Faculty Senate Monthly Packet February 2004

Portland State University Faculty Senate

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The Faculty Senate will hold its regular meeting on February 2, 2004, at 3:00 p.m. in room 53 CH.

AGENDA

A. Roll
*B. Approval of the Minutes of the January 5, 2004, Meeting

C. Announcements and Communications from the Floor

President’s Report
Provost’s Report
Vice President’s Report

D. Unfinished Business

E. New Business

*1. Graduate Council New Course Proposals - Danielson
*2. Curriculum Committee Course and Program Proposals – Baccar

F. Question Period

1. Questions for Administrators
2. Questions from the Floor for the Chair

G. Reports from Officers of the Administration and Committees

1. Intercollegiate Athletic Board Report – Farr

H. Adjournment

The following documents are included with this mailing:
B Minutes of the Meeting of January 5, 2004
E1 Graduate Council Course Proposals
E2 Curriculum Committee Course and Program Proposals
Minutes: Faculty Senate Meeting, January 5, 2003
Presiding Officer: Cynthia Brown
Secretary: Sarah E. Andrews-Collier


Alternates Present: Ruedas for Duffield, Harmon for Cornman.


A. Roll

*B. Approval of the Minutes of the June 2, 2003, Meeting

The minutes of the meeting of December 1, 2003, were approved as published.

C. Announcements and Communications from the Floor

President’s Report

BERNSTINE noted the new board nominations are scheduled to be approved late in January.

BERNSTINE noted that he has named the new Vice President for University Relations, Catherine "Cassie" McVeety, director of campus advancement at Washington State University Vancouver. She has been attending certain events since December, and will join the university full-time on April 1.

Minutes of the PSU Faculty Senate, January 5, 2004
Provost's Report

TETREAULT noted she is moving forward with tenure-related searches having to do with retirements. Martha Balshem has been named the new Director of the Center for Academic Excellence. The search for the Dean of Urban and Public Affairs is moving forward and should be concluded very soon. The search for the Dean of Social Work is also moving forward, with a list of finalists to be determined in the near future. The search for the Dean of the Library is underway and review of files commenced January 1. The search committee for Vice Provost for Intl. Affairs has identified four candidates, and campus visits will take place in the third and fourth week of January.

TETREAROUT noted that after a review of institutional priorities over the break, she has elected to prioritize how to attract and retain a faculty of distinction, and she will begin working with the deans and vice provosts how to achieve that priority, given our fiscal constraints. She noted she has invited department chairs to come to the Chairs to Chairs Meeting on January 21, 8:30 – 10:00 to discuss how to achieve this priority.

Vice President's Report

The Vice President did not report.

D. Unfinished Business

None.

E. New Business

1. Change in the Status of Extended Studies

D.BROWN/BURNS MOVED THE SENATE APPROVE the recommendation of the Educational Policies Committee: “Retain the current faculty senate representation of School of Extended Studies faculty, with faculty retaining theirs senate post even if they are moved out of Extended Studies.”

ROBINSON asked why this needs to be moved by February. ANDREWS-COLLIER noted that the Constitution specifies that faculty are certified for faculty governance and elections once each year, in February. Due to the proximity to the certification date of these deliberations, this body of faculty could potentially lose their representation in Faculty Senate until June 2005. The proposal is intended to protect their representation in the interim.

BRENNAN asked why the faculty from Extended Studies wouldn’t just be moved into the All Others division and still be represented. LATIOLAIS stated that the Educational Policies Committee is not ready to make their recommendation to the Senate on the future of faculty representation for this group of faculty.
THE MOTION PASSED by unanimous voice vote.

F. Question Period

There were no questions.

G. Reports from Officers of the Administration and Committees

1. Report of the Interinstitutional Faculty Senate Meeting of December 5-6, 2003

CARTER presented the report (attached).

2. Faculty Development Committee Semiannual Report

KETCHESON presented the report (attached).

H. Adjournment

The meeting was adjourned at 3:38 p.m.
Members:

Kathi A. Ketcheson, Chair
Gordon Buffonge
Sara Davis
Don Frank
Steve Harmon
Jun Jiao
Risa Kiam
Thomas Kindermann
Sharon Lee
Ronald Marshall
Christine Rose
Shawn Smallman
Claudia Weston

Faculty Enhancement Awards. The "Call for Proposals" has been available on the Office of Research and Sponsored Projects Web site (http://www.gsr.pdx.edu/orsp_internal_enhancement.html) since November 15. The deadline for applications is January 20, 2004 at 5:00pm. Applicants may apply for awards up to $10,000, not including graduate assistant tuition remissions. Proposal reviews will begin in Winter Term.

Professional Travel Grants. The "Call for Proposals" also may be found on the ORSP Web site (http://www.gsr.pdx.edu/orsp_internal_travel.html). The Travel Grant Subcommittee met on October 21 to review applications for Fall Term travel. The committee received 23 applications totaling $16,098 and granted 22 awards totaling $10,900. Here are the deadlines for the remainder of the year:

<table>
<thead>
<tr>
<th>Term</th>
<th>Deadline (5:00pm)</th>
<th>Travel Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter 2004</td>
<td>January 23</td>
<td>December 1 through February 29</td>
</tr>
<tr>
<td>Spring 2004</td>
<td>April 9</td>
<td>March 1 – May 31</td>
</tr>
<tr>
<td>Summer 2004</td>
<td>July 9</td>
<td>June 1 – August 31</td>
</tr>
</tbody>
</table>

OIRP:kak
12/29/03
The most important concern of this meeting was the recent developments affecting the Optional Retirement Plan (ORP). Denise Yunker, Human Resources officer for the Oregon University System (OUS), explained why OUS’ contribution for ORP plummeted from 11.3% to 4.3%. The state sold $2 billion worth of bonds which were applied as a buy-down of PERS premiums, to 4.3%. State law couples the ORP rate and the PERS rate such that OUS is required to make the same contribution to ORP that it does to PERS. In effect, then (and this is strictly my interpretation) a law originally designed to assure equity between members of ORP and members of PERS is now being used to justify a gross inequity. IFS will pursue this matter, to include attendance at legislative hearings on whether to de-couple ORP and PERS rates.

The Public Employees Benefits Board (PEBB) is said to be “changing its spots,” moving toward some pre-tax payment for medical expenses and toward an “evidence-based” system for medical coverage (i.e. emphasis on medicines and procedures proven to work). OUS has not recently pursued the possibility for a different PEBB rate for faculty—faculty utilization rates have increased to a rate nearly the same as that of other groups in PEBB. Additionally, PEBB is looking at a new type of flexible spending account without a “use it or lose it” provision.

Tom Doyle, attorney from Bennet and Hartman (the firm handling four pieces of major litigation related to the PERS reform laws), described ongoing litigation and projected timelines. (1) Direct appeal to the state supreme court, charging HB 2003 and 2004, the PERS reform laws with both impairment of contract and breach of contract. Basically, the 6% has been moved to a place where it will no longer get a money match. Expected to be resolved in early 2005. (2) Federal case on the same issues. To be decided early this summer. An adverse hearing in one court will not prejudice the other. (3) Class action suit in behalf of a representative group but applies to all. Seeks a way to distribute damages. On hold until supreme court case is resolved. (4) Renewal of a gender equity case from mid 1970’s. Then, the supreme court found separate benefit tables for men and women unconstitutional, and required that women be brought up to the level of men. This case charges that state be found in contempt of this earlier requirement.

Doyle had also intended to talk about provisions regarding the 12-month break in service, but ran out of time. Referred one and all to the firm’s web site at bennethartman.com.

State Representative Steve March spoke of the tax surcharge and what would happen if voters rejected it (cited a poll: 51% against, 25% for, remainder undecided). He said the consequences of rejection are already known, as HB5077 (see legislature’s web site) contains built-in cuts. Unfortunately, the cuts ($10.93 million) don’t represent 100% of the amount to be foregone ($11.5 million). E-board might step in to make an adjustment.

March also noted the change in the retirement contribution going to non-PERS faculty and observed that it is going to be hard to attract new faculty to Oregon.
Asked if he agreed that the chancellor's office made a mistake by lobbying for quality rather than access, March said no, that the legislature was interested in both. He said our focus in lobbying should be on educating students.

March also indicated that he favored autonomy for individual institutions.

John Wykoff of the Oregon Student Association provided an overview of the most recent legislative session from the student perspective. He stated that given recent increases in tuition, students were beginning to feel like they had a target on their back. While praising Chancellor Jarvis for his candor and willingness to work with students, he also ventured the opinion that the chancellor made a mistake to focus on quality, which made us sound elite, rather than on viability and the access crisis. Wykoff said he was "cautiously optimistic" about the governor's appointment of Neil Goldschmidt to head up the state board and hoped it signaled an intention of getting more money into the system.

Since PSU hosted this meeting, various PSU administrators addressed the group. Provost Mary Kay Tetreault welcomed the senators and described our planning initiative and our work to manage enrollment growth (to include building the faculty). She also spoke of turning access dollars into permanent dollars for units, and of making new tenure-track hires by matching (from OAA) funds put up by schools and colleges. Dean Nohad Toulan described the University District Vision Plan, and Vice President Jay Kenton talked about some of the creative financing PSU has employed in these past few years. He described our financial plight as part of a paradigm shift rather than a short-term problem, leading the university to build residence halls to attract more out-of-state and international students, to attract retailers to help pay for the new space, to develop philanthropy, and to consider closer relationships with business and industry, among many other things.

The most important issue to emerge in our Saturday session was OHSU's introduction of web filters last April (removed in May), apparently to cut down on the use of "inappropriate" web sites. This move was made without consultation and without warning. OHSU's senator Steve Teich researched the matter, only to find that no comparable universities anywhere filter web sites or monitor work stations. Clear implications for academic freedom.

Other topics included the consequences of the recent shakeup of the state board, nomination of a faculty member (to replace Gerri Richmond of UO) for the board, the ORP/PERS issue, and news from the various campuses.

Thus ends my three-year term with the IFS, which I have thoroughly enjoyed. I will be replaced by Robert Mercer, CLAS, who will join continuing senators, Craig Wollner (UPA) and Scott Burns (CLAS).

Respectfully submitted,

Duncan Carter
CLAS
To: Faculty Senate Steering Committee, January 12, 2004

From: Sue Danielson
For Graduate Council

Below is the list of courses approved by the Graduate Council and to be submitted for approval to the Faculty Senate in its February meeting.

New Courses

JPN 514 [4 credits] Advanced Japanese Grammar
JPN 594 [4 credits] Japanese Sociolinguistics
SYSC 521/621 [4 credits] Systems Philosophy
SYSC 525/625 [4 credits] Agent Based Simulation
SYSC 546/646 [4 credits] Information theory
CS 492/592 Applied Computer Security[4 credits for UG/
3 credits for grad]

Course Changes

SW 651 [2 credits] Integrative Writing Seminar
SW 690 [2 credits] Teaching Practicum

Susan Danielson
English Department
Portland State University
Portland, OR 97207
503 725-3569
February 2, 2004

MEMORANDUM

To: Faculty Senate

From: Cindy Baccar, Chair – University Curriculum Committee

Re: Recommendations for approval by the Faculty Senate

The University Curriculum Committee submits the following program changes, new courses and changes to existing courses for approval by the Faculty Senate. Descriptions of all new courses are attached.

College of Liberal Arts and Sciences

New Courses:

JPN 314  Beginning Japanese Grammar, 2 cr – new course
JPN 315  Intermediate Japanese Grammar, 2 cr – new course
JPN 415  Advanced Japanese Grammar, 4 cr – new course
JPN 494  Japanese Sociolinguistics, 4 cr – new course

School of Business Administration

Program Modification: Change to Minor in Business Administration

The goal of the proposed revisions to the current business minor is to better address demand for a shorter, more applied business program that exposes non-business majors to basic business concepts. The new business minor is distinct from the business major and is not available to majors as it is designed to meet the needs of a non-business major audience. The program as proposed reduces the credits required from 40 to 24, allowing students majoring in other areas to add a business background to their program of study. Courses taken for the minor, with the exception of BA 101, may not be used to satisfy business major requirements. A detailed summary of the Business minor program revisions is attached.

New Courses:

BA 306  Working with Money for Business Minors, 4 cr – new course
BA 316  Working with Customers for Business Minors, 4 cr – new course
BA 326  Working with People for Business Minors, 4 cr – new course
BA 336  Working with Information for Business Minors, 4 cr – new course
BA 346  Working as an Entrepreneur for Business Minors, 4 cr – new course
College of Engineering & Computer Science

New Courses:

Computer Science

CS 492 Applied Computer Security, 4 cr - new course

Civil Engineering

CE 440 Geosynthetics in Infrastructure Engineering, 2 cr - new course
CE 445 Geo-Environmental Engineering with Geosynthetics, 2 cr - new course
CE 451 Traffic Control and Analysis, 4 cr - new course
CE 455 Intelligent Transportation Systems, 4 cr - new course
CE 458 Public Transportation Systems, 4 cr - new course
CE 459 Transportation Operations, 4 cr - new course
CE 460 Access Management Transportation Systems, 4 cr - new course

Electrical Engineering

ECE 483 Digital IC Design I, 4cr - new course

School of Fine & Performing Arts

New Program: Minor in Design Management

This minor is specifically designed for students in advertising management, marketing, and other non-design majors who aspire to work in the creative communications industry. The course work teaches non-design students the skills needed to work effectively with graphic designers and art directors on creative teams. The culmination of this minor is a two-class sequence that focuses on solving design problems in a collaborative team environment. To earn a Minor in Design Management, a student must complete a total of 28 credits, to include the following courses, taken in numeric order:

ART 100 Introduction to Communication Design for Non-Art Majors
ART 120 Computer Graphics for Art and Design
ART 200 Digital Page Design I
ART 224 Communication Design I
ART 290 History of Modern Design
ART 367 Design Team Management I
ART 467 Design Management II
New Courses:

ART 100     Intro. to Communication Design for Non-Art Majors, 4cr – new course
ART 367     Design Team Management I, 4 cr – new course
ART 467     Design Team Management II, 4 cr – new course

ART 262     Photoimaging, 4 cr – new course
ART 361     Photographic Lighting, 4 cr – new course
ART 460     Photographic Exploration, 4 cr – new course

Changed Courses:

ART 360     Intermediate Photography, 4cr – number change from ART 340 to 360

ART 120     Computer Graphics for Art and Design, 4 cr – change pre-requisites to include ART 100 as an alternative for non-art majors.

ART 224, 225 Communication Design Studio I, II (4,4) – change pre-requisites to include ART 100 and ART 120 as an alternative for non-art majors.
Proposal for Changes to the Minor
School of Business Administration
Portland State University

The goal of this proposal is to revise the current business minor to better address demand for a shorter, more applied business program that exposes non-business majors to basic business concepts.

Discussions with students and advisors in departments across the University indicate to us that many non-business students would be interested in a business minor that addressed issues around working in a business and starting a business. The minor as proposed here will provide a broad background of business educational experience to students seeking to enrich their University experience and add a marketable credential to their resumes. The individual courses in the minor will provide background in specific business areas, and emphasize skills and strategies for success, whether the student is an employee in a company, or an entrepreneur.

The program as proposed here also addresses the need for a business program that can be accommodated at the same time students are completing major requirements in another department. By reducing the number of credits from 40 to 24, students are better able to take on the business minor, regardless of whether they are fulfilling an art major (approximately 100 credits) or a psychology major (56 credits).

Current Minor:
Currently, the PSU business minor is a total of 40 credit hours.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics</td>
<td>8</td>
</tr>
<tr>
<td>Economics</td>
<td>8</td>
</tr>
<tr>
<td>BA 101</td>
<td>4</td>
</tr>
<tr>
<td>BA 205</td>
<td>4</td>
</tr>
<tr>
<td>BA211</td>
<td>4</td>
</tr>
<tr>
<td>BA303</td>
<td>4</td>
</tr>
<tr>
<td>BA311</td>
<td>4</td>
</tr>
<tr>
<td>BA 302 or BA 385</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
</tr>
</tbody>
</table>

All 100 and 200 level courses for the minor must be completed with a C or higher. The PSU cumulative GPA and the PSU business GPA must be 2.5 or higher in order to graduate with a minor in business administration.

Proposed Minor in Business – Not available for Majors

The new business minor is a program distinct from the business major. The major and minor are two different paths to a business education. The minor will have, with one
exception (BA 101), courses which are different from those offered to the business majors, and which cannot be used by business majors to fulfill their major requirements. It will be designed to meet the needs of a non-business major audience. As the minor will provide a business education experience different from that of a student who is pursuing a business major, it is important to clearly delineate these courses and provide ample opportunity for students to make informed choices about whether they will choose the major or the minor. The following are important to the new business minor.

1. The minor will be discussed and compared to the major in BA 101.
2. The minor will be discussed and compared to the major on the syllabi of all minor courses.

The required courses for the minor are:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 101</td>
<td>4</td>
<td>Introduction to Business</td>
</tr>
<tr>
<td>BA 306</td>
<td>4</td>
<td>Working with Money—for Business Minors</td>
</tr>
<tr>
<td>BA 316</td>
<td>4</td>
<td>Working with People—for Business Minors</td>
</tr>
<tr>
<td>BA 326</td>
<td>4</td>
<td>Working with Customers—for Business Minors</td>
</tr>
<tr>
<td>BA 336</td>
<td>4</td>
<td>Working with Information—for Business Minors</td>
</tr>
<tr>
<td>BA 346</td>
<td>4</td>
<td>Working as an Entrepreneur—for Business Minors</td>
</tr>
</tbody>
</table>

Total: 24

The PSU cumulative GPA and the PSU business GPA must be 2.0 or higher in order to graduate with a minor in business.

Residency requirement: In accordance with University policy, at least 1/3 of the courses in the minor must be taken at Portland State University.

Pass/No Pass: None of the courses in the minor may be taken P/NP.

Full Disclosure: No additional requirements are required to satisfy the minor other than the successful completion of the 24 credits of coursework noted here.

Omnibus Course numbers: The attached pages include proposals for discrete course numbers for each of the proposed business minor courses. The School of Business does not anticipate offering any omnibus number courses that could satisfy the minor course requirements.

Advisors: The professional advisors in the School of Business will serve as advisors to all business minors.

The Business Minor program as proposed here is accessible, interesting and valuable to an audience of degree seeking and non-degree-seeking students alike. Colleagues at the Capital Center site have indicated that this program will be very popular with non-degree students on the western edge of the metro area, and this new minor has been identified as a critical component to the University’s overall community college initiative just
beginning at Mt. Hood Community College. This outside interest, as well as interest among PSU students, makes the School of Business confident that student credit hours generated by these courses will offset any additional instructional cost.

Proposed Catalog Copy 2004-05

Minor in Business Administration

The School of Business Administration offers a 24-credit minor to students majoring in other disciplines who wish to add a business background to their program of study. The minor emphasizes an applied approach to the basic functional areas of business, including accounting and finance, organizational management, marketing and advertising, and entrepreneurship. It is well-suited for the student majoring in the liberal arts and sciences, architecture, fine and performing arts, engineering, urban and public affairs or pre-health sciences who intends to work as an independent contractor or operate a small firm or practice.

Coursework requirements for the Minor in Business Administration are as follows. Please note that courses in the minor (except BA 101) MAY NOT be used to satisfy business major requirements.

BA 101 Introduction to Business
BA 306 Working with Money – For Business Minors
BA 316 Working with Customers – For Business Minors
BA 326 Working with People – For Business Minors
BA 336 Working with Information – For Business Minors
BA 346 Working as an Entrepreneur – For Business Minors

Total 24

The PSU cumulative GPA and the PSU business GPA must be 2.0 for a student to graduate with the minor.
NEW COURSES
Effective Fall 2004
COLLEGE OF LIBERAL ARTS AND SCIENCES
Foreign Languages and Literatures

Jpn 314, 315
Beginning Japanese Grammar/Intermediate Japanese Grammar (2, 2)
A systematic approach to the study of Japanese grammar for transfer students, for majors, and
for teachers. [NEW]

Jpn 414/514
Advanced Japanese Grammar (4)
A systematic approach to the study of Japanese grammar for advanced students and majors, and
for teachers. Prerequisite: Jpn 302 or 315. [NEW]

Jpn 494/594
Japanese Sociolinguistics (4)
Study of the key concepts that characterize Japanese language and culture, along with empirical
analysis of Japanese communication style. Prerequisite: Jpn 302. [NEW]

SCHOOL OF BUSINESS ADMINISTRATION

BA 306
Working with Money for Business Minors (4)
Essential topics in accounting and finance for business minors. Reading and interpreting income
statements and balance sheets, especially for small businesses. Forecasting to determine
financing requirements. Use of techniques in time value of money to determine present values,
loan payments, etc. Sources of business financing. [NEW]

BA 316
Working with Customers for Business Minors (4)
Essential topics in marketing for business minors. Students will be introduced to the basic
concepts of marketing and customer satisfaction. Students will explore primary considerations of
the market environment and marketing practices including price, promotion, distribution and
product in an applied setting. [NEW]

BA 326
Working with People for Business Minors (4)
Essential topics in management and business communications. Focuses on the management of
business organizations in an applied setting. Key topics include motivating and leading
individuals and groups, working effectively in teams and conflict management. In addition,
students will learn to collect, organize and present information in a business setting. [NEW]

BA 336
Working with Information for Business Minors (4)
Discusses the importance of information technology and its support of a business organization. An
understanding of the essential relationships among information, business process and
information technology. This is a survey course. [NEW]
BA 346
Working as an Entrepreneur for Business Minors (4)
Capstone course in the business minor. Provides the student an opportunity to link previous coursework in the development of business plans and organizations, with specific emphasis on the challenges of small emerging organizations. Project-based course that provides students with a toolbox of applied skills. Prerequisite: BA 101. [NEW]

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE
Civil and Environmental Engineering

CE 440/540
Geosynthetics in Infrastructure Engineering (2)
Testing and design with polymer-based geosynthetic products in and on soil for the civil infrastructure. Strength-based design applications are introduced with design-by-function principles, and product approval for transportation, structural, and geotechnical disciplines. Use of geotextiles, geogrids and geo-composites in slopes, mechanically stabilized earth retaining walls, pavement subgrades and overlays. Prerequisite: CE 444. [NEW]

CE 445/545
Geo-environmental Engineering with Geosynthetics (2)
Application of polymer-based geosynthetic products for geo-environmental and municipal engineering including landfills, soil erosion control, filters and drains. Testing, design and product selection for hydraulic, degradation and chemical stability properties. Introduction to reliability, endurance, and design life with reference to RCRA, ESA, and EPA laws. Prerequisite: CE 341. [NEW]

CE 451/551
Traffic Control and Analysis (4)
Traffic control principles; maintenance and responsibility for traffic control devices; choice of traffic control; signs, markings and signals; low-volume roads, temporary control, and school areas, traffic control for highway-rail grade crossings, bicycles and transit: warrants for control; control techniques and analysis, advanced technologies. Prerequisite: CE 351. [NEW]

CE 455/555
Intelligent Transportation Systems (4)
Introduction to intelligent transportation systems, including enabling surveillance, navigation, communications, and computer technologies. Application of technologies for monitoring, analysis, evaluation, and prediction of transportation system performance. Intervention strategies, costs and benefits, safety, human factors, institutional issues, and case studies. Prerequisite: CE 351. CE 454 recommended. [NEW]

CE 458/558
Public Transportation Systems (4)
Performance characteristics of public transportation systems, with emphasis on urban systems. Planning, design, and operational issues related to public transportation systems. Emerging technologies. Prerequisite: CE 351. CE 454 recommended. [NEW]

CE 459/559
Transportation Operations (4)
Operation, modeling and control of unscheduled and scheduled transportation modes; elementary traffic flow concepts; flow, density and speed; scheduling; route and bottleneck capacities; networks; data interpretation; analysis techniques; diagrams; simulation queuing; optimization. Prerequisite: CE 351. CE 454 recommended. [NEW]
CE 460/560
Access Management Transportation Systems (4)
Access management issues; geometric design, roadway operation and access; safety and other
benefits; access design concepts; functional integrity of highway; driveway and intersection
spacing; functional area of intersection; turn lanes; median openings; access management
techniques; regulations and policy; case studies; research issues. Prerequisite: CE 351. [NEW]

Computer Science

CS 492/592
Applied Computer Security (4/3)
Practical study of good security practices in software. Issues of correctly implementing security
strategies, including why some strategies fail. State-of-the-art implementation techniques and
appropriate conditions under which these techniques apply (or not). Students will apply
concepts from software engineering, cryptography, and security theory to a non-trivial project
that will stress correct secure programming techniques. Prerequisites: CS 333, CS 491/591.
[NEW]

Electrical and Computer Engineering

ECE 483/583
Low Power Digital IC Design (4)
Introduction to the existing techniques for IC power modeling, optimization and synthesis. Topics
include: sources of power dissipation, design for low power, voltage scaling approaches, power
analysis techniques, power optimization techniques, low-power system-level designs. Focus on
abstraction, modeling and optimization at all levels of design hierarchy, including the
technology, circuit, layout, logic, architectural, and algorithmic levels. Prerequisite: ECE
425/525. [NEW]

SCHOOL OF FINE AND PERFORMING ARTS

Art

Art 100
Introduction to Communication Design for Non-Art Majors (4)
Introduction for non-art majors to communication design principles and methods used in
composition. Lectures, readings, and projects enable creative application of design principles,
color theory, and typography. Projects address formal concerns of visual communication design,
visual literacy, design nomenclature, and design process through methods and strategies for
creative problem-solving. Students demonstrate verbal and visual application of a design and
compositional vocabulary, an effective design process, and skillful use of materials and tools.
Projects do not require computer experience. [NEW]

Art 262
Photoimaging I (4)
Studio course introducing concepts, techniques, practices, aesthetics, and ethics of photographic
imaging and image-making with digital technology. Investigations in photographic media are
enabled through modes of expression most easily accomplished in digital form. Methods include
retouching, color correction, filtering, masking, layering, and compositing. Projects apply
concepts of digital imaging, including image capture and resolution, color models, tonal
relationships, presentation formats, and photographic printmaking. Prerequisite: Art 261 or
Art 260. Open to non-majors with instructor consent. Maximum 4 credits. [NEW]
Art 361
Photographic Lighting (4)
The study of natural and artificial lighting techniques with two principal concerns: how different kinds of light alter both the black and white photograph's aesthetic qualities and its clarity of visual communication. Includes working outdoors and indoors with variable natural light and learning to control artificial light in the studio. Working in low available light situations is also emphasized. The documentation of 2D and 3D artwork for personal portfolios or commercial purposes is demonstrated. Includes a final portfolio comprising two series: one using difficult natural light and one using artificial sources. Prerequisite: Art 261. Open to non-majors with instructor consent. Maximum 8 credits. [NEW]

Art 367
Design Team Management I (4)
Introduction to multidisciplinary, team-based, problem-solving practices in communication design. Majors in art/graphic design and non-art majors enroll in this course to form interdisciplinary teams working on hypothetical projects or case studies in current business problems, issues, and trends. Emphasis is placed on strategic design and planning, creative process, project management, and studio management. Students demonstrate skills in research, conceptual development, persuasive writing and communication, negotiation, initiative, collaboration, and team dynamics. This course prepares students for participation in team-based community service projects developed in Art 468 Design Team Management II. Prerequisites: for Non-art majors, Art 100, 120, 200, 224, and 290. For Art majors, Art 321, Art 354, and either Art 300 or Art 341. [NEW]

Art 455
Time Arts Studio (4)
Advanced practicum for students seeking a minor in Time Arts. Students propose projects that may encompass or combine work in 2D animation, 3D animation, and video. Emphasis is placed on the professional presentation and delivery of projects. Consent of instructor required. Prerequisites: Art 255, 256, 257, 296 and ArH 291. [NEW]

Art 467
Design Team Management II (4)
This course applies skills and knowledge gained in Design Team Management I. Non-art majors enroll in this course that meets with a 300- or 400-level communication design course engaged in community service projects. Both groups of students work collaboratively in teams on contracted projects for community clients. Projects address a variety and combination of print, audio, video, or interactive media. Emphasis is placed on skills required to create media campaigns: marketing, branding, identity, and advertising. Teams develop solutions for client business problems through a design process not limited to the following: development of design strategy, analysis of audiences, conceptual development and formal solutions, research of textual and visual content, appropriate context, management of client communications and mediation, selection and coordination of media, and overall project management, including project timelines and budgets. Design history, current design trends, formal concerns, and typography are covered. Professional presentation and delivery of all projects is expected. Prerequisites: ART 100, 120, 200, 367, and ArH 290. [NEW]
Systems Science

SySc 521/621
Systems Philosophy (4)
A study of ideas central to systems theory and philosophy. The course focuses on concepts rather than mathematics, and organizes systems ideas around the theme of the fundamental "difficulties" (problems, imperfections, modes of failure) encountered by systems of widely differing types. Though these systems ideas often come from the natural sciences and engineering, they are significant also for the social sciences, the professional fields, and even the arts and humanities. [NEW]

SySc 525/625
Agent Based Simulation (4)
Introduction to simulation methods that impart simple rules to a collections of "agents" that interact within an environment represented as a spatial grid. The properties of the agents and the environment vary dynamically, and often result in behavior patterns that are complex in ways that are not readily apparent from an examination of the rules that generated the behavior. Such behavior is often referred to as emergent, with examples including flocks of birds, traffic jams, ant colonies, crowd phenomena, etc. Of particular interest is the fact that such phenomena occur without centralized control. This approach is often used to study social systems, but may be used to study a variety of natural and non-natural systems. [NEW]

SySc 546/646
Information Theory II (4)
Information theory establishes theoretical limits on the performance of techniques for compression or error correction of signals. Course is a continuation of SySc 545/645 and focuses on source coding and channel coding for continuous signals. Topics will include: Gaussian Channels and Rate Distortion Theory. [NEW]