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# CWU Faculty Senate Minutes - 02/07/07

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## CENTRAL WASHINGTON UNIVERSITY FACULTY SENATE

#### REGULAR MEETING Wednesday, February 7, 2007, 3:10 p.m. BARGE 412 MINUTES

ROLL CALL:

**Senators:** All senators or their alternates were present except: Gina Bloodworth, Lori Braunstein, John Bryant, Scott Calahan, Anthony Diaz, Karen Hendricks, Mark Soelling, and Ronald Tidd.

**Visitors:** Rose Spodobalski Brower, Sheryl Grunden, Jennifer Fountain, Danielle Howard, Margise Allen, Carey Gazis, and Ethan Bergman.

CHANGES TO AND APPROVAL OF AGENDA Ogden moved Snedeker seconded Approved

**MOTION NO. 06-17(Approved):** APPROVAL OF MINUTES of January 17, 2007 Ogden moved Chase seconded

**COMMUNICATIONS** – Letter from Dr. Beath regarding Douglas Honors College Director search committee. Copy is available in Senate office.

FACULTY ISSUES: None

**OLD BUSINESS** - None

#### **REPORTS/ACTION ITEMS**

SENATE COMMITTEES:

**Executive Committee:** 

**Motion No. 06-18(Approved):** "Ratification of 2007-08 Faculty Senate Standing Committee members attached as Exhibit A."

#### Academic Affairs Committee:

**Motion No. 06-19(Failed, 8 yes and 21 no):** "That the Policy Manual Academic Affairs section 5-9.6 Course Scheduling be added as shown in Exhibit B."

Discussion: Senator Ogden expressed concern that this policy was what is being done currently and does not change anything. Not all courses work best in this framework, especially 300-400 courses. In the Communication Department this policy has forced the majority of major courses into the afternoon and early evening. It is creating time to degree issues. Senator Cant also expressed concern about this policy for the students. He indicated he has someone on a daily basis with a problem with conflicts in major courses. Senator Donahoe indicated a concern regarding the Registrar controlling scheduling. Senator Dittmer explained that this is the current procedure and the Registrar does not control scheduling. The current procedures were put together by a committee of associate deans. Provost Soltz suggested creating an ad hoc committee of faculty and administrators to look at how we schedule courses on campus.

Academic Code and Bylaw Committee: No report

#### Curriculum Committee:

**Motion No. 06-20(Approved)**: "Recommendation to accept a new specialization in Economic and Business Forecasting as outlined in Exhibit C."

Discussion: Robert Carbaugh, Chair of the Economics department gave a brief background why this new specialization was created. This specialization is in recognition for students who have a strong quantitative background. Employers in Washington as well as nation wide require more quantitative abilities from our graduates. Students need the business core to apply quantitative tools as well as a way to more closely align the Economics department within the College of Business for accreditation purposes.

**Motion No. 06-21(Approved):** "Recommendation to accept new graduate cognates in Music as outlined in Exhibit C."

**Motion No. 06-23(Tabled):** "Recommendation to accept a new Master of Science in Health and Physical Education – Athletic Administration Specialization as outlined in Exhibit C."

Motion No. 06-23a (Approved): Senator Ogden moved to table. Motion was seconded by Senator Cant.

#### **General Education:**

**Motion No. 06-22(Approved):** "That the General Education program be amended as outlined in Exhibit D."

Discussion: Carey Gazis reported that the Senate Office sent out proposed General Education breadth outcomes to the Senators this afternoon. The General Education committee would appreciate any feedback from Senators on these outcomes. Chair Dippmann indicated that the ENG 110 course was removed from the General Education motion. This course has been held by the Curriculum committee for further information. This course is not part of this motion and comments were limited on that subject.

#### Evaluation and Assessment Committee: No report

Faculty Legislative Representative: Included with agenda. See Faculty Senate office to review copy.

#### Professional Development Committee: No report

**CHAIR:** Chair Dippmann thanked everybody for getting committee preferences for senate and university committees in. All committees should be filled in a very short time. Academic Affairs Committee has been charged with looking at waitlists and the three day window as well as reviewing the current final exam schedule. A reminder that if your department needs to hold Senator elections, these elections need to be done by February 15<sup>th</sup>. The Board of Trustees (BOT) met last Friday. Section II "Academic Chairs" of the Academic Code was not approved by the BOT and will not be part of that document. Legal counsel for the University has determined there was a bargainable issue and could not be included. Until this issue, is resolved the old policies and procedures for chair elections will be used. The Provost will be posting this policy on his website. The Executive Committee met with the BOT for lunch and had a very good discussion. The BOT reaffirmed their support of the Faculty Senate and what Senate does. Faculty Senate has been invited to give a presentation about the Senate, its history, structure and vision and role of Senate at the University in the future. This is an opportunity to educate the BOT about what Senate is and does.

**CHAIR-ELECT**: Chair-elect Madlem indicated that the luncheon was a delightful opportunity to talk to the BOT. She encouraged faculty to be involved with BOT meetings.

**PRESIDENT:** Legislative update – She is currently watching tuition waiver authority bill. The students have been very help in testifying on that. Another bill they are watching is the Text book bill. Washington Learns and the Governor's budget are clearly providing the framework within which a lot issues are being discussed. Council of President met with the Governor a couple of weeks ago. The main tone of the conversation was to thank the Governor for her budget and how what can the universities do to help. The Governor feels very strong that education is an investment. Government Relations website provides additional information on what is going on in the legislator.

http://www.cwu.edu/legis/ The Board of Trustees has had some changes lately. The current Board of Trustees are: Ken Martin, Chair; Judy Yu, Vice Chair; Sanford Kinzer; Leslie Jones; Patricia Notter; David Valdez; and Tony Aronica, student trustee. The Board members are citizens and really work hard to stay informed. The meetings can be helpful in letting them know how we do things. The President recently went on an Alumni trip to Arizona to reconnect with alums. At these meetings, the university tries to a have presentation to represent what is going on at the university. Karen Blair, History, presented at the Phoenix meeting. President has been going on "Getting to Know You" visits with departments. These meetings are an opportunity to faculty to let her know what is going on in their department.

**PROVOST:** The provost added his thanks for the Senate and members of the faculty for coming forward so rapidly to serve on university and senate committees. This has been the most successful round that we've had in a while. The appointment letters for universities committee should be going out this week. Monday and Tuesday is the Darwin Day celebration, is being tied in with the One Book, On Campus program. There is a Presentation on Monday evening at 7:00. The selection committee is working on the book for next year. They currently have 7-8 books that they are reviewing. The Provost wants to make the announcement for the book selected for next year by the end of winter quarter. The Associate Vice President for Undergraduate Studies search is underway and moving rapidly. The committee is currently doing reference checks and by the end of next week will have candidates selected to come to campus. The candidates will likely be on campus the last two weeks in February and the first two weeks in March. Barbara Hodges is leaving the Provost office at the end of next week. She will be working with the College of Business in development. Senate is currently looking for faculty willing to serve on the General Education program review committee. An Ad Hoc committee will be formed and are looking for someone willing to chair this committee.

**STUDENT REPORT:** Three legislative bills that the ASCWU is focusing on are the tuition waiver, text book exempt from sales tax and the child care bill. ASCWU election process is underway. Hope to have election packets by finals week. Fireside chat is on Monday at 8:00 p.m. at the SUB pit. Reminder that the Quintuplet silent auction is March 1<sup>st</sup> from 6-8 in the SUB theatre. This is to raise funds for the Stevenson quintuplets.

**NEW BUSINESS** – **Motion No. 06-24 (Approved):** Senator Ogden moved, Senator Williams seconded, to request that the Faculty Senate Executive Committee formulate an ad hoc committee of faculty with invited administration participation, to formulate recommendations to address block courses and General Education scheduling conflict and report back to the Faculty Senate by the end of spring quarter.

Meeting was adjourned at 5:00 p.m.

# Exhibit A

Committee	Name	Department	Term
Academic Affairs Committee		-	
CAH (Need 1)	Maurice Amutabi	History	6/15/07-6/14/10
CEPS (Need 1)	Marla Wyatt	FCS	6/15/07-6/14/10
COB (Need 1)	Tim Dittmer	Economics	6/15/07-6/14/10
COTS (Need 2)	Tim Englund	Mathematics	6/15/07-6/14/10
	Krystal Noga	Law & Justice	
Professional Development Committee	Robert Holtfreter	Accounting	1/01/07-6/14/08
	Xiao Hong	Sociology	
	Gary Richardson	Finance & OSC	
	Sura Rath	English	
	Marcus Kieltyka	Library	
	Mary Wise	Library	
	Katherine Whitcomb	English	
	Patricia Gross	FCS	
Academic Code & Bylaw Committee	Daniel CannCasciato	Library	1/01/07-6/14/08
	JoAnn DeLuca	Chemistry	
	Don Nixon	Management	
	Lynn Richmond	Management	
	Catherine Bertelson	ITAM	
Curriculum Committee			
COTS (Need 1)	Kathy Temple	Mathematics	6/14/07-6/15/10
COB (Need 1)	Brian Kulik	Management	6/14/07-6/15/10
CAH (Need 1)	Jason Knirck	History	1/01/07-6/14/09
CEPS (Need 1)	Lori Braunstein	ITAM	1/01/07–6/15/10
Conorol Education Committee			
General Education Committee COTS (Need 2)	John Algorizato: Dathag	Anthropology	6/11/07 6/15/10
CO13 (Need 2)	John Alsoszatai-Petheo	Anthropology Mathematics	6/14/07-6/15/10
	Aaron Montgomery	wamematics	
CAH (Need 2)	Bobby Cummings	English	6/14/07-6/15/10
	Maya Chachara	Art	
		/	
CEPS (Need 1)	Vacant		

Evaluation and Assessment Committee			
	Rob Perkins	IET	01/01/07-6/14/08
	Minerva Caples	Education	
	Roxanne Easley	History	
	Robert Fordan	Communication	

# Exhibit B (Not approved)

5-9.6 Course Scheduling

- 5-9.6.1 <u>Weekday lecture/seminar courses shall be scheduled across the hours of</u> <u>7:00 a.m. to 10:00 p.m. Limited classroom space prohibits concentration</u> <u>of classes during prime hours.</u>
  - 5-9.6.1.1 <u>The standard class period will be fifty (50) minutes in length.</u> <u>Between the hours of 9:00 a.m. and 2:00 p.m., the formal</u> <u>scheduling of a class into a fractional segment of the fifty-minute</u> <u>class period will be prohibited without written approval from the</u> <u>office of the appropriate dean.</u>
  - 5-9.6.1.2 <u>Classes requiring consecutive periods should schedule blocks of</u> <u>time which end no later than 9:50 a.m. or begin no earlier than</u> <u>2:00 p.m.</u>
- 5-9.6.2 Distance education courses using live audio-video technology should adhere to the following time blocks with either Monday/Wednesday or Tuesday/Thursday meeting patterns:
  - (a) <u>Early Afternoon 1:00 p.m. start time with class ending no later than</u> <u>3:10 p.m.</u>
  - (b) <u>Late Afternoon 3:20 p.m. start time with class ending no later than</u> 5:30 p.m.
  - (c) <u>Early Evening 5:40 p.m. start time with class ending no later than</u> <u>7:50 p.m.</u>
  - (d) <u>Late Evening 8:00 p.m. start time with class ending no later than</u> <u>10:10 p.m.</u>
- 5-9.6.3 Exceptions to the general scheduling policies (5-9.6.1 and 5-9.6.2 require the approval from the office of the appropriate dean (with the exception of laboratory classes, graduate courses and university center courses). Department Chairs must submit a rationale and supporting documentation to obtain approvals for block scheduling classes.
- 5-9.6.4 <u>Complete guidelines for course scheduling will be provided by the Office of the Registrar.</u>

# Exhibit C

## • NEW SPECIALIZATION TO AN EXISTING PROGRAM

## **Department - Economics**

## B. S. Economics with a Specialization in Economic and Business Forecasting

This specialization is for students who seek careers involving research in economics and business, including forecasting.

Required Courses	Credits
Pre-admission Requirements	
ECON 324, Introduction to Econometrics	
ECON 325, Introduction to Forecasting	
ECON 352, Managerial Economics	
ECON 401, Intermediate Microeconomic Analysis	5
ECON 402, Intermediate Macroeconomic Analysis	5
ECON 406, Economics Assessment	3
ECON 426, Economic Research	5
ACCT 251, Accounting I	
FIN 370, Introductory Financial Management	
MKT 360, Principles of Marketing	
MGT 380, Organizational Management	
MIS 386, Management Information Systems	
OSC 323, Operations Management	
OSC 435, Advanced Operations Management	
Select one of the following	
ADMG 385, Business Communications and Report Writi	
COM 345, Business and Professional Speaking (4)	ng (5)
, , , , , , , , , , , , , , , , , , , ,	
ENG 310, Technical Writing (4)	00.00
Total	92-93

#### • GRADUATE COGNATES IN MUSIC

#### **Department – Music**

**Justification:** This proposal will offer CWU Music graduate students an opportunity to enhance the benefits they gain from coursework taken beyond that required for the degree. Most graduate students in Music are Graduate Teaching Assistants, required to register for 10 credits per quarter to maintain their position. For those students who stay two full years, this means 60 "required" credits, 15 more than the 45 required for the degree. At present, students who take these "hidden" required credits have nothing on their transcripts to show for their work, beyond just a listing of courses. This proposal for Cognates in Music will help to lend more coherence to the cluster of courses students take beyond those required for the degree, and offer more meaningful recognition on the transcript for these "extra" courses.

A Graduate Cognate in Music, similar to an undergraduate minor or cognate in a doctoral program, would create opportunities for students to get something for these "hidden" credits. Beyond the obvious recognition for additional work accomplished, this action would conceivably provide more incentive for students to register for credible classes beyond their major requirements, as well as bolstering enrollment in many of our graduate courses. Since these cognates would be elective, not required, students may opt not to pursue them. All current graduate students in Music, GTAs and not, have expressed interest in being able to take coursework in another area AND have something to show for it.

A total of 13 credits is proposed to earn a Graduate Cognate in Music, with specific subject areas identified according to combinations of courses that are associated with majors in these areas. 12 credits of courses in the comparable major area will provide substantive experience without the same credit load as a major field of study (15-21 credits). One credit for the final project presentation seems reasonable for the culminating work in this cognate area. Adding one Cognate would bring the number of required credits from 45 to 58.

#### Program:

A Graduate Cognate in Music is an opportunity for master's students to pursue academic work in an additional area of specialization. A total of 13 credits beyond the major requirements is required to earn a Graduate Cognate in Music.

#### Admission

Students who have been accepted into a graduate major in music may apply for admission to a Graduate Cognate after they arrive on campus. This interview/audition will normally be conducted during the first quarter of enrollment or later. Acceptance for admission is also dependent on space available, to be determined by faculty in that area. Admission to a Graduate Cognate requires the following, in order:

1. Acceptance for admission to CWU Graduate Program

2. Acceptance for admission to a Major Graduate Program in Music (by audition/interview)

3. Acceptance for admission to the Graduate Cognate by separate audition/interview. This interview/audition will normally be conducted during the first quarter of enrollment or later.

#### Guidelines

1. Students are allowed one Graduate Cognate in Music.

2. Students accepted into a Cognate will have an assigned advisor, but will not need to form a graduate committee for the Cognate final project or recital. This advisor will be responsible for evaluating the culminating recital or project, and will also be a member of the student's major graduate committee.

3. Courses counted for the Cognate must also be indicated on the Course of Study form, separate from General, Specific and Elective Curricular Requirements.

4. Material and coursework covered in the Cognate would be eligible for inclusion in the Final Examination, as approved by student's major graduate committee chair.

#### Content

Students must take a minimum 12 credits of courses approved by the Cognate adviser in consultation with the Major Adviser, normally taken from those that apply to the corresponding major area, **plus** one credit of MUS

600 Graduate Cognate Project in the quarter the required culminating work is presented, above the 45 credits required for the masters degree.

#### Subject Areas

Composition Conducting Performance Performance-Pedagogy Music Education Music Theory Music History

#### Individual Subject Area Requirements

<u>Composition</u>: Students receive guided study in their own musical composition, culminating in the presentation of a musical composition or project in the field of composition.

6 credits of MUS 523 Advanced Composition6 credits of approved Composition/Theory classes1 credit MUS 600: presentation of composition or project

Normally, courses will be selected from: MUS 444, 522, 547, 584, 610, 613

**Conducting**: Students are provided opportunities to hone their conducting skills, culminating in a project or public performance demonstrating progress in the student's conducting experience.

9 credits of approved classes, including at least 3 credits of MUS 5413 credits of orchestration or arranging courses1 credit MUS 600: present approved conducting project or performance

Normally, courses will be selected from: 440, 522, 540, 541, 584, 615

**<u>Performance</u>**: Students receive opportunities, through applied study and performance experience, to improve their performance skills on a primary instrument or voice, culminating in a public performance.

8 credits of MUS 664 major applied lessons
3 credits of MUS 426 Studio Literature
1 credit ensemble (note: this credit is in addition to 3 credits required in all masters degrees)

1 credit MUS 600: present approved recital

<u>Performance-Pedagogy</u>: Students receive opportunities to improve performance skills with additional emphasis on the pedagogy of the primary instrument or voice, culminating in an appropriate performance, project, or combination in lecture-demonstration.

8 credits of MUS 664 major applied lessons

3 credits of MUS 425 Studio Pedagogy

1 credit ensemble (note: this credit is in addition to 3 credits required in all masters degrees)

1 credit MUS 600: present approved recital, lecture-demonstration or written project

<u>Music Education</u>: Students are provided opportunities to study and conduct research in the field of music education in greater depth, culminating in an appropriate written document or project.

12 credits of approved Music Education classes

1 credit MUS 600: present covering paper or project on approved topic.

Normally, courses will be selected from: MUS 525, 527, 554 C-G, 560, 582, 611

<u>Music Theory</u>: Students are provided opportunities to study and conduct research in the field of music theory in greater depth, culminating in an appropriate written document or project.

12 credits of approved Music Theory classes (note: these credits are in addition to 3 credits required in all masters degrees)

1 credit MUS 600: present covering paper or project on approved topic.

Normally, courses will be selected from: MUS 444, 520, 522, 547, 584, 610, 613

<u>Music History</u>: Students are provided opportunities to study and conduct research in the field of music history in greater depth, culminating in an appropriate written document or project.

12 credits of approved Music History (note: these credits are in addition to 3 credits required in all masters degrees)

1 credit MUS 600: present covering paper or project on approved topic.

Normally, courses will be selected from: MUS 570, 571, 572, 573, 575, 576, 579, 610, 612

# Master of Science in Health and Physical Education – Athletic Administration Specialization. (Tabled)

The athletic administration specialization offers courses to develop one's effectiveness as an administrator in sport marketing, public relations, and program management. Students will take classes in liability and risk management, principles of athletic administration, fundraising, social and psychological dimensions of sport and culture, and coaching. Prospective students wishing to specialize in Athletic Administration need to contact the Department of Health, Human Performance and Nutrition to inquire about availability.

Required Core Courses	Credits
HPE 510 Issues in Health and Physical Education	3
HPE 560 Descriptive Statistics in Health and Physical Education	4
HHPN 557 Research Methods and Design in Health and Physical	
Education	4
HHPN 700 Thesis, Project, Examination	6
Advisor Approved Electives (HPE, HHPN, PE)	14-24
Electives in related disciplines	5-18

Total

45

# Exhibit D

## **BREADTH REQUIREMENT**

#### I. ARTS AND HUMANITIES.

Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement.

#### Literature and the Humanities

A grade of C- or better is required in ENG 101 before taking any of the courses in this category.

ENG 105(W) The Literary Imagination: An Introduction to Literature (4) ENG 247(W) Multicultural Literature (4) ENG 347(W) Global Perspectives in Literature (4) HUM 101(W) Exploring Cultures in the Ancient World (5) HUM 102 (W) Exploring Cultures from 16<sup>th</sup> Through 19th Centuries (5) HUM 103(W) Exploring Cultures in Modern & Contemporary Societies (5)

#### The Aesthetic Experience.

ART 101 Introduction to Western Art (5) ART 102 Introduction to Non-Western Art (5) FVS 250(W) Introduction to Film and Video Studies (4) MUS 101 History of Jazz (5) MUS 102 Introduction to Music (5) PED 161 Cultural History of Dance (4) TH 101 Appreciation of Theatre and Film (4) TH 107(W) Introduction to Theatre (4) <u>TH 375(W) Asian Theatre (4)</u> TH 382(W) Ethnic Drama (4)

#### Philosophies and Cultures of the World.

Foreign Languages 251, 252, or 253. Second year foreign language (same as studied in high school) (5) or

Foreign Languages 151, 152 or 153 or CHIN 141, 142, or 143. First year foreign language (different than the one used to meet basic skills requirement) (5)

- PHIL 101(W) Introduction to Philosophy (5) PHIL 115(W) The Meaning of Life (5)
- PHIL 202(W) Introduction to Ethics (5)
- PHIL 202(W) Introduction to Ethics (5) PHIL 209(W) Introduction to Asian Philosophy (5)
- PHIL 210(W) Current Ethical Issues (5)
- PHIL 306(W) Environmental Ethics (5)
- PHIL 378(W) The Philosophy of Love (5)
- RELS 101(W) Introduction to Religion (5)
- RELS 201(W) Sacred Books of the World (5)

### **II. SOCIAL AND BEHAVIORAL SCIENCES**

Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement.

#### Perspectives on the Cultures and Experiences of the United States.

An introduction to the institutions, cultures, and traditions of the United States intended to encourage a critical and analytical understanding of how the past affects the present and the future. An introduction to the complexities of social, economic, and political processes, issues, and events in the United States intended to provide a context for informed decision-making and citizenship.

ECON 101 Economic Issues (5) ECON 201 Principles of Economics Micro (5) ETS 101(W) Ethnic Awareness (4) HIST 144(W) U.S. History Since 1865 (5) POSC 210 American Politics (5) SOC 101(W) Social Problems (5) SOC 305 (W) American Society (5) WS 201(W) Introduction to Women Studies (5)

#### **Perspectives on World Cultures**

An introduction to institutions, cultures, and traditions of nations, groups, and societies outside the United States intended to encourage an understanding and appreciation of the dimensions of human diversity as well as similarities. An introduction to contemporary international and transnational issues intended to provide a broader perspective of the individual's relationship to other cultures and to common human concerns.

ANTH 130 Introduction to Cultural Anthropology (5) AST 102(W) Introduction to Asian Studies (3) COM 302(W) Intercultural Communication (4) ECON 102(W) World Economic Issues (5) <u>ECON 360(W) Contemporary Economic Problems (5)</u> GEOG 101 World Regional Geography (5) HIST 102(W) World Civilization: 1500-1815 (5) HIST 103(W) World Civilization Since 1815 (5) LAS 102(W) Introduction to Latin American Studies (5) POSC 270(W) International Politics (5)

#### Foundations of Human Adaptations and Behavior

An introduction to and analysis of the fundamental principles underlying human interaction intended to foster a better understanding of the human condition. An introduction to the fundamental patterns and understandings of human interaction with natural and man-made environments intended to help students make informed judgments concerning broad environmental issues.

ANTH 107 General Anthropology (5) ANTH 120 Introduction to Archaeology (5) FCSF 337(W) Human Sexuality (4) GEOG 108 Introduction to Human Geography (5) POSC 101(W) Introduction to Politics (5) PSY 101 General Psychology (5) PSY 205(W) Psychology of Adjustment (5) SOC 107(W) Principles of Sociology (5) HED 101 Health Essentials (4)

#### **III. THE NATURAL SCIENCES**

The natural sciences provide basic methods for rigorously describing and comprehending the natural world. Inquiry-driven laboratory and field observations are an essential mode of teaching, learning, and practicing natural science. Students must take at least one course from each of the three groups. No more than one class from a single department may be counted toward this requirement. It may be advantageous for students to take courses from groups in the order they appear below.

#### **Fundamental Disciplines of Physical and Biological Sciences**

An introduction to those sciences that study the fundamentals of physical and life systems.

BIOL 101 Fundamentals of Biology and Lab (5) CHEM 111/111LAB Introduction to Chemistry and <u>Introductory Chemistry Lab Laboratory</u> (5) CHEM 181/181LAB General Chemistry <u>I</u> and <u>General Chemistry Laboratory I</u> <del>Lab</del> (5) GEOL 101/101LAB Physical Geology and Lab (5) PHYS 111/111LAB Introductory Physics and Lab (5) PHYS 181/181LAB General Physics and Lab (5)

#### Patterns and Connections in the Natural World.

Those sciences that use a knowledge of basic scientific disciplines to examine large and complex physical and life systems.

ANTH 110 Introduction to Biological Anthropology (5) (Lab ANTH 110LAB is optional) BIOL 200(W) Plants in the Modern World and Lab (5) BIOL 201 Human Physiology (5) BIOL 300 Introduction to Evolution (5) ENST 301 Earth as an Ecosystem (5) GEOG 107 Introduction to Physical Geography (5) GEOL 102/101LAB Geology of National Parks and Lab (5) GEOL 107 Earthquakes, Volcanoes and Civilization (5) GEOL 302 Oceans and Atmosphere (4) PHYS 101/101LAB Introductory Astronomy of Stars and Galaxies and Lab (4) (1) PHYS 102/101LAB Introductory Astronomy of the Solar System and Lab (4) (1)

#### **Applications of Natural Science**

These courses explicitly treat social, economic, technological, ethical or other implications of natural phenomena, of human influence on natural systems, or of responsive scientific inquiry.

ANTH 314 Human Variation and Adaptation in Living Populations (4) BIOL 302 Human Ecology (5) CHEM 101 Contemporary Chemistry and Lab (5) ENST 302 Ecosystems, Resources, Population and Culture (5) NUTR 245 Basic Nutrition (5) GEOG 273 Geography of Rivers (5) GEOL 180 108 Introduction to Environmental Geology (5) IET 101 Modern Technology (5) PHYS 103/103LAB Physics of Musical Sounds and Lab (4)-(5)