absences, the faculty member has the discretion to grant that student permission to make up any missed academic work and may include consideration of the student's class performance, as well as their attendance, in the decision. The professor may deny the student the opportunity to make up all or part of the missed work.

ATTACHMENT D

Proposal for a Revised Energy Minor and ASI

**Submitted by the
Energy Minor Committee
March 11, 2009**

Preface to March 11 submission:

In the month following the presentation of the original Energy Minor proposal, the Energy Minor Committee has received constructive feedback from several Undergraduate Council members. Many of these suggestions are reflected in the attached revision.

Besides several minor grammatical corrections, the changes from the February 11 draft are summarized below:

1. Throughout the proposal the titles of the topical survey courses were changed as follows:

ENGY310: "Introduction to Fossil Energy" is changed to "Fossil Energy"

ENGY320: "Introduction to Renewable Energy" is changed to "Renewable Energy"

ENGY340: "Introduction to Nuclear Energy" is changed to "Nuclear Energy"

This change reflects the appropriate level of these courses. "Introduction" is traditionally used for 100- 200-level courses which is not appropriate here.

2. In the Staffing and Resources section (page 8) a sentence was added clarifying the need for improved library holdings in the area of energy policy. Energy Minor member Carl Mitcham is working with library staff to identify the needs.

Proposal for a Revised Energy Minor and ASI

**Submitted by the
Energy Minor Committee
March 11, 2009**

Energy Minor Committee Members

Jim McNeil (Chair), Dwayne Bourgoyne (PE), Marcelo Simoes (EG), Carl Mitcham (LAIS), Murray Hitzman (GE), Reuben Collins (PH), and John Persichetti (ChE). At the Chair's request, Ramona Graves, Department Head of PE, joined in most committee meetings.

Executive Summary

Energy is one of CSM's core missions. A background in energy science, technology, economics, and policy will enable CSM students to make important contributions to critical energy issues world-wide while improving their employment opportunities. Since energy is an intrinsically interdisciplinary topic cutting across most campus programs, an energy minor will serve a broad swath of students by complementing existing majors with a strong energy background.

The Energy Minor Committee proposes a revised Energy Minor and ASI program to replace the existing program. The revised program can in principle be taken by any CSM student within a normal 4-year undergraduate career. The proposed new program will be delivered and managed by a Director advised by a board of eight department heads from the principal participating departments/divisions and two external members drawn from industry or national labs. Curricular and advising matters will be decided by a standing committee of the principal instructors in the Energy Minor program chaired by the Director. The new program involves five new courses delivered by five different departments each of which has committed to provide the necessary staffing. The proposed Energy Minor consists of identifiable specialty tracks in fossil energy and renewable energy as well as a general track spanning fossil, renewable, and nuclear energy. The

track framework can be readily expanded to include additional tracks in other energy areas. Preliminary student interest surveys suggest the new program could generate enough student credit hours to be financially self-sustaining after a start-up period of about three years.

Background

In 2006, at the initiative of John Fanchi (PE), CSM created an 18 credit Energy Minor (EM) program. As implemented, the original EM consisted of an introductory course, PEGN350 or PEGN450, two society-related courses (from a list of four), and three additional courses selected from a list of discipline-specific existing courses. However, neither the introductory course nor the society-related courses provided the depth in prerequisites needed to take the elective courses, and, since a minor allows only one course in a student's major, it was not feasible for a typical student to complete the minor in a standard undergraduate career. As a result, no student thus far has completed the Energy Minor, and only one student is currently on track (after much effort) to complete the minor this spring. In addition, in 2008 the NSF awarded CSM a Materials Science and Engineering Research Center (MRSEC) grant in the area of renewable energy. One of the education and outreach commitments CSM made to the NSF was to create a renewable energy minor. Given the problems with the existing energy minor, the CSM administration felt that a reformed energy minor could potentially satisfy the MRSEC commitment while creating a more workable energy minor program overall. In October 2008 2.

Associate Provost Wendy Harrison and Associate Provost Barbara Olds created the Energy Minor committee with the following charge:

1. Define the desired learning outcomes for the energy minor.
2. Develop a list of courses that will address the outcomes and will be achievable by students in all CSM majors. These courses may be new or may be selected from existing courses.
3. Suggest foundation courses, which would be required of all students who take the minor, as well as possible “tracks” for the minor, e.g., fossil, sustainable, and renewable energy, if desired.
4. Propose a governance structure for the minor—within a single department/division or governed by an interdisciplinary board as BELS was in its early days—as well as mechanisms for cross-listing courses.

The committee members and home departments are:

Jim McNeil (Chair, PH), Dwayne Bourgoyne (PE), Carl Mitcham (LAIS), Murray Hitzman (GE), Marcelo Simoes (EG), Reuben Collins (PH), John Persichetti (ChE).

At the Chair's invitation, Ramona Graves, Head of PE, joined in on most meetings.

The Energy Minor committee met weekly starting on Oct. 21, 2008. Besides its own deliberations, the committee engaged in a campus outreach effort that included informational/feedback/advisory meetings/phone/email exchanges with several campus constituencies. These included:

1. Campus groups: Faculty Senate, Undergraduate Council, REMREC Education Committee, GE Department, PH Department, Department Heads (as a group),
2. Individual Department Head/Division Directors: Dan Knauss (CH), Jim Ely (ChE), Rod Eggert (EB), Terry Parker (EG), John Humphrey (GE), Hussein Amery (LAIS), John Moore (MME), Ramona Graves (PE), and Tom Furtak (PH),
3. Meetings/email/phone conversations with many interested faculty.

The curricular constraints on any minor program are defined in the CSM Undergraduate Catalog which states that a minor must include a logical sequence of courses comprising at least 18 credits hours with no more than 3 credit hours allowed from the student's major department, and no more than 3 credit hours at the 100- or 200-level. An Area of Special Interest (ASI) which may be offered through the student's major program consists of a logical sequence of at least 12 credit hours

with no more than 3 credit hours at the 100- or 200-level and no more than 3 credit hours from the required courses in the student's degree-granting department.

The result of the committee's deliberations and the aforementioned consulting activities is presented below.

Description of the new Energy Minor and ASI

Learning Objectives

The first task of the committee was to define the learning objectives for the Energy Minor. There was unanimous sentiment expressed that the program needed to address the societal impacts of energy as well as the technical aspects of energy generally. After much deliberation, the following statement of purpose and learning objectives was approved:

The discovery, production, and use of energy in modern societies has profound and far-reaching economic, political, and environmental effects. As energy is one of CSM's core statutory missions, it is appropriate that CSM offer a program of study that not only addresses the scientific and technical aspects of energy production and use but its broader social impacts as well. The Energy Minor program is intended to provide engineering students with a deeper understanding of the complex role energy technology plays in modern societies by meeting the following learning objectives:

1. Students will gain a broad understanding of the scientific, engineering, environmental, economic and social aspects of the production, delivery, utilization, and remediation of energy as it relates to the support of current and future civilization both regional and worldwide.
2. Students will develop depth or breadth in their scientific and engineering understanding of energy technology.
3. Students will be able to apply their knowledge of energy science and technology to societal problems requiring economic, scientific, and technical analysis and innovation, while working in a multidisciplinary environment. They will be able to communicate effectively the outcomes of their analysis in written and oral form.

Curriculum

The committee recognized the challenge presented by the ambitious learning objectives described above. To begin defining the curriculum, the committee first surveyed all existing energy related courses to identify courses that could contribute directly to meeting the learning objectives. The committee also identified the prerequisite chains for these existing courses in order to evaluate their suitability for all students. The committee found that the prerequisite problem which plagues the current version of the Energy Minor could not be overcome using only existing courses. Several new courses are required to create an Energy Minor program that a typical student could reasonably complete during his or her undergraduate career at CSM.

Initially, the Energy Minor will be organized into two topical tracks and a general track. The initial topical tracks will be in Fossil Energy and Renewable Energy. Nuclear Energy may become an additional topical track once the nuclear engineering graduate program is fully launched. The 18-credit minor will have the following framework. All students will take Introduction to Energy, ENGY200,

Energy Economics, EBGN330, and the senior capstone course, Global Energy Policy, ENGY490. Students in the Fossil track will take Fossil Energy, ENGY310, and two fossil-energy related electives prior to taking ENGY490. Students in the Renewable Energy track will take Renewable Energy, ENGY320, and two renewable-energy related electives prior to taking ENGY490.

Students in the General track will take Fossil Energy, ENGY310, Renewable Energy, ENGY320,

and Nuclear Energy, ENGY340, prior to taking ENGY490. The topical introductory courses will have only ENGY200 as a prerequisite. This framework involves the creation of five new courses. With new courses comes the opportunity for pedagogical reform as well. To meet the learning objectives the committee adopted a cyclic pedagogy in which important concepts are repeated in greater depth in a vertically integrated fashion. The proposed Energy Minor begins with a very broad overview introductory course having only the CSM common core as a prerequisite. It then cycles through the major energy components again in greater depth and sophistication in subsequent courses.

In this fashion the committee constructed a framework for topical tracks which have significant depth while providing some breadth of content in social and complementary energy topics along the way. For example, all Energy Minors start with ENGY200, Introduction to Energy, and ENGY330/EBGN330, Energy Economics, both broadly covering all energy technology areas. For students in the Renewable track, the next course is a more focused survey of just renewable energy. This is followed by at least two specific topical courses in renewable energy, such as photovoltaics or fuel cells. Finally, as the synthesis point in the curriculum, students on all tracks join together in the senior level global energy policy seminar.

The Energy Minor will not be home to any faculty and the non-elective courses are interdisciplinary.

To avoid potential conflicts with the "one-course in the home department rule", the committee found it appropriate to give the new interdisciplinary courses a separate prefix designation, e.g. ENGY200.

These are essentially interdisciplinary courses, yet each must be taught by a faculty member who necessarily is a member of some department. For such essentially interdisciplinary courses it is reasonable that each student, regardless of his/her home department, be able to take one of these interdisciplinary courses, even if it is taught by a faculty member from the student's home department without it counting as being a course within his/her major. For example, a faculty member from the Geology Department will likely teach the introductory course, ENGY200, but a geology major should still be able to take this course as part of the Energy Minor without having it count as a geology course.

The committee has proposed the following courses to carry the ENGY prefix and be considered as being offered through the Energy Minor program and not any specific department.

ENGY200 - Introduction to Energy

ENGY310 - Fossil Energy

ENGY320 - Renewable Energy

ENGY340 - Nuclear Energy

ENGY490 - Global Energy Policy

EBGN330, Energy Economics, is already an existing course, and would be cross-listed as ENGY330.

Unlike the other interdisciplinary ENGY courses, EBGN330/ENGY330 is a discipline specific course which will count as the one course allowed in the Energy Minors within the Economics and Business major. Since there are no undergraduate degree program in LAIS, there can be no issues in cross-listing ENGY490 with LAIS490. As currently structured, cross-listed courses would count as a course

in the major of the cross-listed discipline (as with ENGY330/EBGN330). The Committee recommends that the UG Council review policies regarding cross-listing of courses as it pertains to minors to achieve consistency and greater flexibility.

The Minor in Energy requires a minimum of 18 credit hours of acceptable course work. Within the Energy Minor there are three curricular tracks: Fossil Energy, Renewable Energy, and General.

Additional focus tracks such as nuclear energy, are envisioned in the future. However, due to a lack of nuclear energy undergraduate courses, the full nuclear energy minor track will not be available in this initial manifestation, but the introductory nuclear energy course will be offered to satisfy the breadth needs of the general track.

All Energy Minors must take Introduction to Energy, ENGY200, and Energy Economics, EBG330/ENGY330, and Global Energy Policy, ENGY490. In addition to the required courses, students in the Fossil Energy track must take ENGY310, Fossil Energy, and two approved fossil energy-related electives. In addition to the required courses, students in the Renewable Energy track must take ENGY320, Renewable Energy, and two approved renewable energy-related electives. In addition to the required courses, students in the General track must take at least two of the energy topic survey courses, ENGY310, Fossil Energy, ENGY320, Renewable Energy, and ENGY340, Nuclear Energy, and one additional energy-related elective from any category. Up to 3 hours of coursework may be taken in the student's degree-granting department. Figure 1 is a graphical representation of the curricular map for the Energy Minor along with the departments that have agreed to provide the lead instructor. The lines indicate prerequisite chains. The course approval forms, descriptions and prerequisites for the proposed new courses are given in the Appendix. The initial list of approved electives is in the Appendix. This list is expected to expand as the program develops.

The Committee further proposes that the track designation appear on the student's transcript, such as Energy Minor (Fossil), Energy Minor (Renewable), or Energy Minor (General), as appropriate. The Area of Special Interest in Energy requires a minimum of 12 credit hours of acceptable course work: ENGY200, EBG330/ENGY330 and two additional courses selected from any of the approved energy-related courses.

Governance

The Committee proposes a simple governance structure for the Energy Minor program consisting of the Director, an Advisory Board, and a Curriculum Committee. The Director, appointed by the Provost, will have overall responsibility for the administration of the program, coordinate with the Registrar, approve all student curricular forms related to the minor, coordinate advising of students as well as staffing, sequencing and scheduling of Energy Minor related courses, chair the Energy Minor Curricular Committee and serve, *ex officio*, on the Energy Minor Advisory Board. The Energy Minor Advisory Board will consist of the Program Director, two external members from industry, government or national laboratories, and the Department Heads/Division Directors of the principal participating departments/divisions: Chemical Engineering, Economics and Business, Engineering, Geology and Geological Engineering, Liberal Arts and International Affairs, Metallurgical and Materials Engineering, Petroleum Engineering, and Physics. The Advisory Board will select its own chair, determine its internal operating procedures, and will meet at least once per academic year. The Energy Minor Curriculum Committee will consist of the principal instructors of the ENGY courses and will be responsible for the Energy Minor curriculum, including proposals for new courses or minor tracks for eventual Undergraduate Council approval, student advising, and curricular assessment and improvement. The Director will chair the Curriculum Committee which will meet at least twice per academic year.