The Faculty Senate was called to order by Ken Struckmeyer, on Thursday February 21, 2008, in FSHN, T101, at 3:30 p.m. Fifty-four (54) members were present twenty-seven (27) were absent with four (4) vacancies. Five (5) non voting members were present.

The meeting opened with a round of applause and recognition for Ken Struckmeyer the first recipient of the Sahlin Faculty Excellence Award for Leadership.

Minutes of February 7, 2008 meeting were approved as circulated.

Announcements (Information Items)

1. The Faculty Salary Report was distributed to the four year universities by Nick Lovrich. The universities will use the report as a template for salary studies at their respective schools. Lovrich will use the report to inform the legislators about salary issues under discussion by University faculty.

2. Minor Bulletin #4 is in Exhibit B as follows:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>New Revise Drop</th>
<th>Current</th>
<th>Proposed</th>
<th>Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT</td>
<td>311</td>
<td>Revise</td>
<td>Draping and Flat Pattern 3 (0-6) Prereq AMT 211. Introductory draping, drafting, and flat pattern techniques for apparel patternmaking.</td>
<td>Draping and Flat Pattern 3 (0-6) Prereq AMT 211 and certification in Apparel Design. Introductory draping, drafting, and flat pattern techniques for apparel patternmaking.</td>
<td>8-08</td>
</tr>
<tr>
<td>AMT</td>
<td>314</td>
<td>Revise</td>
<td>Fashion Forecasting 3 (2-2) Prereq AMT 208, 210 or by permission. Developing forecasting expertise needed to work in merchandising environment; examined through influences on</td>
<td>Fashion Forecasting 3 (2-2) Prereq AMT 208, 210; and certification in Apparel Design or Merchandising. Developing forecasting expertise needed to work in merchandising</td>
<td>8-08</td>
</tr>
<tr>
<td>Course Code</td>
<td>Revision</td>
<td>Course Title</td>
<td>Prerequisites</td>
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<tr>
<td>AMT 318</td>
<td>Revise</td>
<td>Merchandise Buying and Planning</td>
<td>Prereq EconS GER; Math GER; AMT 314. In-depth study of apparel buying and</td>
<td>In-depth study of apparel buying and planning, application of buying and planning principles, problem solving skill development. Cooperative course taught jointly by WSU and UI (FCS 429).</td>
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<td></td>
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<td></td>
<td>planning, application of buying and planning principles, problem solving</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>skill development. Cooperative course taught jointly by WSU and UI (FCS 429)</td>
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</tr>
<tr>
<td>AMT 411</td>
<td>Revise</td>
<td>Fashion Line Pre-development</td>
<td>Prereq AMT 311. Exploration of design inspiration and development of theme</td>
<td>Exploration of design inspiration and development of theme and strategy for a fashion line presented in an annual fashion show event.</td>
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<td></td>
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<td>and strategy for a fashion line presented in an annual fashion show event.</td>
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<tr>
<td>AMT 412</td>
<td>Revise</td>
<td>Fashion Line Development</td>
<td>Prereq AMT 410, 411. Development of original fashion lines for an annual</td>
<td>Development of original fashion lines for an annual fashion event. Cooperative course taught jointly by WSU and UI (FCS 424).</td>
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<tr>
<td></td>
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<td></td>
<td>fashion event. Cooperative course taught jointly by WSU and UI (FCS 424).</td>
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<tr>
<td></td>
<td></td>
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<td>consumption; comparison of production, distribution, and consumption of</td>
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<tr>
<td></td>
<td></td>
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<td>apparel in the global economy.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prerequisites/Notes</td>
<td>Description</td>
<td>Credits</td>
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<tr>
<td>AMT 420</td>
<td>[M] History of Fashion Design 3</td>
<td>Prereq AMT 215 or by permission.</td>
<td>Overview of apparel design, designers and social history in the 20th century.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AMT 490</td>
<td>Cooperative Education Internship V</td>
<td>Prereq Certification in Apparel Design or Merchandising.</td>
<td>May be repeated for credit; cumulative maximum 10 hours. Experience with business, industry or government unit.</td>
<td>1-10</td>
<td></td>
</tr>
<tr>
<td>Cpt S 153</td>
<td>BASIC Programming 3</td>
<td>Prereq Math 171 or c//.</td>
<td>Comprehensive programming practice using contemporary instances of the BASIC programming language.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cpt S 203</td>
<td>FORTRAN Programming 2</td>
<td>Prereq Math 171 or c//.</td>
<td>Comprehensive programming practice using FORTRAN.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Cpt S 252</td>
<td>Introduction Windows Development</td>
<td>Prereq Cpt S 122.</td>
<td>Introduction to Windows application programmers interface, emphasizing what constitutes a well behaved Windows program.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cpt S 330</td>
<td>Numerical Computing 3</td>
<td>Prereq Cpt S 121, 203, or 251; c// in Math 315.</td>
<td>Power and limitation of numerical solutions; design, analysis and implementation of numerical algorithms; visualization and rendering.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Description</td>
<td>Notes</td>
<td>Semester</td>
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<tr>
<td>Cpt S 467</td>
<td>System Software 3 (2-3)</td>
<td>3</td>
<td>Prereq E E 315; engineering consortium students only. Engineering and design of system software in C &amp; assembly, including libraries, executives, and I/O; use of debugger and emulators.</td>
<td>--N/A--</td>
<td>5-08</td>
</tr>
<tr>
<td>Cpt S 480</td>
<td>Object-Oriented Windows Programming 3 (2-3)</td>
<td>3</td>
<td>Prereq admission to consortium program, six semester credits of HLL programming. Object-oriented software design and programming in a modern windowing environment.</td>
<td>--N/A--</td>
<td>5-08</td>
</tr>
<tr>
<td>E E 362</td>
<td>[M] Power System Laboratory I 2 (1-3)</td>
<td>2</td>
<td>Prereq E E 262; E E 352; c// in E E 361, E E 341, and Engl 402. Experiments in simulation, modeling, transformers, rotating machines, and transmission lines.</td>
<td>[M] Power System Laboratory I 2 (1-3) Prereq E E 262; E E 352; c// in E E 361, E E 341. Experiments in simulation, modeling, transformers, rotating machines, and transmission lines.</td>
<td>5-08</td>
</tr>
<tr>
<td>E E 476</td>
<td>Analog Integrated Circuits 3</td>
<td>3</td>
<td>Prereq E E 311; 351 or c//; 489 or c//; c// in 477 for capstone design credit. Analysis and design of analog integrated circuits in CMOS and BiCMOS technologies; current mirrors, gain stages, operational amplifiers, frequency response, and compensation. Credit not granted for both E E 476 and 576.</td>
<td>Analog Integrated Circuits 3 Prereq E E 311; 351 or c//; 489 or c//. Analysis and design of analog integrated circuits in CMOS and BiCMOS technologies; current mirrors, gain stages, operational amplifiers, frequency response, and compensation. Credit not granted for both E E 476 and 576.</td>
<td>5-08</td>
</tr>
<tr>
<td>E M 480</td>
<td>Quality Control and Reliability Design 3</td>
<td>3</td>
<td>Prereq junior standing. Quality analysis including process modeling, product quality, statistical process control, process capability studies and reliability prediction models.</td>
<td>Quality Control and Reliability Design 3 Prereq junior standing. Quality analysis, modeling process, product quality, statistical process control, process capability studies; sampling concepts, reality models, predictions, design testing. Credit not granted for both E M 480 and 580.</td>
<td>5-08</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Department</td>
<td>Prerequisites</td>
<td>Description</td>
<td>Time</td>
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<tr>
<td>E M 485</td>
<td>Quality Engineering Using Experimental Design</td>
<td>Engineering</td>
<td>Junior standing</td>
<td>The process of designing quality into products and processes using Taguchi Techniques for robust and parameter design.</td>
<td>5-08</td>
</tr>
<tr>
<td>E M 485</td>
<td>Quality Engineering Using Design of Experiments</td>
<td>Engineering</td>
<td>Statistical 430</td>
<td>Design for quality improved products; processes and services using designed experiments, including robust/parameter design. Credit not granted for both E M 485 and 585.</td>
<td>5-08</td>
</tr>
<tr>
<td>E M 505</td>
<td>Financial Management for Engineers</td>
<td>Engineering</td>
<td>Time value of money, capital budgeting, accounting principles, cost, valuation, risk, cost accounting and sensitivity analyses: concepts for engineering decision-making.</td>
<td>5-08</td>
<td></td>
</tr>
<tr>
<td>E M 508</td>
<td>Legal Concepts for the Technical and Engineering Manager</td>
<td>Engineering</td>
<td>Graduate standing</td>
<td>Basic legal obligations of engineering technical managers; identify, minimize and recognize risks and liability; contemporary legal environment and business law.</td>
<td>5-08</td>
</tr>
<tr>
<td>E M 520</td>
<td>Construction Project Management for Technical Managers</td>
<td>Engineering</td>
<td>Graduate standing</td>
<td>Construction project bids, proposals, contracts, project delivery/organization; estimating, scheduling, resource loading, project monitoring and controls, safety and quality.</td>
<td>5-08</td>
</tr>
<tr>
<td>E M 545</td>
<td>Decision Analysis for Engineering</td>
<td>Engineering</td>
<td>Graduate standing</td>
<td>Structured discipline for describing, analyzing, and finalizing decisions involving uncertainty.</td>
<td>5-08</td>
</tr>
<tr>
<td>E M 545</td>
<td>Technical Decision Analysis</td>
<td>Engineering</td>
<td>Graduate standing</td>
<td>Decision analysis provides a structured discipline for describing, analyzing, and finalizing decisions involving uncertainty.</td>
<td>5-08</td>
</tr>
<tr>
<td>Course</td>
<td>Code</td>
<td>Credits</td>
<td>Title</td>
<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>E M 555</td>
<td>Revise</td>
<td>Enterprise Resource Planning</td>
<td>3</td>
<td>Prereq graduate standing. <strong>Focus</strong> on the flow of quality, timely products and cooperative supply chain operations and planning.</td>
<td>Enterprise Resource Management 3 Prereq graduate standing. Focusing the flow of quality, timely products and cooperative supply chain operations and planning using simulation and effective enterprise resource management.</td>
</tr>
<tr>
<td>E M 565</td>
<td>Revise</td>
<td>Systems Engineering Management</td>
<td>3</td>
<td>Prereq graduate standing. Design, manufacture, and operation of complex system development for engineering managers; project planning, organizing, and controlling tools for engineering system constraints.</td>
<td>Introduction to Systems Management 3 Prereq graduate standing. Design, manufacture, and operation of complex system development for managers; project planning, organizing, and controlling tools for system constraints.</td>
</tr>
<tr>
<td>E M 580</td>
<td>Revise</td>
<td>Quality Control and Reliability Design</td>
<td>3</td>
<td>Prereq junior standing. Graduate-level counterpart of E M 480; additional requirements. Credit not granted for both E M 480 and 580.</td>
<td>Quality Control and Reliability 3 Prereq graduate standing; Rec Stat 430. Graduate-level counterpart of E M 480; additional requirements. Credit not granted for both E M 480 and 580.</td>
</tr>
<tr>
<td>E M 585</td>
<td>Revise</td>
<td>Quality Engineering Using Experimental Design</td>
<td>3</td>
<td>Prereq junior standing. Graduate-level counterpart of E M 485; additional requirements. Credit not granted for both E M 485 and 585.</td>
<td>Quality Engineering Using Design of Experiments 3 Prereq graduate standing; Rec Stat 430. Graduate-level counterpart of E M 485; additional requirements. Credit not granted for both E M 485 and 585.</td>
</tr>
<tr>
<td>E M 591</td>
<td>Revise</td>
<td>Strategic Management of Technology and Innovations in Engineering</td>
<td>3</td>
<td>Rec senior standing. Management of innovation and technological innovation, integrating technological strategy, new product development, and corporate entrepreneurship and innovation.</td>
<td>Strategic Management of Technology and Innovations 3 Prereq graduate standing. Management of technological innovation; integrating strategy, new product development, corporate entrepreneurship, and innovation; features action-oriented cases.</td>
</tr>
</tbody>
</table>
| EconS | 102 | Revise | [S] Fundamentals of Macroeconomics 3  
Theory and policy related to unemployment, inflation, foreign trade, government spending, taxation, and banking.  
Prereq Course equivalent to Math 101 or equivalent Math Placement score. Theory and policy related to unemployment, inflation, foreign trade, government spending, taxation, and banking. | 1-09 |
|---|---|---|---|---|
| EconS | 301 | Revise | Intermediate Microeconomic Theory 3  
Prereq EconS 101; Math 171 or 202. Calculus-based intermediate microeconomic theory for majors in economics and agricultural economics.  
Intermediate Microeconomic Theory 3  
Prereq EconS 101; Math 171 or 202. Calculus-based intermediate microeconomic theory for majors in the School of Economic Sciences. | 8-08 |
| EconS | 432 | Revise | [M] Natural Resource Economics and Policy 3  
Prereq EconS 301; EconS 311; EconS 330. Economic principles and models applied to natural resource problems, issues, and policies. Credit not granted for both EconS 432 and 532.  
Prereq EconS 301 or permission of instructor. Economic principles and models applied to natural resource problems, issues, and policies. Credit not granted for both EconS 432 and 532. | 8-08 |
| EconS | 452 | Revise | [M] Advanced Agribusiness Management 3  
Prereq EconS 101; EconS 352; Math 202 or 171; Stat 212 or MgtOp 215; Acctg 230; Acctg 234. Alternatives in the market behavior of firms that handle, process, and trade in agricultural inputs and outputs.  
[M] Advanced Business Management Economics 3  
Prereq EconS 301; EconS 352; Math 171 or 202; MgtOp 215 or Stat 212. Topics in business management economics and strategy, from demand and supply to bargaining, contracting, pricing strategies, and market structure. | 8-08 |
| EconS | 521 | Revise | Topics in Agricultural Economics V 1-3  
Prereq EconS 301; EconS 311; EconS 330. Current topics in agricultural economics.  
Topics in Economic Sciences V 1-3 May be repeated for credit; cumulative maximum 6 hours. Prereq EconS 301; | 8-08 |
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>EconS 311; EconS 302.</td>
<td></td>
<td>Current topics in the development and application of the economic sciences.</td>
</tr>
<tr>
<td>EconS 301; EconS 311; EconS 330.</td>
<td></td>
<td>Graduate-level counterpart of EconS 432; additional requirements. Credit not granted for both EconS 432 and 532. Cooperative course taught by WSU; open to UI students (Ag Econ 532).</td>
</tr>
<tr>
<td>EconS 532 Revise</td>
<td></td>
<td>Natural Resource Economics and Policy 3</td>
</tr>
<tr>
<td>Math 100 Revise</td>
<td></td>
<td>Basic Mathematics 2</td>
</tr>
<tr>
<td>Math 101 Revise</td>
<td></td>
<td>Intermediate Algebra 3</td>
</tr>
<tr>
<td>Math 103 Revise</td>
<td></td>
<td>Algebra Methods and Introduction to Functions 3</td>
</tr>
</tbody>
</table>

### Description:
- **Math 100**: Review of basic arithmetic and elementary algebra. No credit earned toward degree; not qualified for financial aid. S, F grading.
- **Math 101**: Fundamental algebraic operations and concepts. No credit earned toward degree; not qualified for financial aid.
- **Math 103**: Fundamental algebraic operations and concepts, linear systems and inequalities, polynomial and rational functions, introduction to exponential and logarithmic functions. (This material is currently available on the Pullman campus through a 3 credit course, Math 99, taught by the Institute for Extended Learning, Community Colleges of Spokane.)
### Educational Issues and Curriculum Analysis

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurs 523</td>
<td>V 3</td>
<td>(3-0) to 5 (3-6) Prereq graduate standing in nursing or by permission. Exploration of curriculum history, development, future predictions; program evaluation, instructional resources, leadership, and policy development in academic and service settings.</td>
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</tr>
<tr>
<td>Nurs 565</td>
<td>V 3</td>
<td>(3-0) to 5 (3-6) Prereq graduate standing in nursing or by permission. Exploration of curriculum history, development, future predictions; program evaluation, instructional resources, leadership, and policy development in academic and service settings.</td>
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### Information Management for Clinical Practice

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<th>Course Code</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Nurs 565</td>
<td>3 (2-3)</td>
<td>Prereq computer competency in word processing/spreadsheets. Application/evaluation of nursing informatics; use for management of patient care data in nursing practice and administration.</td>
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</tbody>
</table>

### Introduction to Veterinary Neurology

<table>
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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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</thead>
</table>

### Faculty Senate Minutes

February 21, 2008

**Announcements (Reports).**

1. Remarks by the Chair.—K. Struckmeyer

Struckmeyer announced President Floyd will be presenting his first State of the University address Monday, February 25, in the Bryan Hall Auditorium. The Address is slated to begin at 3:10, preceded by music provided by Professor’s Jeff and Karen Savage. Following the presentation, open microphones will be available for a question and answer session. Refreshments will follow. The presentation will also be simulcast to all campuses.
Dr. Cofer and I had a very good exchange of ideas with the President and Provost last Friday. We discussed the A2P2 process, the budgeting process associated with preparation, AAU status and faculty and staff morale. We also discussed the Foundation Campaign currently in its silent phase and the role of the faculty in the campaign.

I am showing you the Academic Affairs Program Prioritization Process or otherwise known as A2P2. I received this information last Friday afternoon from Dr. James. The first page shows the committee and how it is organized. The second page shows the flow chart regarding the process. You will note that on April 3, the Senate is to provide its comments to the committee. The Third page shows the agenda for the Program Prioritization Forum to be held on April 3. Of interest is the time schedule for presentations.

In light of this information, I am informing you that we will be holding a special session of the Faculty Senate to deal just with the Program Prioritization issue. Because of the time schedule, we will be doing the following. The March 27 session of the Senate will deal exclusively with A2P2. We have called a special session of the Senate for April 3. This meeting will deal with the agenda of the Senate. The final meeting of the Senate is scheduled for April 10. We are still working on the format for the March 27th meeting. We have several options: we could ask the chairs of the four subcommittees to come and present their recommendations to the senate; we could request that senators review the materials and just come forward with discussions regarding their constituencies; or we could ask for an open session with open discussion.

This is a draft of a statement regarding what we believe to be the role of the Senate in this process. It is a draft, but the intent is to help guide our deliberations and discussion. It is my hope that we do not put ourselves in a position of voting on the recommendations, thus having us vote on the futures of our colleagues thus putting us in an adversarial role with each other.

The Faculty Senate Role will be to advocate for adequate consideration in review of documentation provided by departmental faculty to the Phase II Subcommittee. This role is advisory with the right to express points of concern, asking for reconsideration of recommendations to the committee and the administration. The Faculty Senate reserves the right to comment at later times concerning the process and the recommendations. The Senate also will have the responsibility to review academic and departmental reconfiguration as part of the implementation process which is its traditional role.

I believe this statement could be expanded to present our version of the future of the university addressing at the undergraduate, graduate, scholarly and creative activity and service and outreach missions. I do believe the statement should be concise and a guide as we conduct our review.

Finally, we continue to seek candidates to stand for election to the position of Chair Elect—Chair of the Faculty Senate for the next two academic years. The election will be held at the last meeting April 10. Please forward your nominations to Dr. Swanson, Dr. Cofer, me or members of the steering committee.
2. Faculty Diversity—A. Tan

Faculty Diversity
My assignment from the Office of the Provost and the Division of Student Affairs, Equity and Diversity is to develop a strategic plan to improve on the recruitment and retention of a diverse faculty at WSU, including the urban campuses.

We propose this definition of diversity: Diversity is the variety of cultures, world views, values and personal experiences that may result from differences in race, ethnicity, gender, age, religion, language, abilities, socioeconomic status, sexual orientation, geographic region, and more. While recognizing that the different manifestations of diversity are equally important to the university and that other groups may be underrepresented in the faculty, the strategic plan focuses on women and U.S. racial minorities where there is under representation as determined by the academic units and the Center for Human Rights. In accordance with Washington state law, no quotas are set for these inspirational goals.

Why Diversity
- To develop and reinforce an academic community that reflects a diverse range of interests, cultures, life experiences and world views
- To fully utilize the talent and abilities in a diverse U.S. population
- To reinforce the land grant mission of WSU

Why A Strategic Plan at this Time
- Among the 12 WSU peer institutions that are members of the Association of American Universities, WSU is last (11%) in percent of faculty who are American Indian, Asian American, black and Hispanic (U.S. citizens and permanent residents.) The average for the 12 peer institutions is 16.5%.
- According to the WSU Center for Human Rights, U.S. racial minorities are underutilized in most WSU departments and schools, and women in many. Underutilized is when percent in faculty is less that percent availability.
- A number of commissions and college committees have made very good recommendations in the past 15 years. There is a need for a coordinated plan that will lead to implementation.

Developing the Plan:
- Interviewed deans, chancellors, some faculty groups
- Looked at strategic plans of the University of California system, the University of Wisconsin, the University of Minnesota, the University of Massachusetts and others
- Working with a faculty committee

Components of the Plan:
- Context, Mission Statement
- Culture
- Recruitment
- Retention
- Assessment
Budget and Timeline

Timeline:
- Distribute draft to faculty and administrators for comment – March, April 2008
- Revisions – May
- Submit to Provost and the Vice President for Student Affairs, Equity and Diversity – June
- Begin to implement – August

Progress report on implementation: Faculty Diversity Award – Michael Pavel

Committee members:
Steve Burkett, Graduate School
Len Foster, College of Education
Linda Heidenreich, Women’s Studies
Lincoln James, Communication
K.D. Joshi, College of Business
Gretal Leibnitz, College of Engineering and Architecture
Bill Pan, Crop and Soil Sciences
Robbie Paul, College of Nursing
Michael Pavel, College of Education
Skip Paznokas, College of Science
Rob McDaniel, Extension
Ray Quock, Pharmacy
Mary Sanchez-Lanier, College of Sciences
Amy Wharton, WSU Vancouver

Ex-Officio:
Felicia Gaskins
Fran McSweeney
Raul Sanchez

3. Faculty Diversity Award—M. Pavel

Pavel stated that he is grateful and humbled that he was elected as the first recipient of the Faculty Diversity Award. He stated that when he first came to WSU he did not know if he would stay. He was not treated well but then he met Skip Paznokas. Skip was a kind mentor who worked with him and he is very thankful for his kindness. Pavel has now had the opportunity to work with just about every college, and many students, and is proud to be a part of the Cougar Nation.

Additions or Changes to the Agenda.

There were no additions or changes to the agenda.
Agenda Items (Action Items)

1. Nominations and Elections to Senate Committees Exhibit C is as follows:

FROM THE COMMITTEE ON COMMITTEES

The Committee on Committees submits the following names to serve on the following Senate committees with terms beginning August 15, 2008 and ending on the year indicated. Senators are encouraged to study the Committee Manual along with the vitae of the nominee, prior to the meeting of February 21, 2008 desiring to nominate additional persons from the floor MUST PROVIDE written information about the nominees for distribution before the meeting.

Academic Advising and Reinstatement
F-2010
OAKLEY, Christine, Instructor, Sociology, Faculty, WSU 8 years. Relevant Experience and Qualifications: Time is split between advising all Sociology majors and teaching, active in teaching at both graduate and undergraduate levels. WSU Committee Experience: Catalog Subcommittee, Sociology Club Advisor, CLA Scholarship Committee.

F-2011
WHITACRE, Tom, Associate Director, CLA General Studies & Advising Learning Center, A/P with a Clinical Faculty appointment, WSU 11 Years. Relevant Experience and Qualifications: Manages the daily functions of the CLA General Studies and Advising Center; is familiar with the undergraduate academic advising and the reinstatement process. WSU Committee Experience: CLA Curriculum Committee; CLA Academic Advising and Steering Committee; Faculty Senate Ad Hoc Advising Committee.

Catalog
F-2009
EVANS, Marc, Professor, Statistics, Faculty, WSU 20+ Years. Relevant Experience and Qualifications: Active in teaching at undergraduate level, CAHNRS Alumni Association Undergraduate Advising Award. Committee Experience: Catalog Committee.

Graduate Studies
F-2011
BOYD, Brenda, Associate Professor, Human Development, Faculty, WSU 14 Years. Relevant Experience and Qualifications: 16 years teaching graduate students in Human Development. Committee Experience: Graduate Studies Committee; CAHNRS Tenure and Promotion Committee, Departmental Marketing committee; Assistant Professor and Instructor search committees, Mentoring committees, Graduate committees, Child Development Center, Director.
**Teaching Assistant Training Program**

F-2011

AKMAL, Tariq, Associate Professor and Extension Specialist, College of Education, Faculty, WSU 10 Years. **Relevant Experience and Qualifications**: Active in his college and department working with Teaching Assistants. **Committee Experience**: Committee on Committees; Professional Education Advisory Board; Regents Scholarship Review Committee; Student Affairs Committee; CE: Teacher Preparation Committee, Program Committee, Teaching Education Committee, Secondary Education Program Revision Committee; Pullman School District Diversity Committee, WSU College of Education Representative.

**WSU Foundation Faculty Advisory**

F-2011

GILLES, Mary, Head Librarian, Terrell Library, Faculty, Current Senator, WSU 36 Years. **Relevant Experience and Qualifications**: WSU faculty member for 28 years. **Committee Experience**: Faculty Affairs Committee, Budget Committee, All University Writing Committee, Faculty Status Committee.

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Election Result: Academic Advising and Reinstatement: C. Oakley and T. Whitacre; Catalog: M. Evans; Graduate Studies: B. Boyd; Teaching Assistant Training: T. Akmal; and WSU Foundation Faculty Advisory: M. Gilles.

2. Recommendation from Research and Arts for the Sleep and Performance Research Center **Exhibit D** from 1/24/08 agenda is as follows:

**Proposal to Establish a New Center at Washington State University**

1. **Name of the unit** - Sleep and Performance Research Center

2. **Nature and Scope of Activities** – The Sleep and Performance Research Center (SPRC) will integrate the programs in animal and human, basic and applied, laboratory and field sleep research at WSU. The core faculty members of the proposed SPRC have done innovative, groundbreaking work, are well-published, have excellent records of attracting funding, and are internationally respected in their areas of research. The creation of the SPRC will further enhance the scholarly visibility and stature of sleep research at WSU, help in recruiting new faculty, post-doctoral fellows, and graduate students in sleep and related areas, define an entity that will aid in securing additional larger program grant support from federal, state, and private sources (foundations and corporations), create a programmatic unit to facilitate efficient function of a group that spans two campuses, and be a focal point for the creation of unique resources (e.g., an in-resident human sleep and performance lab, including, in the future, high fidelity simulators of real-world performance) to support the research programs and their themes.

At the behavioral level, fatigue and the attendant degradation in performance is a function of time awake, time of day (circadian rhythm), and time on task. Despite over a hundred years of experimental work, we do not know what it is about prolonged
waking that degrades performance and how sleep restores it. The extant theory of sleep/wake regulation - that sleep is a whole-animal behavioral state imposed by central neuronal mechanisms - is now 50 years old and though it has stimulated much experimental work it has been unable to answer these fundamental questions. A new theory, put forward by James Krueger, posits that sleep begins as local, use-dependent changes in neuronal metabolism and that these local changes coalesce to trigger whole animal sleep. The proposed SPRC is organized, in part, to develop and test this theory.

The SPRC will focus on understanding the brain organization of sleep in humans and animals and use this understanding to link sleep, by way of the underlying neurobiology, to performance. The research will contribute to sustaining human productivity, safety, health, and well-being and may even contribute to the understanding of the neurobiology of consciousness. The study of sleep, sleep deprivation, sleep restriction, and performance is a research priority at the NIH, the Department of Defense, and the Department of Transportation, and other federal agencies. A recent report by the Institute of Medicine puts sleep at the forefront of biomedical research. The proposed SPRC will consist of 6 laboratories: The James Krueger lab (animal sleep and biochemistry) in Pullman, the David Rector lab (animal neurophysiology and imaging) in Pullman, the Steven Simasko lab (animal behavior) in Pullman, the Gregory Belenky and Hans Van Dongen lab (laboratory and field studies of human sleep and performance) in Spokane, and the planned Bryan Vila lab (human sleep and performance in high fidelity simulation and in the field) in Spokane. These labs have developed strong interactions with each other supported by funding from several NIH grants, congressionally-mandated funding, and grants from private foundations (e.g., Murdock and Beckman). The inter-lab collaboration has reached a new level with a $1.5 M grant just received from the W.M. Keck Foundation (see below). This grant awarded jointly to the Krueger and Rector labs in Pullman and the Belenky and Van Dongen labs in Spokane and integrated through the proposed SPRC will enable the application of new technologies in EEG, EEG-impedance imaging, and optical imaging to test the predictions in animals and humans of the Krueger theory of local sleep. These co-located laboratories are positioned to advance our understanding of sleep and performance by deconstructing behavioral fatigue and performance degradation to the level of cortical columns, neuronal assemblies, and in general local brain organization. In the future, these collaborations are envisioned to grow with additional joint research program funding (e.g., one or more NIH program project grants) and the number of investigators contributing is expected to grow through strategic planning in cooperation with other academic programs and departments (see, for example, the letters of support from Bryan Slinker and Dennis Dyck).

3. **Criteria and Method of Selection of Director and Participating**

   a. The director of the SPRC will be selected by a committee consisting of the Vice Provost for Research, the Chancellor of WSU Spokane, the Vice Chancellor for Research of WSU Spokane, the Dean of the College of Veterinary Medicine, and the Chair of the Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP). The term of office of the director will be 5 years.
b. Core faculty:

Gregory Belenky, M.D., Research Professor, Health Research and Education Center, WSU Spokane; Adjunct Professor, Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP), College of Veterinary Medicine, WSU; Adjunct Professor, Department of Psychology, College of the Liberal Arts; Adjunct Professor, Department of Psychiatry, University of Washington School of Medicine

James Krueger, Ph.D., Regents Professor, Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP), College of Veterinary Medicine, WSU

Jaak Panksepp, Ph.D., Professor, Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP), College of Veterinary Medicine, WSU

David Rector, Ph.D., Associate Professor, Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP), College of Veterinary Medicine, WSU

Steve Simasko, Ph.D., Professor, Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP), College of Veterinary Medicine, WSU

Hans Van Dongen, Ph.D., Research Associate Professor, Health Research and Education Center, WSU Spokane; Adjunct Associate Professor, Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP), College of Veterinary Medicine, WSU; Adjunct Associate Professor, Department of Psychology, College of the Liberal Arts, WSU

Bryan Vila, Ph.D. Professor, Department of Political Science/Criminal Justice, College of the Liberal Arts, WSU

c. Potential affiliated faculty:

Deuk Heo, Ph.D., Assistant Professor, School of Electrical Engineering and Computer Science, WSU

John Hinson, Ph.D., Professor, Department of Psychology, College of the Liberal Arts, WSU

George La Rue, Ph.D., Associate Professor, School of Electrical Engineering and Computer Science, WSU

Matt Mccluskey, Ph.D., Professor, Department of Physics, College of the Sciences, WSU

John Roll, Ph.D., Professor, Washington Institute for Mental Illness Research and Training (WIMIRT), WSU

Sandip Roy, Ph.D., School of Electrical Engineering and Computer Science, WSU
Paul Whitney, Ph.D., Department of Psychology, College of the Liberal Arts, WSU

d. The criteria of membership in the core faculty of the SPRC will be direct, over-half-time involvement in basic or applied sleep research. The current core faculty will constitute a committee to select new members.

4. **The college(s) and/or departments(s) to be involved** (referencing both core and affiliated faculty):

Department of Electrical Engineering, College of Engineering and Architecture
Department of Physics, College of Sciences
Department of Political Science, College of the Liberal Arts
Department of Psychology, College of the Liberal Arts
Department of Veterinary Comparative Anatomy, Physiology, and Pharmacology (VCAPP), College of Veterinary Medicine
Health Research and Education Center (HREC), WSU Spokane
Washington Institute for Mental Illness Research and Training (WIMIRT), WSU Spokane
Washington, Wyoming, Alaska, Montana, Idaho (WWAMI) Medical Education Program

5. **Amount of budgetary support requested.** The specific levels of support should be addressed in the proposal.

There is no budgetary support requested. It is expected that the director will work with academic leadership of participating departments to strategically plan within the proposed scientific focus. Success does not depend on new resources, but long-term success will be enhanced if a larger critical mass of investigators can be assembled through cooperative strategic planning with departments and programs and broadening of the funding base.

6. **Expected funding needed from university, state, external awards or gift sources.**

The center will be funded by grants and contracts. Many of the core and affiliate faculty draw PBL-based salary from their home academic unit, but the SPRC will not be an appointing unit and so will not require additional PBL. Library use under the center organization will be the same as already extant for the center’s components. There will be no additional impact of the center on library use.

Current sleep-related grant support for the components of the proposed SPRC:

a. Gregory Belenky

U.S. Army Medical Research and Materiel Command Award (W81XWH-05-1-0099) - Naturalistic Field Studies of Sleep and Performance - $4.5M (award period 2004-2009)

W.M. Keck Foundation - New Theoretical, Technical, and Experimental Approaches to Brain Organization of Sleep and Performance - $1.5 M (award period 2007-2009)

Airline Pilots Association - Fatigue Analysis of Comair 5191 - $8,750 (award period 3-4/2007)


America Trucking Association - Divided vs. Consolidated Sleep - $78,625 (award period 7-10/2007)


b. James Krueger

NIH R01 NS25378 - Interleukin 1 - A Promoter of Slow Wave Sleep $948,000 (award period 3/1/05 - 2/28/09)

NIH R01 NS27250 - Sleep Regulation - the Involvement of GHRH - $900,000 (award period 7/1/06 - 3/31/10)

NIH R01 NS31453 - Sleep Regulation and Tumor Necrosis Factor - $875,000 (award period 2/1/07-1/31/11)

NIH R01 HD36520 - Molecular Mechanisms of Sleep Responses to Viral Infections - $1,050,000 (award period 04/15/07-03/31/2012)

c. Jaak Panksepp

Hope for Depression Research Foundation - Sustaining Support for Affective Mind/Brain Research Fund at Washington State University - $151,857 (award period 07/01/06-99/99/99)

d. David Rector

NIH R01 MH071830-01A2 - Implantable 16-256 Channel Data System for Sleep in Mice - $1,125,000 (award period 01/01/06-12/31/2010) $38,475 (Supplement: 01/01/07-12/31/07).
NIH 2R01MH060263-05 - Advanced Optical Image Probe for Neurophysiology
$1,000,000 (award period 07/01/05-04/30/2010)

Howard Hughes #107344 (Pending) - Role Models for Science at Washington State University - $750,000 (award period 09/01/07-08/31/2012).

Harvard University/NIH Subcontract #108802 (Pending) - Effective Sleep Homeostasis - A Paradigm Shift in Sleep Medicine and Research - $500,000 (award period 01/01/05-12/31/2012).

e. Steve Simasko

NIH RO1-AA13248-01A1- Mechanisms of Alcohol Effects on Sleep - $1,000,000 (award period 06/01/02 – 02/28/08; currently in no-cost extension)

f. Hans Van Dongen

NIH R01 HL70154 – Individual Response to Sleep Deprivation - $871,000 (award period 2002-2007; currently in no-cost extension)


U.S. Army Medical Research and Materiel Command – Prophylactic Napping & Caffeine - $154,000 (award period 2006-2008)

7. Needs for space, equipment, and supplies (currently available and needed now).

The SPRC will utilize space already in use for sleep research as assigned by the appointing units of the core and affiliate faculty. For example, for the core faculty this includes ~5,000 sq ft human sleep research lab (Belenky and Van Dongen) in Spokane; ~2,500 sq ft human sleep and performance in high fidelity simulation lab (Vila) in Spokane (still in development; funding is applied for and some is already available; we will be requesting space for this in the South Campus Facility, WSU Spokane); ~ 3,000 sq ft animal sleep and biochemistry (Krueger) in Pullman; ~1500 sq ft animal neurophysiology and imaging lab (Rector) in Pullman; and ~1500 sq ft animal behavior lab (Simasko) in Pullman.

8. Expected contribution to and impact on the instructional programs.

The SPRC will provide an integrated group of laboratories studying sleep and performance in animals and humans. It will train undergraduate students, graduate students, and post-doctoral fellows in the laboratory. And, it will provide undergraduate (to include Intercollegiate School of Nursing) and graduate (to include WWAMI) courses in sleep. Currently, the core SPRC labs are training 9 graduate students and employing 24 undergraduate students as research assistants.
9. **Expected contribution to university and other clients.**

The SPRC will provide scaffolding for an integrated, co-located program in research in Sleep and Performance at WSU. The SPRC will 1) provide a research bridge between the Pullman and Spokane campuses; 2) bring additional biomedical research to Spokane thereby enhancing WSU presence in the new WWAMI program; 3) provide a critical mass of sleep researchers important for funding and national presence; and 4) provide a focus for interdisciplinary collaboration. Already projects include, in addition to the core faculty, faculty from the College of Liberal Arts (Department of Psychology), College of Sciences (Department of Physics), and College of Engineering and Computer Science (Department of Electrical Engineering). In addition, there are potential collaborations with the College of Pharmacy, the Intercollegiate College of Nursing, and the Washington Institute for Mental Illness Research and Training (WIMIRT). We expect the SPRC will provide education on sleep and performance for the lay public at the local, state, and national levels.

10. **Supporting letters** from chairs, deans, vice provosts, and/or other individuals to whom the unit director will report. We will have supporting letters from:

Brian Pitcher, Chancellor, WSU Spokane

Dennis Dyck, Vice Chancellor for Research, WSU Spokane

Warwick Bayly, Dean, College of Veterinary Medicine, WSU

Bryan Slinker, Chair, Department of Veterinary Comparative Anatomy, Pharmacology, and Physiology, College of Veterinary Medicine, and Director, Programs in Neuroscience, WSU

11. **Impact**

By integrating and creating synergies between existing efforts in sleep research at WSU, the SPRC will provide advantages in competing for funding. Stanford, Harvard, and UPENN have centers for sleep research similar to the one we are proposing for WSU that have made their efforts more attractive to funding agencies. Increased funding will bring more faculty, staff, and F&A dollars to WSU. By integrating the component sleep research efforts and creating a co-located (Pullman and Spokane) program, the SPRC will attract more graduate students than the individual efforts do currently by providing a distinct institutional home for sleep research at WSU. Graduate students will benefit as the SPRC will provide for seamless movement between labs. The SPRC will broaden the scope of educational opportunities at WSU for both undergraduate and graduate students. It will ensure that sleep is well-represented in the WWAMI curriculum.

This activity, which spans the co-located campuses of Pullman and Spokane, can be a model for the development of other interdisciplinary biomedical research programs that span from basic sciences to so-called translational research in individual humans and populations of humans.
The SPRC will not be a degree granting organization. Its facilities already exist. There is no additional cost to WSU or increased workload for support units to include libraries.

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It was requested a statement be added to the proposal about the crucial nature of the Libraries for success of the Center. The proponents of the motion agreed to the statement.

Motion carried.

3. Recommendation from Academic Affairs for an Undergraduate Certificate in Organic Agriculture Exhibit E from 2/7/08 agenda is as follows:

MEMORANDUM

TO: Jolanta Drzewiecka, Chair AAC
FROM: Lisa Devine, Assistant Registrar
FOR: Academic Affairs Committee
DATE: January 28, 2008
SUBJECT: New Undergraduate Certificate in Organic Agriculture

At the meeting on December 6th, 2007, the Catalog Subcommittee approved the undergraduate certificate in Organic Agriculture.

The department has included the following rationale:

The College of Agricultural, Human, and Natural Resource Sciences (CAHNRS) is proposing an undergraduate Certificate in Organic Agriculture. This will be an interdisciplinary certificate that makes use of coursework from several departments in the college.

Rationale

Agriculture is Washington’s number one employer, representing 12% of the state’s economy and employing 160,000 people (WSDA). Graduates of WSU’s College of Agricultural, Human, and Natural Resource Sciences seeking employment in this sector historically have job placement percentages nearing 100%. The US organic food industry has grown at a rate of 20-30% each year for more than a decade, and the industry is challenged to find employees who understand the unique production, processing, and marketing approaches used in organic agriculture. A new major in Organic Agriculture Systems was approved in May 2006 as part of the interdisciplinary B.S. in Agricultural and Food Systems, and students began enrolling in the program in Fall 2006. Currently WSU is one of two institutions nationally that offer a major in Organic Agriculture. It behooves the university to make this nationally recognized area of preeminence more broadly available to those desiring to gain knowledge in the area. The certificate can be obtained on the Pullman campus and also entirely through on-line learning. Extension of the certificate to an on-line audience will allow students at all of WSU’s branch campuses and Learning Centers, as well as place bound, time bound and non-traditional students worldwide, to participate in this program.
Many people in Washington and the nation who work in agriculture already hold a bachelor’s degree, but wish to gain expertise in the rapidly growing organic agriculture sector. Developing an undergraduate certificate in Organic Agriculture is a natural next-step to complement WSU’s major in this discipline. Working professionals, other non-degree-seeking students, as well as current students in other majors at WSU will be able to learn the fundamentals in a highly focused program through on-line and classroom venues. Numerous inquiries regarding on-line delivery of the organic agriculture major have been received by CAHNRS faculty and staff since the first media reports of about the new program were published in Spring 2006.

Holders of the Certificate in Organic Agriculture will be well prepared to work on or develop their own farm, and will be qualified for employment opportunities with non-profit organizations and government agencies involved in environmental and food safety, as well as private sector food processing, marketing, organic certification, and product development industries.

Requirements
The 18-credit certificate program is designed with two core courses required for all students, a minimum of 3 credits of “experiential learning”, plus a minimum of nine additional credits selected from a range of courses. All courses already exist as permanent courses, and the certificate can be fulfilled through in-class participation on the Pullman campus or through on-line delivery.

(Note: Several of the courses are in the process of requesting new prefixes, and in one case a modified name, to better reflect the course content and to take advantage of the ability of the new, interdisciplinary AFS prefix to convey the interdisciplinary nature of these courses. The submitted proposals for course prefix changes are: 1) Soils 101 cross listed with AFS; 2) Soils/CRS 404 changing to AFS/CRS 416; Soils/CRS 403 changing to AFS/CRS 417; and Soils 445/545 changing to AFS/CRS 445/545. The list below contains the existing course designations (before the proposed changes take place).)

Core (both courses are required; 6 credits):
- SoilS 101 – Organic Gardening and Farming, 3 cr
- SoilS/CRS 404 – Small Acreage Farming and Ranching Overview, 3 cr.

Experiential Learning (3 credits minimum):
- SoilS 480, Practicum in Organic Agriculture, for must be taken on-campus
  OR
  Professional Internship (Crops 498, EconS 497, Hort 399, Soils 498, or similar) for off-campus students

Food, Farming, and Ecosystems (choose 9 credits minimum):
- EconS 101 [S], Fundamentals of Microeconomics 3 cr
- EconS 102 [S], Fundamentals of Macroeconomics, 3 cr
- CropS/Hort 102, Crop Growth and Development 4
- CropS/SoilS 360 [I], World Agricultural Systems, 3 cr.
- CRS 336 [S], Agriculture, Environment and Community 3
- CRS 435, Resolving Environmental Conflicts, 4 cr
FSHN 130 [B], Nutrition for Living, 3 cr.
FSHN 220, Food Safety and Quality 3 cr.
NATRS 300 [B], Natural Resource Ecology, 3 cr.
SoilS 301 [M], Ecological Soil Management, 3 cr.
SoilS 441, Soil Fertility, 3 cr.
SoilS 445, Field Analysis of Sustainable Food Systems, 3 cr.
SoilS 490, Composting, 2 cr.

Total Minimum Credits: 18

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Motion carried.

4. Recommendation from Academic Affairs for Undergraduate and Professional Major Change Bulletin #8 Exhibit F from 2/7/08 agenda is as follows:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>New Revise Drop</th>
<th>Current</th>
<th>Proposed</th>
<th>Effective Date</th>
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<tbody>
<tr>
<td>C E</td>
<td>437</td>
<td>New</td>
<td>-- N/A --</td>
<td>Structural Composites Design 3 Prereq C E 330. Behavior, analysis and design of fiber-reinforced composite structures; micro, ply and laminate mechanics; reinforcement of concrete and wood.</td>
<td>8-08</td>
</tr>
<tr>
<td>CES</td>
<td>205</td>
<td>New</td>
<td>-- N/A --</td>
<td>[S, D] Farm Workers 3 Historical and contemporary experiences of farm workers in the US and their relationship to the farm labor system including immigration and free trade policies, unions and advocacy organizations.</td>
<td>8-08</td>
</tr>
<tr>
<td>Cpt S</td>
<td>401</td>
<td>Revise</td>
<td>[T] Computers and Society 3 Prereq Phil 260 or Soc 101; completion of one Tier I and three Tier II courses; completion of University Writing</td>
<td>[T] Computers and Society 3 Prereq Phil 260 or Soc 101; completion of one Tier I and three Tier II courses; completion of University Writing</td>
<td>8-08</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Description</td>
<td>Pre-requisites</td>
<td>Prerequisites/Notes</td>
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<tr>
<td>Cpt S 402</td>
<td>[M] Social and Professional Issues in Computer Science 3</td>
<td>Prereq Cpt S 121; certified in computer science; completion of University Writing Portfolio. Social, legal, ethical and professional issues that arise in the context of computing. Credit not granted for both Cpt S 401 and 402.</td>
<td>Cpt S 121; certified in computer science; completion of University Writing Portfolio. Social, legal, ethical and professional issues that arise in the context of computing. Credit not granted for both Cpt S 401 and 402.</td>
<td>8-08</td>
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</tr>
<tr>
<td>Engl 454</td>
<td>History of the English Language 3 Prereq one-year foreign language.</td>
<td>Language related to the origin, history, and literature of its speakers.</td>
<td>First-year foreign language. Language related to the origin, history, and literature of its speakers. Credit not granted for both Engl 454 and 554.</td>
<td>8-08</td>
<td></td>
</tr>
<tr>
<td>Engl 492</td>
<td>[M] Advanced Topics in Literature, Criticism, and Theory 3</td>
<td>Not open to graduate students. Seminar with term paper project; focused studies in literature and critical theory.</td>
<td>[M] Advanced Topics in Literature, Criticism, and Theory 3 May be repeated for credit; cumulative maximum 6 hours. Not open to graduate students. Seminar with term paper project; focused studies in literature and critical theory.</td>
<td>8-08</td>
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<tr>
<td>Course</td>
<td>Code</td>
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<td>Title</td>
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<tr>
<td>Engl</td>
<td>493</td>
<td>Revise</td>
<td>[M] Advanced Topics in English Literature</td>
<td>3</td>
<td>Not open to graduate students. Seminar with term paper project; focused studies in English literature.</td>
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<tr>
<td>Engl</td>
<td>494</td>
<td>Revise</td>
<td>[M] Advanced Topics in American Literature</td>
<td>3</td>
<td>Not open to graduate students. Seminar with term paper project; focused studies in American literature.</td>
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<tr>
<td>Engl</td>
<td>495</td>
<td>Revise</td>
<td>[M] Advanced Topics in English for Teachers</td>
<td>3</td>
<td>Prereq senior in English/teaching option. Not open to graduate students. Seminar with term paper project; literature, composition theory, pedagogy.</td>
</tr>
<tr>
<td>Fren</td>
<td>104</td>
<td>Revise</td>
<td>Intensive French: Foundations of Language and Culture</td>
<td>4</td>
<td>Intensive first-year French, emphasizing reading, writing, oral expression and comprehension, cultural awareness. Serves as a prerequisite for Fren 203. Not open to native speakers except with permission. Credit not granted for Fren 101/102 and 104.</td>
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<tr>
<td>Geol</td>
<td>406</td>
<td>New</td>
<td>-- N/A --</td>
<td></td>
<td>Basin Analysis 3 Prereq Geol 320. Characteristics of sedimentary basins and methods for studying them. One two-day field trip required. Cooperative course taught by UI (Geol 405); open to WSU students.</td>
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<tr>
<td>H D</td>
<td>430</td>
<td>Revise</td>
<td>Professional Skills for Working with Individuals and Families</td>
<td>3</td>
<td>Prereq 6 hours of social sciences;</td>
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<td>Course Code</td>
<td>Type</td>
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<tr>
<td>I D 197</td>
<td>New</td>
<td>-- N/A --</td>
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<td>Design Communication I 3 (2-2) Integration of manual and digital methods in design implementation; freehand sketching and graphics software used in design process.</td>
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<tr>
<td>I D 297</td>
<td>New</td>
<td>-- N/A --</td>
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<td>Design Communication II 3 (2-2) Prereq I D 197. Integration of manual and digital methods in design drafting.</td>
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<tr>
<td>M E 116</td>
<td>New</td>
<td>-- N/A --</td>
<td></td>
<td>Engineering Computer-aided Design and Visualization 3 (1-6) 3-D solid modeling, parts, engineering drawings and assemblies; geometric dimensioning and tolerancing, 3-D visualization, computational analysis of parts and assemblies.</td>
<td></td>
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<tr>
<td>Phil 443</td>
<td>Revise</td>
<td>Philosophy of Language 3 Prereq 3 hours Phil. Investigation of philosophical issues concerning meaning, reference, truth, the nature of language, and the relation between language and thought. Cooperative course taught jointly by WSU and UI (Phil 443).</td>
<td>Philosophy of Language 3 Prereq 3 hours Phil. Investigation of philosophical issues concerning meaning, reference, truth, the nature of language, and the relation between language and thought. Credit not granted for both Phil 443 and 543. Cooperative course taught jointly by WSU and UI (Phil 443).</td>
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<tr>
<td>SHS 473</td>
<td>Revise</td>
<td>Language and Literacy 3 Diagnosis and remediation of language and learning</td>
<td>[M] Language and Literacy 3 Diagnosis and remediation of language</td>
<td></td>
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</tbody>
</table>

junior standing. Development of skills important for effective human service professionals: communication, group dynamics, supervision, leadership, ethical behavior, cultural sensitivity, and others.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Action</th>
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<td>Revise</td>
<td></td>
<td><strong>Assessment of Speech and Language</strong> 3 Prereq SHS 376 or c//, 475 or c//; 478.</td>
<td>Principles, techniques, and materials involved in exploring the nature of speech and language disorders; planning programs of therapy.</td>
<td>8-08</td>
</tr>
<tr>
<td>U H 270</td>
<td>New</td>
<td>-- N/A --</td>
<td><strong>Principles and Research Methods in Social Science</strong> 3 Scholarships in social sciences; exposure to theoretical frameworks.</td>
<td></td>
<td>8-08</td>
</tr>
<tr>
<td>U H 280</td>
<td>New</td>
<td>-- N/A --</td>
<td><strong>Contextual Understanding in the Arts and Humanities</strong> 3 Scholarships in the arts/humanities; exposure to theoretical frameworks.</td>
<td></td>
<td>8-08</td>
</tr>
<tr>
<td>U H 290</td>
<td>New</td>
<td>-- N/A --</td>
<td><strong>Science as a Way of Knowing</strong> 3 Prereq science or engineering majors. Exploration of how scientific knowledge is acquired, refined and advanced; hands-on experience with scientific scholarship.</td>
<td></td>
<td>8-08</td>
</tr>
<tr>
<td>U H 370</td>
<td>New</td>
<td>-- N/A --</td>
<td><strong>Case Study: Global Issues in Social Sciences</strong> 3 Prereq U H 270. Using research skills to analyze a global case study or international perspective in the social sciences.</td>
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<tr>
<td>U H 380</td>
<td>New</td>
<td>-- N/A --</td>
<td><strong>Case Study: Global Issues in the Arts and Humanities</strong> 3 Prereq U H 280. Using research skills to analyze a global case study or international perspective in the arts/humanities.</td>
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<td>8-08</td>
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<tr>
<td>U H 390</td>
<td>New</td>
<td>-- N/A --</td>
<td><strong>Case Study: Global Issues in the Sciences</strong> 3 Prereq U H 290 or 299. Using research skills to analyze a</td>
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<td>8-08</td>
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<td>Prerequisites</td>
<td>Description</td>
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**UNDERGRADUATE AND PROFESSIONAL MAJOR CHANGE BULLETIN NO. 8**  
**Spring 2008**

---REQUIREMENTS---

The requirements listed below reflect the undergraduate major curricular changes approved by the Catalog Subcommittee since approval of the last Undergraduate Major Change Bulletin. All curricula are printed in their entirety under the headings Current and Proposed, respectively. The column to the far right indicates the date each change becomes effective.

<table>
<thead>
<tr>
<th>Heading</th>
<th>Current</th>
<th>Proposed</th>
<th>Effective Date</th>
</tr>
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</table>
| Honors College, revise certificate requirements | The suggested schedule of studies, distributing the honors courses over four years, is as follows:  
**Freshman Year**  
Engl 298 and 199  
Math requirement  
Note: Students who qualify for Calculus II (Math 172) on the basis of the math placement test receive credit for Math 171 and thereby fulfill this requirement. Other students take the math required by their major. Honors College accepts: Math 140, 171, 202, 205, 206, 210, 212, and 251 and 252 combined. Check with a University Honors College advisor for any questions concerning the math requirement.  
**Freshman or Sophomore Year**  
Choose three:  
Anth 198, EconS 198, Hist 290, Pol S 198, Psych 198, Soc 198  
Both required for non-science majors:  
Science 198 (fall only)  
Science 199 (spring only)  
Note: Science majors taking | The suggested schedule of studies, distributing the honors courses over four years, is as follows:  
**Freshman or Sophomore Year**  
All required:  
Engl 298  
Math (N)  
UH 270: Principles and Research Methods in the Social Sciences  
UH 280: Contextual Understanding in the Arts and Humanities  
UH 290: Science as a Way of Knowing  
In addition to UH 290 science majors complete appropriate 4-credit [B] or [P] course. Required for non-science majors:  
Science 298 (fall only)  
Science 299 (spring only)  
Note: Science 299 will satisfy the requirement of UH 290 for non-science majors.  
**Sophomore or Junior Year**  
UH 398: Honors Thesis Proposal Seminar | 8-08 |
biological science and physical science laboratory courses for their majors fulfill this requirement with those courses.

- **Sophomore or Junior Year**
  - Choose one:
    - UH 300, Phil 108
    - Junior or Senior Year
      - UH 330 Development of Western Civilization
      - UH 350 Development of Global Civilization
      - UH 440 Domain of the Arts or UH 410 Domain of the Sciences
      - UH 450 Honors Thesis

Note: Three credits required except for some majors, which require 2 credits and 1 credit of departmental 499. Please check with an Honors advisor.

**Timing Optional with Student:**
- Optional: UH 430 (Education Abroad Practicum and Research)

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**First Year**

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<tr>
<th>First Term</th>
<th>Hours</th>
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<tr>
<td>Arts &amp; Humanities [H,G] or Social Sciences [S,K] (GER)</td>
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<tr>
<td>Biological Sciences [B] (GER)</td>
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<tr>
<td>Communication Proficiency [C,W] (GER)</td>
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<tr>
<td>Engl 101 [W] (GER)</td>
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<td>GenEd 110 [A] (GER)</td>
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<tr>
<td>Arts &amp; Humanities [H,G], Intercultural Studies [I,G,K], or Social Sciences [S,K] (GER)</td>
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<tr>
<td>GenEd 111 [A] (GER)</td>
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<tr>
<td>Physical Sciences [P] (GER)</td>
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<tr>
<td>Psych 105 [S] (GER)/SHS Elective</td>
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</tbody>
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Foreign language competency requirement: assessed proficiency in a second language at the intermediate level. May be completed at any time before graduation. Check with an Honors advisor for specifics.

**Junior or Senior Year**

| UH 370 Case Study: Global Issues in Social Science |
| UH 380 Case Study: Global Issues in Arts and Humanities |
| UH 390 Case Study: Global Issues in Science |
| UH 450 Honors Thesis |

Note: Three credits required except for some majors, which require 2 credits and 1 credit of departmental 499. Some majors do not require Honors thesis due to own thesis project requirement. Please check with an Honors advisor.

**Timing Optional with Student:**
- Optional: UH 430 (Education Abroad Practicum and Research)

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Speech and Hearing Sciences, revise graduation requirements 8-08
<table>
<thead>
<tr>
<th>Sciences (GER)</th>
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<tr>
<td>SHS 205</td>
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<td>SHS 250</td>
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**Second Term Hours**

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<td>Stat 212 [N] (GER)</td>
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<td>Complete Writing Portfolio</td>
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**Third Year**

**First Term Hours**

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<td>SHS Elective¹</td>
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<td>SHS Elective²</td>
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**Second Term Hours**

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<td>SHS 378</td>
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<tr>
<td>SHS 472</td>
<td>SHS 478 [M]</td>
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<tr>
<td>SHS 478 [M]</td>
<td>SHS 461 or</td>
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<td>Tier III Course [T] (GER)</td>
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**Fourth Year**

**First Term Hours**

<table>
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<tr>
<th>SHS 472</th>
<th>SHS 477</th>
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<tr>
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<td>SHS 482</td>
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<td>SHS 471</td>
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**Second Term Hours**

<table>
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<tr>
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<th>SHS 475</th>
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<tbody>
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<td>SHS 479</td>
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<tr>
<td>SHS 479</td>
<td>SHS 482 [M]</td>
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<tr>
<td>SHS 480</td>
<td>SHS 475 [M]</td>
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<th>Tier III Course [T] (GER)</th>
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<tbody>
<tr>
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<td>3</td>
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</tbody>
</table>

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**Footnotes**

¹ Selected GERs may be used to fulfill SHS electives. Highly recommended electives include: Acctg 230, 231; Anth 405, 450; Biol; Chem; Cpt S Engl 255, 256, 402; For Lang; H D; MgtOp 101, 301; Physics; Psych 311, 312, 321, 333, 361, 363, 372, 384, 390, 412, 464, 490; SHS 489, 490; Soc 356; Sp Ed 301; Stat 212; T & L 330, 333, 335; W St 220; others in consultation with your advisor.

² Selected GERs may be used to fulfill SHS electives. Highly recommended electives include: Acctg 230, 231; Anth 405, 450; Biol; Chem; Cpt S Engl 255, 256, 402; For Lang; H D; MgtOp 101, 301; Physics; Psych 311, 312, 321, 333, 361,
363, 372, 384, 390, 412, 464, 490; SHS 489, 490; Soc 356; Sp Ed 301; Stat 212; T & L 330, 333, 335; W St 220; and others in consultation with your advisor.

SHS 475 at Pullman campus; Rotating Core Elective at Spokane campus

****

Motion carried.

5. Recommendation from Academic Affairs for the Bi-State School in Food Science

Exhibit G from 2/7/08 agenda is as follows:

MEMORANDUM

TO: Barry Swanson, Executive Secretary
    Faculty Senate

FROM: Becky Bitter, Registrar’s Office

FOR: Academic Affairs Committee

DATE: 4 February 2008

SUBJECT: Proposal for the Bi-State School of Food Science

On January 30, 2008, AAC members reviewed and approved the attached proposal for a Bi-State School of Food Science between Washington State University and the University of Idaho after receiving approval from the Budget Committee.

At this time, Faculty Senate review and approval is recommended, to be effective fall 2008.

School of Food Science
Washington State University & the University of Idaho

A Proposal to the Administration and Faculty of Washington State University and the University of Idaho

Submitted on behalf of Faculty from the
WSU Department of Food Science and Human Nutrition
and
UI Department of Food Science and Toxicology

School of Food Science Mission Statement

The School of Food Science will strive to provide the highest quality education in food science, serving the citizens of Idaho, Washington and the Northwest, the United States, and the world. The School will:
1. prepare undergraduate and graduate students for rewarding careers and personal leadership in the food industry, academia and government agencies;
2. conduct innovative and responsive research to improve the safety, quality, and availability of food, agricultural commodities, and value-added food products; and
3. provide high impact outreach and extension programs to enhance the safety, economic development, competitiveness, and profitability of the food industry and ensure consumer well-being.

**Justification**

Formation of the School of Food Science will merge the food science faculty and programs from the WSU Department of Food Science and Human Nutrition with the food science faculty and programs from the UI Department of Food Science and Toxicology into one unit jointly administered by the Washington State University College of Agricultural, Human and Natural Resource Sciences and the University of Idaho College of Agriculture and Life Sciences. The formation of a bistate School of Food Science will provide tremendous opportunities for the citizens of Washington and Idaho with minimal input of new resources. By leveraging existing expertise and facilities of both universities, the implementation of this proposal will result in a value-added enhancement of the food science programs with no additional resources.

Although the departments currently offer a collaborative curriculum leading to the Bachelor of Science in Food Science, additional benefits will be achieved by the formation of a School of Food Science that combines teaching, research and outreach. A School of Food Science will allow for coordinated planning, more efficient use of resources, and less duplication of effort. Benefits include increased faculty numbers and collaboration leading to expanded research and extension opportunities, improved student activities, increased regional, national, and international recognition and respect in the professional food science communities, and a larger base of external industrial and consumer stakeholders.

Numerous benefits will accrue to a merged School of Food Science at both Washington State University and the University of Idaho. A formal agreement will enhance communication and collaboration among individual faculty with similar goals and missions. A larger number of faculty with enhanced research capabilities and productivity will promote articulation of a broader range of research projects, more rapid and efficient response to emerging production, industry, and consumer needs, and provide more experienced and influential mentoring and graduate student training. Coordinated faculty hiring will reduce overlap and inefficiencies, allowing the School of Food Science to provide expanded areas of expertise. A more coordinated, efficient teaching program will reduce both the competition and duplication in student recruiting efforts, expand internship opportunities and job placement efforts, expand undergraduate and graduate student activities, and promote student retention and career guidance. The School of Food Science faculty will be responsive to a larger group of external stakeholders and have greater access to endowed funding than the faculty of separate food science programs. Artificial barriers resulting from state boundaries, especially in research and extension programming will be reduced. Many alumni of the WSU and UI Food Science programs are already employed by the food industry with food processing
facilities in both Washington and Idaho. The School of Food Science will be supported by three regional sections of the Institute of Food Technologists, the Society for Food Science and Technology: the Lewis & Clark, Puget Sound, and Intermountain Sections. Appropriate organization of the school will result in administrative cost savings, reduce administrative barriers to collaboration, and lead to resolution of competitive recruiting, retention, and administrative policies at the two universities.

The formal creation of a bistate School of Food Science will be unique in the nation and provide immediate national impact and recognition. The formation of the School of Food Science will promote food science teaching, research, and extension programs into the top tier of universities with food science programs in the United States based on faculty numbers, undergraduate and graduate student enrollment, degrees granted, research productivity, and extension programming. Formation of the School of Food Science will not only increase faculty and student numbers, but will enhance competitiveness of the School of Food Science for recruiting graduate students, proposing integrated research proposals, and collaborative extension programming.

Career opportunities for graduates in food science are excellent (100% placement). Presently and for the foreseeable future, there is a international, national, and regional deficit in prospective food science employment opportunities in the food industry, government agencies, and academia. Due to continued growth in the food production, preservation, and product development industry, the USDA estimates there will be more jobs than graduates in food science for at least the next fifteen years. Starting salaries for food scientists are highly competitive ($40,000/yr. B.S., $50,000/yr. M.S. and $68,000/yr. Ph.D.). Food science graduates begin careers in food quality assurance, food safety microbiology, technical sales, production management, product extension or development, regulatory affairs, or research in the food/allied industries or federal/state regulatory agencies. Educating Washington and Idaho citizens in food science is an excellent way to provide challenging and profitable opportunities to remain in the Pacific Northwest and enjoy a resourceful professional career. It is clear and fortuitous that consumer and regulatory demands impacting the food distribution, food preservation, and food service industries will continue to provide excellent employment opportunities for food science graduates. Because of the dynamic nature of the food science discipline, well educated and productive food science faculty researchers and educators will provide quality educational experiences for food science majors as well as students from other disciplines.

Background

Food processing is the largest manufacturing industry in the United States, a $459 billion industry (2002, US Manufacturing Census) that adds significant value to the production of farm commodities. Food processing is the largest manufacturing employment sector in Idaho and the second largest in Washington behind transportation. There are more than 1790 food processing operations in Idaho and Washington, ranging from large international corporations to small entrepreneurial start-up companies. In Idaho, the food and beverage manufacturing industry employs more than 16,900 people and adds $5.2 billion to Idaho’s economy. In Washington, the food and beverage processing industry employs about 40,000 people and adds $10.3 billion to Washington’s economy. Nationally, value-added food processing contributes greater than 8% to the gross
domestic product (GDP) and accounts for about 50% of realized profits across the entire food distribution system. Thus, food processing represents a profitable and established area for continued economic growth and development within the Pacific Northwest and the United States.

Market globalization is opening a tremendous opportunity for the food industry. The United States, including Idaho and Washington, primarily export low value commodities and is not taking full advantage of the opportunities for exporting high value-added food products. United States’ exports of processed food products are increasing, but the overall worldwide market share of food products is decreasing. To enhance the regional economy, Idaho and Washington must focus on adding value to agricultural commodities to meet the demand of increasingly diverse populations of international consumers. Thus, increasing the safety, quality, and quantity of value-added food products, regional commodities, specialty crops and by-products will provide significant economic benefits through domestic markets and international exports. Growth in food science related manufacturing will continue to provide rewarding careers for the citizens of Idaho and Washington and support the tax base of not only the states, but the counties and cities as well.

Food Science is the scientific discipline that supports the food and beverage manufacturing industry. Food Science is a multidisciplinary science that applies biology, chemistry, physics, engineering, nutrition, and other sciences to improve the safety and quality of food products; develop new food products; and design new, safer, and more energy efficient food preservation methods. Food scientists are employed around the world by large and small food processing companies, food ingredient suppliers, food quality assurance and testing labs, federal and state governmental agencies, and academia. Food scientists strive to improve the microbial and chemical safety of foods, enhance the quality of foods through traditional and emerging technologies. Food scientists conduct research to improve food safety and quality, identify beneficial food ingredients and develop new food products, extend the shelf life of foods, and identify environmentally friendly food preservation technologies. Many of the foods in retail grocery stores or offered on restaurant menus were developed and their safety, quality and shelf life assured by food scientists.

The food science profession is very dynamic due to the many changes in technologies and the identified desires of consumers. Consumers no longer view food in terms of bulk commodities. Although consumer food purchases trended away from commodities (e.g. potatoes, legumes, fruit, cereal grains, meats, poultry, and dairy products) toward value-added food products, food expenditures decreased over the past 50 years and now comprise about 11% of the annual disposable income of Americans. The reduction in expenditures of disposable income for food is not incidental, but attributed to the application of advanced technologies and food chemistry, microbiology and engineering. Large changes in lifestyle are leading to alteration of consumer demands, resulting in the development of a wide variety of safe, high quality, economical and convenient value-added food products. Consumer demand for specially designed convenience foods is increasing as the population of the US ages and becomes more ethnically diverse. Consumers are not only demanding safe and high quality convenient foods composed of essential nutrients, but many consumers are demanding health-promoting ‘functional’ foods that may protect or offer protection against chronic diseases. Impatient consumers
are requesting meal replacements that mimic a complete home cooked meal in taste and quality, but without the preparation and clean up time. Consumers also expect a risk free standard of food safety. Finally, many consumers desire food processed with minimal environmental impact, including reduced energy usage, reduced packaging waste, and improved utilization of agricultural by-products. All of these expectations must be readily available and delivered economically. The food production and preservation industry is a key component of Washington and Idaho’s economic base, providing great opportunities for increased academic/industrial partnerships. A School of Food Science will be well positioned to meet the emerging challenges, needs, and opportunities of the food industry. All of these factors will result in increased demand for food scientists competent in molecular biology, biochemistry, material science, engineering and other sciences.

**History**

In the Pacific Northwest, Food Science programs are offered at Oregon State University, Washington State University and the University of Idaho.

Discussion of a merged Food Science program between Washington State University and the University of Idaho was discussed previously. The concept was first discussed in 1989 when the Food Science and Human Nutrition building on the Washington State University Campus was in the initial planning stages. At that time, a proposal was introduced to merge food science faculty, form a merged Food Science Department, and house the new program at Washington State University. The proposal was not acted upon at that time.

A merger of food science faculty proposed in 1997 led to a cooperative curriculum and teaching program leading to the Bachelor of Science in Food Science and Human Nutrition at WSU and the Bachelor of Science in Food Science and Toxicology at the UI. This cooperative curriculum was formalized by a Memorandum of Understanding signed by the provosts of each institution. Faculty from both universities teach courses and supervise graduate student research in the Food Science program, allowing students access to facilities and faculty expertise from both institutions. Joint WSU-UI food science curriculum meetings are held regularly throughout the academic year to assess and coordinate teaching responsibilities. The food science faculty of each institution is responsible for approximately half of the courses in the major. Neither faculty is currently able to offer the entire food science curriculum alone without sacrificing research and extension programs. The Food Science BS curriculum is approved as a cooperative curriculum by the Institute of Food Technologists, the Society for Food Science and Technology. This unique cooperation and partnership between neighboring universities permit the food science faculty to offer approved, high quality food science undergraduate and graduate curricula. Alumni surveys indicate student satisfaction with the cooperative curricula in Food Science.

Several recent developments lead to the current proposal for the formation of a School of Food Science:
1. WSU realignment plans include moving the dietetics and nutritional sciences faculty and curricula currently in the Department of Food Science and Human Nutrition into a proposed Division of Health Sciences in the College of Pharmacy, providing the dietetics and nutrition faculty new and expanded research, teaching and outreach opportunities.

2. Cooperation among food science faculty with respect to the teaching, research and extension programs are enthusiastic and energetic, and faculty are excited, ready and willing to explore the proposed formation of a School of Food Science.

3. The administrative chair of the Department of Food Science and Human Nutrition at WSU and the head of the Department of Food Science and Toxicology at the UI are vacant at this time. The proposed merger of departments to form a School of Food Science is supported by Dean Daniel Bernardo, College of Agricultural, Human, and Natural Resource Sciences, WSU, and Dean John Hammel, College of Agriculture and Life Sciences at the UI.

4. Both universities proposed merging the food science faculties with the animal science faculties for economic stability, although there is an absence of faculty support and minimal programmatic bases for this merger. Faculty also expressed concerns about a loss of food science recognition within Animal Science Departments.

5. Robert Bates, the Provost at both Washington State University and Doug Baker, the Provost at the University of Idaho and formerly Associate Provost for Academic Affairs at Washington State University, are familiar with the ongoing cooperation among Food Science faculty and supportive of the concept of the proposed School of Food Science.

**Administration**

**Director.** A single Director will lead the School of Food Science. The Director will be employed 50% by each university and responsible to both the Dean of the College of Agricultural, Human, and Natural Resource Sciences at WSU and the Dean of the College of Agriculture and Life Sciences and the UI. Fringe benefits will be shared equitably and allocated such that the director is not disadvantaged by the joint appointments.

The Director will be responsible for the budget of the School and allocate funds for teaching, research and extension with input and direction from the appropriate college officials at both universities. Faculty will be given equitable treatment in allocation of these funds distributed on the basis of productivity and merit. All productivity measures of the School (e.g. student credit hours, number of majors, publications, grant funding) will be acknowledged by both universities. The Director will be responsible for assigning support staff and graduate assistants to specific tasks, faculty, research or outreach programs. A proposed description for the Director position is included in the Appendices.

**Faculty.** UI faculty will hold rank, tenure, or both, at the UI and all academic affairs such as promotion, tenure review, tenure, annual performance evaluation and salary increases will follow the policies in the UI Faculty-Staff Handbook. WSU faculty will
hold rank, tenure, or both, at WSU and all academic affairs such as promotion, tenure review, tenure, annual performance evaluation and salary increases will follow the policies in the WSU Faculty Manual. UI and WSU faculty with appointments in the bistate School will be provided employee privileges at both universities. Future faculty appointments in the School may be hired jointly by WSU and the UI.

Initially, faculty will be housed at their respective universities. In the future, faculty may be housed at either university as space is available appropriate for programmatic collaboration and success.

Students. UI students will pay UI tuition and fees and will be awarded degrees from the UI. WSU students will pay WSU tuition and fees and be awarded degrees from WSU. All Food Science courses (proposed prefix, F S) will be cross-listed at both universities. About half of the core curriculum necessary to earn a Bachelor of Science in Food Science will be offered on each campus.

Advisory Board. An Advisory Board comprised of individuals from the food and allied industries, alumni, and state and federal governments will be appointed by the Director in communication with the faculty to advise the faculty in creation/evaluation of programs and strategic planning for the new School. A food industry Advisory Board is currently in place at the University of Idaho, and at least one member, Ron Luedeman, representing Basic American, Blackfoot, ID is an alumnus of the Washington State University food science program. The combined Advisory Board will meet semi-annually.

The success of the WA/ID School of Food Science will require close cooperation between the two universities and a commitment by university administration. Procedures for conducting the business of the School will be developed by the Director and faculty in close cooperation with appropriate administrative personnel at both universities, including the Provost, Vice President of Research, and college Deans.

Many administrative procedures will need to be agreed upon before WA/ID School of Food Science is official. The enclosed Memorandum of Understanding is being reviewed and revised by the appropriate administrators and the Attorneys General at both Washington State University and the University of Idaho. Particular attention will be necessary to resolve collaborative funding, resource allocation, and intellectual property issues. Grant proposal processes will require simplification and appear seamless to funding agencies. The Deans, Director, and faculty will need to clarify with the research and proposal development offices of WSU and the UI established policies on facilities and administration (indirect cost) sharing and budgeting. A policy on university designation of intellectual property will be required.

Food Science Curricula and Degrees

The undergraduate curriculum leads to a Bachelor of Science in Food Science. The BS in Food Science is reviewed and approved every five years by the Institute of Food Technologists (IFT), the Society for Food Science and Technology.
**Undergraduate Enrollment.** Undergraduate students complete Washington State University General Education Requirements (40 credits) or University of Idaho core requirements (30-32 credits) and supporting science and mathematics classes (27-28 credits) during their first two years of study. The additional biological and physical sciences (cell biology, microbiology, physics, general chemistry, organic chemistry, biochemistry) and mathematics through one semester of calculus are pre-requisite for completing the food science core curriculum. Calculus is required to study kinetic changes of food constituents and microbial contaminants during food preservation and introduce logical thinking into quality deterioration and shelf life problems associated with maintenance of food acceptability. Food Science majors must integrate knowledge from the traditional biological and physical sciences to understand and resolve food science related problems. Other supporting courses include technical writing, statistics and computer applications to provide students the background skills necessary to analyze, interpret and convey scientific information. Registration for introductory food science courses is encouraged during the Freshman and Sophomore years to potentially recruit and promote retention of students interested in the scientific study of foods and awareness of the food industry.

The Food Science curriculum was extensively revised in 2000-2001 and a new curriculum became effective with catalog year 2002. Program assessment and curricular change is an ongoing process led by a Food Science Curriculum Committee. Joint WSU-UI Food Science curriculum meetings are held regularly throughout the academic year to oversee the cooperative core curriculum. All food science teaching faculty from both WSU and the UI are participating members of this committee. Students are invited to attend the meetings and participate in the discussions.

Most of the Food Science discipline specific courses are taken in the Junior and Senior years of the Food Science curriculum. These courses build on the supporting science and mathematics classes taken previously. Food science core courses (35 credits) include food safety/microbiology, food chemistry/analysis, sensory analysis, and food processing/engineering. These courses present the core competencies students must have to meet the challenges they will face in the food industry or in graduate school. The laboratory components of these courses provide hands-on learning opportunities. Written and oral assignments enhance communication skills.

Students also select an area of emphasis which includes elective courses in food processing, economics and business, microbiology, or nutrition. Elective internship or directed study courses in areas of emphasis provide experiential learning opportunities for the student.

**Food Processing Emphasis.** This emphasis provides in depth information on food processing operations. Students may concentrate study within one or more of the dairy, meats, fruits and vegetables, or cereals commodity groups, integrating the study of production and postharvest physiology on food safety as well as food quality, processing characteristics, and acceptability. A food processing emphasis prepares graduates for careers in production supervision, sanitation (HACCP), quality assurance, inspection, product development and process development. Graduates will also be prepared for post-graduate studies leading to research, production and management careers in the food industry, government and academia.
Business Emphasis. This emphasis prepares students for employment in food or food-related businesses where knowledge of scientific methods and food science, as well as economics, marketing and business are important. The recommended course work prepares students for careers in manufacturing management, technical sales, food product marketing or other business careers. Courses in marketing and food systems supplement the core program of basic sciences and food science, thereby integrating the science of food with business, management and economics.

Science Emphasis. This emphasis provides students with an in depth understanding of the physical or biological sciences that supports the food-processing industry. Recommended courses provide fundamental scientific mechanisms involved in improving the safety, quality, preservation, formulation, and risk management of the food supply. Selected courses provide chemical bases for changes in foods that occur during harvest, preservation, handling, storage and consumption. Microbial and chemical food safety issues are addressed in great detail. The science emphasis prepares students for careers in research and development, analytical services, and food safety. The science emphasis is excellent preparation for admission to research programs in the food industry or government (USDA, FDA), as well as graduate school.

Nutrition Emphasis. This emphasis prepares students for careers in the food industry where knowledge of nutrition is important. Current consumer interest in functional health-promoting foods is leading to rapidly expanding job opportunities for food scientists with fundamental knowledge of food composition, formulation, and the relationships between food constituents and health and well-being.

A capstone course, F S 489 Food Product Development (3 credits) required of food science students is a senior-level course promoting creative thinking, problem solving, and integration of the knowledge from food science and ancillary courses to solve realistic food industry and consumer issues with food accessibility and security, food safety, food preservation, and acceptability. Food product development provides students with the opportunity to work in teams and develop leadership skills.

An undergraduate seminar is required to promote communication skills and develop professional relationship skills. Students are also introduced to current issues of importance in food science.

Food science core courses are focused toward development of good citizenship and career success skills such as critical thinking, communication, problem-solving, time management, organization, information acquisition and lifelong learning skills. Students also learn to manage multiple tasks and assignments. These skills provide food science students with the set of skills necessary to identify, resolve and communicate solutions to food science related issues in the food industry, media and society.

Undergraduate Research. Food science majors are presented with opportunities to participate in undergraduate research projects mentored by faculty and supported by college and school resources. Food Science faculty mentored two to three undergraduate food science research projects each year for the past few years. Food science faculty mentored high school seniors in a science projects related to food science in 2006 and previous years. The School of Food Science is prepared to provide ~ $500.00 in
matching funds for each proposed undergraduate research project awarded financial
support by CAHNRS or other University resources. Undergraduate students may obtain
credit for successful participation and contributions to research projects as F S 499
Directed Study.

The undergraduate program in Food Science provides an excellent education and broad
preparation for student success. The undergraduate food science program is experiencing
increased growth in the number of interested students and admissions. Food science
undergraduates from WSU and the UI are competitive for national scholarships,
fellowships and awards, receiving an inordinate amount of support relative to student
numbers. Undergraduate and graduate students are competitive in acquiring prominent
internships, research fellowships, and employment with both the regional and national
food industry. Approximately half of the undergraduates over the past five years went on
to graduate school at Ohio State, Purdue, Wisconsin, WSU or the UI and the others
students accepted positions in the food industry across the U.S. All food science
graduates actively seeking employment find an acceptable position shortly after
graduation. Food industry internships and employment opportunities far exceed the
number of undergraduate food science students. Food science students are readily placed
in food industry internships during each summer of their undergraduate education.

Our undergraduate program is reviewed and approved by the Institute of Food
Technologists, the Society for Food Science and Technology. Student evaluations of
faculty are excellent. Results of exit interviews and alumni surveys indicate satisfaction
with the food science curriculum and teaching efforts. Additional collaboration of WSU
and UI food science faculty will improve the mentoring, advising and career guidance
available to undergraduate students from individual faculty.

Assessment of Undergraduate Curriculum.

Undergraduate curriculum assessment is an ongoing process in food science. The
undergraduate curriculum in food science is approved by the Institute of Food
Technologists (IFT), the primary international scientific/professional society for food
scientists (28,000 members). IFT instituted an evaluation and approval protocol for
undergraduate food science programs in 1960. The collaborative WSU/UI undergraduate
curriculum was reviewed by the IFT Higher Education Committee in October 2002 and
approved for five years. The IFT education standards for undergraduate curricula in food
science require documentation of outcome-based measures of learning and a formalized
assessment program. To meet the IFT education standards, the food science curriculum
must 1) demonstrate that specific content areas and core competencies are met, 2)
document specific learning outcomes for each food science course, 3) document specific
outcomes for the overall curriculum, and 4) develop an assessment program to determine
if learning and curriculum outcomes are being met.

Joint WSU/UI food science curriculum meetings are held regularly throughout the
academic year to assess the curriculum relative to evolving IFT Committee on Higher
Education standards. The WSU/UI curriculum committee established and implemented a
formal outcome and assessment program.
Core Competencies
IFT requires curricula to meet an extensive list of core competencies in the areas of food chemistry and analysis, food safety and microbiology, food processing and engineering, applied food science and success skills. These core competencies require documented courses in the food science curriculum.

Course Outcomes and Assessment
Learning outcomes for each course in the food science curriculum is documented. Each learning outcome is paired with an instructional activity and a related assessment technique. The level of learning, based on Bloom’s Taxonomy, is established for each learning outcome.

Curriculum Outcomes
Curriculum outcomes for food science majors are revised every five years. The proposed School of Food Science curriculum will be reviewed by the IFT Committee on Higher Education in September, 2007.

Curriculum Assessment
A variety of techniques are in place to assess curriculum outcomes, including:

Student performance in internship. Telephone interview by the school director with each employer at completion of internship

Alumni surveys every three years. Alumni surveys are planned for three-year intervals. Surveys were completed in 2002 and 2005. Questions are based on curriculum outcomes and specific course competencies.

Exit interviews with graduating seniors. The school director will interview each graduating student. A written set of questions is used to guide the interview. Many questions are based directly on curriculum outcomes.

Meetings of FST External Advisory Board. Annual meetings will be held with an established External Advisory Board. The board reviews our curriculum. They discuss their current level of satisfaction with our graduates and present industry expectations of graduates.

Student performance. The joint WSU/UI Food Science Curriculum Committee is working with the WSU Center for Teaching and Learning to implement our course outcomes and assessment program. This implementation is a multiple-year project. We have developed a formal assessment plan to evaluate critical thinking and written communication across our major. A critical thinking rubric was developed and tested beginning in fall 2003 by evaluating student essays in sophomore and senior courses.

The WSU/UI food science faculty together with the WSU Center for Teaching and Learning developed and tested a survey instrument to assess job preparedness and the skill set obtained by food science curriculum graduates and a rubric to assess learning outcomes. Graduates of the collaborative food science curriculum generally indicated satisfaction with their food science education and suggested they were adequately
prepared for their employment. Attached is a published “Assessment of the joint food science curriculum of Washington State University and the University of Idaho by graduates and their employers” J. Food Science Education 1, 9-14 (2006). Over the last two years the learning outcomes assessment suggested upper division students improved on four of seven assessment measures, while lower division students improved on four of five measures. Competency was defined as professional level performance. Twenty percent of 200 level essays were rated as competent, while 44% of 400 level essays were rated as competent. The assessment progress report prepared in fall, 2006 is attached in the Appendix. Alumni surveys and exit interviews resulted in numerous changes in the undergraduate food science curriculum.

Undergraduate Fee Differential: WSU academic year resident tuition is $5888 and nonresident tuition is $15,528. WSU also requires a $560 mandatory student services fee. The University of Idaho academic year resident fees are is $3968 and nonresident fees are $8770.

The Graduate Program in Food Science leads to a Master of Science or Doctor of Philosophy degree in Food Science.

Graduate Enrollment. The graduate programs in Food Science at WSU and the UI experienced deliberate growth during the past five years. Enrollment in the graduate programs in Food Science at WSU over the past ten years averaged 25 students, with approximately 10 MS and 15 PhD students in any year. The graduate students are a very diverse group, both by gender and ethnicity (Appendix).

- An average of six MS degree candidates graduate with an MS in Food Science each year after two to two and one-half years of study;
- The range in number of MS graduates in the years 1992 to 2007 varies from two MS students graduating in 2004-05 and 2005-06 academic years to twelve in 1999-2000 academic year;
- Seventy-two MS degrees in Food Science were awarded between 1992 and 2007;
- An average of two PhD degrees in Food Science were awarded each year from 1992 to 2002, an average of four PhD degree in Food Science were awarded each year from 2003-2004 to 2006-2007; three to six years of study were generally required to earn a PhD in Food Science depending on prior academic and research experiences;
- The range in number of PhD graduates over the 1992 to 2007 varies from zero to five; and
- Thirty-eight PhD degrees in Food Science were awarded between 1992 and 2002.

The MS degree program in Food Science at the University of Idaho enrolls an average of six to eight students and is evolving and growing. The non-thesis M.S. in Food Science was added in 2005 to address industry needs for food science graduates with experience with applied research and food production. The PhD program at the University of Idaho was added in 2004 to address industry needs for fundamental food science training and will provide key personnel to support continued maturation and growth of the Idaho food industry. The number of applicants for graduate degrees at WSU and the UI greatly exceeds faculty capacity to advise academic programs and direct research.
Faculty from both the University of Idaho and Washington State University teach courses and supervise graduate student research in the food science program, allowing students access to facilities and faculty expertise from both institutions. We are dependent on each other as neither program can currently offer the program alone without sacrificing research appointments. Faculty teach and advise students in the interdisciplinary Environmental Sciences graduate program (MS and PhD), the Graduate Program in Nutrition (PhD), teach in the WOI cooperative Veterinary Medicine Program at Washington State University, and mentor PhD candidates in Interdisciplinary PhD Programs individually approved by the WSU Graduate School.

An assessment program was implemented in 2003. Food Science graduate students exhibited improvement on five of seven assessment measures over the last two years. Seventy-one percent of graduate students were rated as competent by the selected assessment measures. Graduate program outcomes were revised in Spring, 2005.

**Listing of Departmental Graduate Curriculum in Food Science.**

- FSHN 406/506 Evaluation of Dairy Products I (1 cr)
- FSHN 407/507 Evaluation of Dairy Products II (0-3 cr)
- FSHN 508 Seminar in Technical Writing (2 cr)
- FSHN 509 Oral Seminar (1 cr) - May be repeated for credit
- FSHN 510 Advanced Food Chemistry (3 cr)
- FSHN 511 Food Carbohydrates and Lipids (3 cr)
- FSHN 512 Food Proteins and Enzymes (2 cr)
- FSHN 513 Minerals and Vitamin Metabolism (4 cr)
- FSHN 422/522 Sensory Evaluation of Food & Wine (4 cr)
- FSHN 429/529 Dairy Products (4 cr)
- FSHN 464/564 Food Toxicology (3 cr) - Web based course
- FSHN 465/565 Wine Microbiology and Processing (3 cr)
- FSHN 466/566 Wine Microbiology and Processing Laboratory (1 cr)
- FSHN 470/570 Advanced Food Technology (3 cr)
- FSHN 582 Food Process Engineering Design (3 cr)
- FSHN 583 Advances in Cereal Science & Technology (2 cr)

About 50% of the course credits offered in the graduate program in food science result from concurrent undergraduate and graduate (400/500) courses. Students enrolled in the graduate 500 level class must complete additional in-depth assignments and spend out of classroom time with the professor.

In an effort to incorporate contemporary issues and concepts into the food science graduate program, modular classes of five to nine weeks in length (1-2 cr) were implemented beginning in the fall of 2003 and taught as Special Topics classes. Responsibility for these classes was accepted relative to faculty experience and research expertise.

**FST 504 Special Topics include:**
- Food Laws and Regulations, Rasco (2 cr) fall 2005
- Physical Properties of Food and Biomaterials, Singh (2 cr) fall 2005
- Food Biotechnology, Yuksel (2 cr) spring 2006
- Food Packaging, McCurdy (2 cr) spring 2006
Lipid Chemistry, McCurdy (1 cr) fall 2004
Lipid Functionality and Health, Swanson (1 cr) fall 2004
Carbohydrate Chemistry, Baik (1 cr) fall 2004
Carbohydrate Chemistry – Starch/Hydrocolloids, Huber (1 cr) spring 2005
Protein Chemistry, Powers (1 cr) spring 2005
Protein Structure and Functionality, Smith (1 cr) spring 2005)

The inclusion of the modular classes in the graduate curriculum is still being evaluated, however the scheduling and acceptance of the initial modular classes is resulting in assessment of the syllabi, rigor, and concepts presented in all of the graduate courses currently in place at Washington State University and the University of Idaho.

The Food Science and Toxicology faculty at the University of Idaho also added FST 588, Food Science Teaching Practicum (1-3 cr.) to encourage PhD students to develop teaching skills and FST 590, Food Science Research Seminar (1 cr.) to provide UI graduate students greater exposure to current research topics. At Washington State University, Univ 590 Preparation for College Teaching and requirements for the presentation of classroom subject matter (3 lectures) and laboratory experiences (2 laboratories) are required components of the PhD degree requirements.

Additional FSHN 600, Special Projects or Independent Study, FSHN 700, MS Research and Thesis, and FSHN 800, PhD Research and Dissertation credits are in place to fulfill the program research requirements for graduate degrees.

**Graduate School Fee Differential:** Washington State University Graduate School resident tuition for the academic year is $7066 and nonresident tuition is $17,204. An additional mandatory fee of $510 is required of graduate students. The University of Idaho academic year resident Graduate School fees are $4508 and nonresident fees are $9310.

**Current Faculty, Technical Staff and Areas of Expertise**

**Washington State University**

Boon Chew, Professor  
Stephanie Clark, Associate Professor  
Michael Costello, Research Technician  
Richard Dougherty, Professor Ext  
Charles Edwards, Professor  
James Harbertson, Assistant Professor Ext  
Dong-Hyun Kang, Associate Professor Ext  
Karen Killinger-Mann, Assistant Professor Ext  
Alan McCurdy, Professor  
Jean Soon Park, Assistant Research Professor  
Joseph Powers, Associate Professor  
Barbara Rasco, Professor  
Carolyn Ross, Assistant Professor

functional foods  
dairy chemistry, quality  
dairy analyses, entrepreneur  
food processing, safety, HACCP  
food chemistry, microbiology  
wine and grape quality (IAREC)  
food safety, microbiology  
consumer food safety  
food safety, food processing, lipid chemistry  
functional foods  
protein and enzyme chemistry  
seafood quality, food analyses, food laws and regulations  
wine and food sensory chemistry
Russ Salvadalena, Creamery Manager  dairy products processing
Barry Swanson, Professor  emerging food processes, food chemistry
Karen Weller, Research Technician  sensory evaluation
Frank Younce, Supervisor  food process engineering
VACANT (IAREC position)  wine, fruit juice processing

University of Idaho

Drew Dalgetty, Supervisor  entrepreneur, economic development
Jerry Exon, Professor  food safety, toxicology
Kerry Huber, Associate Professor  starch chemistry, potato/ wheat quality
Jeff Kronenberg, Extension Specialist  food processing, safety
Greg Moller, Technical Director  analytical laboratory
Caleb Nindo, Assistant Professor  food processing
Gulhan Unlu, Assistant Professor  food microbiology, biotechnology
VACANT (in negotiation)  food safety, distance education
VACANT (in negotiation)  food processing
VACANT  administration

Current and potential collaborating/adjunct faculty

Byung-Kee Baik, WSU Crop and Soil Sciences (Cereal Chemist)
Gustavo Barbosa-Canovas, WSU Biological Systems Engineering (Food Engineer)
Carter Clary, WSU Horticulture and Landscape Architecture (Food Processing)
Marc Evans, WSU Statistics (Experimental design, statistics)
Charles Gaskins, WSU Animal Sciences (Experimental design, statistics)
John Fellman, WSU Horticulture and Landscape Architecture (Postharvest Physiology)
Robert Haggerty, UI International Programs (International Food Security)
Bingjun He, UI Biological and Agricultural Engineering (Food Engineer)
Herbert Hill, WSU Chemistry (Food Analyses)
Stephen Love, UI Plant Sciences (Potato Breeder)
Jason Mann, WSU Animal Sciences (Meat Processing)
Jill McCluskey, WSU School of Economic Sciences
Sandra McCurdy, UI Family and Consumer Sciences (Extension Food Safety Specialist)
Craig Morris, USDA-ARS Wheat Quality Laboratory (Cereal Chemist, Wheat Quality)
John Miller, UI Animal Sciences (Meat Processing)
Craig Parks, WSU Psychology (Sensory assessment of foods)
Marvin Pitts, WSU Biological Systems Engineering (Rheology of Foods)
Shyam Sablani, WSU Biological Systems Engineering (Food Engineer)
Juming Tang, WSU Biological Systems Engineering (Food Engineer)

Research Expertise and Emphases of Faculty.

General areas of research emphasis in food science are focused on improving:

1) food safety and quality;
2) health promoting, nutritional, and economic value of foods, food constituents, and bioproducts produced in the Pacific Northwest; and

3) environmental quality and energy conservation in the preservation and packaging of foods.

Research emphases in *Food Microbiology and Biotechnology* are directed to the genomics of lactic acid bacteria, enhancing the quality of dairy products, microbial food safety, and value-added chemicals from agricultural and industrial waste. Specific areas of research include: understanding and controlling common defects (flavor, texture, and appearance) associated with Cheddar-type cheeses; biopreservation of dairy and ready-to-eat meat products using bacteriocins from lactic acid bacteria; repair and improved detection of metabolically-injured foodborne pathogenic bacteria; and production of lactic acid and ethanol from potato processing and dairy industry waste.

*Food Chemistry* research centers on processing and development of foods from dairy, legume, fruit, vegetable, and cereal grain commodities, many of which possess starch as the predominant dry matter. Specific research emphases include development of screening methods for predicting potato end-use quality/processability; identification of wheat starch characteristics critical to functional behavior and product quality; assessment of the functionality imparted to whey proteins by ultra high pressure treatment; manipulation of starch properties within processed foods; and development of novel value-added foods or potential food ingredients from legume, wheat, asparagus, or potatoes.

The *Food Engineering/Processing* research program investigates transport of moisture and heat within food processes and products as a function of food quality. Projects involve experimental and computational techniques to optimize heat and fluid transport operations for producing safer and more wholesome food products with reduced energy consumption. Specific research areas include assessment of the rheological properties of fruits and potato cultivars; NMR imaging and computer simulations for optimizing drying of foods; applying porous media theories to minimize loss of food products due to stress-cracking; and modeling of bacterial inactivation during cooking processes.

The impact of processing methods on physicochemical properties of foods is being studied by assessing novel drying and evaporation technologies that achieve greater retention of bioactive compounds in foods to promote improvement of human health. This research is facilitated in a food engineering laboratory with state-of-the-art facilities for investigating the behavior of food materials under selected flow and thermal conditions. Many food science faculty collaborate with food engineering faculty from the Biological Systems Engineering Department conducting research on emerging food processing technologies as a focus of the Center for Nonthermal Processing of Food. Thermal, rheological, and mechanical properties of foods and the raw materials used in food processing and packaging are studied to understand their impact on food quality. Viscoelastic properties as well as glass-liquid and other weak transitions in food are investigated at non-destructive frequencies to explain the physicochemical changes encountered during processing.
Specific research projects include:

- development of new processes and emerging food preservation technologies to improve the microbial safety of foods;
- investigations into mechanism(s) of action of food borne constituents that may improve human health or reduce chronic human disease;
- investigation of soft wheat and potato quality, functionality and end-use potential;
- assessment of starch behavior and function in food processing operations;
- investigation of the physicochemical and functional properties of dairy and meat proteins;
- utilization of novel protein and starch ingredients in food systems;
- improved food dehydration processes;
- binding and controlled release of flavors from whey proteins; and
- examination of natural and engineered processes in the characterization, fate, transport, and control of environmental and food system contaminants.

A more specialized area of research emphasized by the School of Food Science is enology. The Pacific Northwest is witnessing a tremendous increase in the size of the wine industries, from less than 80 Washington wineries in 1989 to more than 400 in 2006. With this rapid expansion, problems involving the microbiology and chemistry of wines and their impact on sensory characteristics are being identified by local wineries. To solve these problems, research information from other wine regions of the world can be utilized, but application is limited due to differences in viticulture and enological practices. Furthermore, scientific understanding of the complex microbiological and chemical processes which occur during production of wines is surprisingly minimal. Research with locally produced wines is necessary to solve enology related problems in Washington and to assist winemakers’ production of high quality value-added wines.

WSU Prosser Enology Research/Extension Program is a liaison between the wine industry and the university. Insight gained through basic and applied research is shared with the wine industry as we both have the same goals - the betterment and continued success of Washington winemaking. In addition to seminars and other outreach activities, the Enology faculty supplies coursework for the online Certificate Program in Viticulture and Enology.

The research portion of the enology program explores multiple established parameters of wine and fruit quality assessment. A special emphasis is placed on phenolics in grapes and wine, specifically their biochemical and chemical changes during grape ripening, winemaking and aging. The program also plays a support role for the viticulture program, helping to validate field experiments by conducting chemical analysis of fruit and small lot winemaking at the Prosser IAREC facility.

**Toxicology** is defined as the adverse effect of chemicals on living organisms and assessment of the probability of their occurrence. Food toxicology is an applied research division of toxicology that deals specifically with synthetic or natural chemicals in foods. Many foods, especially fruits and vegetables contain beneficial health promoting chemicals. These bioactive chemicals, such as antioxidants are also called nutraceuticals.
because of their health promoting properties. Foods that contain health promoting constituents are often called functional foods. The functional foods research program in food science is directed to the study of health promoting constituents of functional foods and their relationship to enhancement of the immune system and prevention or treatment of cancer.

**Outreach and Extension.**

Outreach and extension contributions to the food industry and consumer safety in Washington and Idaho include short courses, workshops and continuing education programs to improve food safety, quality and preservation efficiencies. The extension efforts of Richard Dougherty and Karen Killinger-Mann in Washington and Jeff Kronenberg and Sandra McCurdy in Idaho are accomplished and well recognized. Both WSU and UI faculty provide outreach support for the food industry, with efforts of Jeff Harberston, Charles Edwards, and Carolyn Ross in the wine industry; Stephanie Clark in the dairy industry; and Joseph Powers in the vegetable and fruit processing industries deserving of special recognition. Dick Dougherty, Michael Costello, Jeff Kronenberg, and Drew Dalgetty provide direct analyses and support for entrepreneurial food product development and marketing efforts in Washington and Idaho. Frank Younce supervises the Food Science Pilot Plant and Drew Dalgetty supervises the Food Technology Center (Caldwell, ID), pilot-scale processing facilities, to respond to explicit inquiries and support product development efforts of small food businesses and food entrepreneurial activities. The pilot plants also provide valuable guidance and consulting services to food and allied industries.

The food processing industry extension programs go well beyond traditional activities in food processing extension to provide on-site professional level technical assistance to food processors interested in improving their safety, efficiency and profitability. Technical assistance is provided in such areas as sanitation practices, Hazard Analysis Critical Control Point (HACCP) programs, food safety, microbiological collection and identification, waste water analyses, workplace safety, strategic planning, quality assurance, lean manufacturing techniques to enhance productivity, packaging, product traceability, marketing, and product distribution. This unique combination of educational programs and on-site assistance yields a documented several million dollar positive economic impact on the Washington and Idaho food industries annually. Outreach efforts also include a web-based certificate program in Food Science and Technology providing food industry professionals with needed training on essential food science and technology topics.

There is an on-going planning effort to organize the food processing extension specialists in the Pacific Northwest states of Idaho, Oregon and Washington into a consortium to respond to issues and problems associated with preserving safe foods. The organizational effort was initiated by Dick Dougherty and includes representatives from the USDA supported Food Innovation Center, Portland, OR, and an advisory role from representatives of the Northwest Food Processors Association.
Food Science Facilities

The School of Food Science at Washington State University is housed in a 35,000 square foot building (1989) containing contemporary well equipped chemistry, microbiology, and sensory research laboratories, as well as a processing pilot plant. The faculty are provided adequate office space, personal computers, and research laboratories as needed. The WSU food processing pilot plant, a modern 7,100 square foot facility in the Food Science and Human Nutrition Building, consists of a large process room with quick utility connections for steam, three phase electric power, potable water and compressed air. A large rear entry provides access for large equipment and forklifts. Adjoining support rooms include space for product storage, equipment maintenance, and plant administration. The pilot plant provides space for equipment and process performance comparisons, small batch optimization, and food preparation. Users can choose from a wide range of plant equipment or bring their own for custom processes. Instrumentation systems on networked computers for process monitoring are available for special requirements. A laboratory for determination of the texture, color and other physical properties of foods is also available.

The faculty of the School of Food Science at the University of Idaho has offices or laboratories in four buildings on the Moscow Campus: Holm Research Center (15,435 sq. ft.), the Food Research Center Sensory Lab (302 sq. ft.), Agricultural Sciences Building (8,500 sq. ft.) and the Agricultural Biotechnology Building (2,336 sq. ft). The Holm Research Center primarily houses food science toxicology faculty and the Analytical Sciences Laboratory, a contract service laboratory for the State of Idaho. The School of Food Science also oversees the Food Technology Center, a 7,000 sq. ft. pilot plant plus adjacent offices and classrooms, in Caldwell, Idaho. A food processing specialist has an office in the UI Water Center in Boise with the Department of Engineering. One faculty member is based at CAMBR in Post Falls, ID.

The success of School of Food Science teaching, research, and extension programs are highly dependant on both WSU and UI food science facilities.

Washington State University Creamery

Washington State University has its own creamery, where students, staff, and visitors may purchase delicious ice cream and cheeses. The cheeses produced here have won national and international awards, as well as earned a reputation worthy enough to support a direct marketing business. The WSU Creamery is a self-supporting unit of the Department of Food Science & Human Nutrition in the College of Agriculture, Human & Natural resource Sciences. Aside from providing jobs for up to 70 students per year, the revenue from the sales of ice cream and cheese helps support teaching and research. The creamery includes a research laboratory adjacent to the production area for the preparation of small volumes of cheeses, ice cream, and other dairy products.

The Creamery manufactures 450,000 pounds of cheese each year, made from Grade A pasteurized milk produced at the university-owned dairy farm and using lactic acid cultures. Cougar Gold, the most popular cheese, accounts for about 80% of the total cheese produced. Other cheeses include a Monterey Jack-type cheese that is called Viking, Crimson FIRE!, American Cheddar, Smoky Cheddar, Dill Garlic, Sweet Basil, and Hot Pepper, which includes diced jalapeno peppers.
USDA/ARS - Western Wheat Quality Laboratory

The mission of the Western Wheat Quality Laboratory is threefold:

1) To conduct cooperative investigations with breeders, geneticists and pathologists in the seven western states (Arizona, California, Idaho, Montana, Oregon, Utah and Washington) to evaluate the milling and baking quality characteristics of wheat selections produced each crop year. These investigations include several market classes and subclasses of wheat which are grown commercially in the Pacific Northwest and the Western Region. The investigations relate to wheat cultivar quality for commercial production and consumer acceptance with the goal of increasing economic benefit to the wheat industry.

2) To conduct basic research into the biochemical and genetic basis of wheat quality in order to better understand the fundamental nature of end-use functionality. The results of this basic research are incorporated into the cultivar development program to provide enhanced feedback into the selection process.

3) To develop new and better means to assess the quality of potential wheat cultivars through identification of critical quality parameters. This is coupled with the creation of new methods to assay the identified quality attributes.

Library Facilities

Washington State University and the University of Idaho libraries currently collaborate in their provision of hard copies of periodicals. Access to electronic peer reviewed food science, biochemistry, microbiology, and biotechnology journals and research manuscripts is excellent. Stephen Borrelli is currently the librarian responsible to the food science faculty at Washington State University, and Charles Edwards is the faculty liaison to WSU libraries. No new or additional facilities, subscriptions, or other library holdings are expected or proposed upon the approval of the School of Food Science.

School of Food Science Benchmarks

1. **Benchmark:** Recruit and retain an increased number of high achieving undergraduate majors per academic F.T.E. in Food Science.

   **Target:** Increase the number of undergraduate Food Science majors at WSU by 25% each year for the next five years. Considering a current undergraduate enrollment of 20, the targeted undergraduate enrollment in food science at WSU after five years (2012) is 61 students.

   **Impact:** Provide more educated food science graduates to fill positions in the Pacific Northwest food industry.

   **Tools:** Increase student recruitment by assigning recruitment responsibilities to selected faculty. Increase the number of scholarships and the scholarship awards to attract students to food science.
2. **Benchmark**: Undergraduate participation in programs of research/scholarship.

**Target**: Continue the steady increase in number of faculty with one or more undergraduates participating in their research program.

**Impact**: Expose undergraduates to the scientific method, development, planning, conduct, and interpretation of research results, and opportunities presented by admission to graduate school.

**Tools**: Develop proposals and identify scholarship funds to financially support undergraduate employment in research laboratories. Distribute and advertise employment opportunities in the WSU Creamery among the undergraduates in food science.

3. **Benchmark**: Increase numbers of food science graduate students.

**Target**: Increase the number of graduate students in food science 10% each year for the next five years. Considering a current baseline of 30 graduate students in food science, the target graduate student enrollment in 2012 is 48 graduate students.

**Impact**: Greater research productivity observed as peer reviewed research manuscripts, intellectual properties, and extramural and food industry resource support.

**Tools**: Increased recognition accompanied by increased extramural and industry resources to support graduate students. Reward faculty during annual review for successful recruiting and mentoring graduate students, and increased research productivity. Promote collaboration with food science faculty at the University of Idaho as well as faculty in Biological Systems Engineering, Horticulture and Landscape Architecture, Crop and Soil Sciences, and the School of Economic Sciences to recruit and mentor graduate students.

4. **Benchmark**: Ratio of doctoral to masters students.

**Target**: The current ratio of PhD to MS students in food science is 1:2. The goal of the food science faculty at WSU over the next five years (2012) is to increase the PhD to MS graduate student ratio in food science to 1:1.

**Impact**: Strive to reach the Washington State University Graduate School goal to achieve a 1:1 ratio of PhD to MS graduate students across the University. The quality and productivity of graduate students is expected to improve with an increased number of PhD candidates.

**Tools**: Increase recruitment efforts for graduate students from graduates of the fundamental physical and biological sciences within WSU, and increase recruitment of domestic and international graduate students into selected research programs.
5. **Benchmark**: Increase extramural and industry resources supporting research and scholarship in food science.

**Target**: Increase extramural support for research, teaching and extension activities by 10% each year for the next five years. Selecting $750,000/year as a baseline, the School of Food Science goal is $1,207,882/year by 2012.

**Impact**: Provide additional funding to conduct research and scholarly activities, recruit and mentor additional graduate students, and provide additional support for teaching and assessment activities.

**Tools**: Encourage attendance at proposal writing workshops within the University as well as workshops promoted by professional societies and federal agencies. Identify and allocate financial rewards for seed grants and pilot projects that can be submitted as larger proposals for extramural or industry support. Encourage and support collaborative multidisciplinary research efforts to propose and conduct research.

6. **Benchmark**: Foster integrated research and extension programs to increase intrastate, interstate, regional, national and international impacts.

**Target**: Increase multi-state extension programming to improve sanitation, hygiene and food safety throughout the production, food preservation, retail, food service, and consumer handling, preparation, and consumption control points along the food chain. Increase the number of food science faculty with no extension appointment participating in documented outreach activities. Increase the documented extension outreach and engagement activities, publications, and citations accorded to food science extension faculty each year. Increase the documented transfer of food science research and technologies to the food industry each year.

**Impact**: Improve overall food safety in production, processing, retail, food service, and consumer handling, preparation or consumption of foods. Provide a safe and accessible food supply for consumers. Improve food safety and quality provided by the food industry.

**Tools**: Encourage food science faculty to participate in collaborative efforts to improve the safety of the food supply from production to consumption. Encourage extension faculty to increase their efforts to improve the safety of the food supply.

7. **Benchmark**: Increase the total amounts of gifts received from alumni and the food industry.

**Target**: Increase financial gifts to the School of Food Science by 10% each year for five years. Utilize the gifts to increase the number and amounts of scholarships awarded to undergraduate and graduate students of food science. Using $20,000 annual contributions as a baseline, the food science goal is $32,210 per year by 2012.
**Impact:** Increase the number and quality of undergraduate and graduate students. Increase the visibility and recognition of food science, as well as promoting the personal rewards associated with supporting the continuing efforts of food science faculty and students to provide safer foods for all consumers.

**Tools:** Promote both the needs and rewards associated with financial contribution to the School of Food Science. Recognize all financial contributions personally, taking the time to identify the way(s) in which the financial contributions were used and the rewards garnered by faculty or students of food science.

School of Food Science Hiring Plan, 2007-2008.

The School of Food Science hiring plan is directed at three prioritized goals: 1) to maintain attention to regional research needs, 2) maintain instruction excellence in undergraduate classes in the core food science curriculum, and 3) improve research productivity and introduce classes to identify and exemplify the health-promoting qualities of foods.

The ranked order of position priorities for the School of Food Science for the 2007-2008 academic year are:

1. Director, School of Food Science, Pullman/Moscow
2. Assistant/Associate Professor, Dairy Chemistry, Microbiology and Processing, Pullman
3. Assistant Professor, Food Chemistry (health promoting functional foods), Pullman
4. Recruiting and Development Coordinator, Pullman
5. Assistant Professor, Cereal Chemistry, Pullman
6. Assistant Professor, Food Microbiology (wine fermentation), Pullman
7. Research Technician, Classroom and Laboratory Support, Pullman

**Director, School of Food Science, Pullman/Moscow (50% WSU/50% UI, 100% Administration)**

Responsibilities: Administer the School of Food Science faculty and staff; Manage the School budgets and provide oversight for the recruitment, retention and time to graduation for undergraduate and graduate food science students; Effectively communicate policies and procedures of the Universities, Colleges and the School of Food Science to the faculty and staff; Evaluate the performance of faculty and staff; Encourage continual progress and improved productivity in research, extension and teaching programs of the School. Effective administration will lead to successful achievement of the School of Food Science, CAHNRS, and WSU/UI benchmarks and goals. The strategic areas of excellence will be better defined, refined and approached with effective communication and administration.

**Dairy Chemistry and Processing, Assistant/Associate Professor, Pullman (60% research/40% teaching).**

Responsibilities: Plan, propose, conduct, interpret and communicate independent and collaborative research directed to the chemistry of milk, whey, cheese, and other dairy products of interest to the regional dairy industry and the dairy products research community. Teach classes in Dairy Chemistry, Microbiology, and
Processing; Evaluation of Dairy Products; and Food Safety. Provide requested recruiting, advising and mentoring for undergraduate and graduate food science students with attention to providing undergraduate food science students with research opportunities and successfully mentoring graduate food science students. The proposed position will contribute to food safety and quality research and identification of health promoting foods emphases of the School of Food Science, as well as respond to the prominent and influential dairy industry in Washington and Idaho. This position will provide continuity in dairy products education and research, with expectations for successful contributions leading to expansion of undergraduate and graduate programs, and excellent opportunities to generate significant regional commodity commission and extramural funding.

Food Chemistry (Health Promoting Foods), Assistant or Associate Professor, Pullman (75% Research/25% Teaching).
Responsibilities: Plan, propose, conduct, interpret and communicate independent and collaborative research directed to identification, elucidation, validation and potential contribution of health promoting constituents and qualities of selected foods. Plan and teach undergraduate classes in food chemistry and graduate classes in the identification, analyses, validation and promotion of health promoting functional foods. This position will contribute to the food safety and quality and health promoting foods emphases of the School of Food Science, as well as providing recruiting and advising of undergraduate and graduate students. The position will provide excellent independent, collaborative, and integrative opportunities to generate internal and extramural research funding. There exists great potential for this position to provide substantial leadership and contributions to the emerging CAHNRS area of preeminence identified as functional foods. The potential contributions to the food industry and the improved health of consumers upon identification of foods that will promote the health or extend a healthy lifestyle are self evident.

Recruiting and Development Coordinator, Pullman (100% Teaching)  
Responsibilities: Plan, develop and organize a marketing and recruiting program to improve recruiting of undergraduate and graduate food science students. Design, develop and maintain the School of Food Science website. Coordinate a School of Food Science development effort with the WSU and UI Foundations, the Development Officers in CAHNRS and CALS to improve gifts and donations to the School; identify benefactors, foundations and other resources willing to entertain submission of selected research proposals from the School of Food Science faculty. Encourage and assist School of Food Science faculty to prepare, consolidate and submit research proposals for review and consideration by granting agencies and philanthropic organizations.

Cereal Chemistry, Assistant Professor, Pullman (70% Research/30% Teaching).  
Responsibilities: Plan, propose, conduct, interpret and communicate independent and collaborative research in cereal and grain legume chemistry and processing. The interest in generating safe foods from traditional, genetically modified, and recently identified cereal and legume grains is growing based on the improved health associated with whole grain and fiber consumption. Research focused on the health promoting constituents of cereals and legumes is contemporary and important to the
dry land production of wheat, barley, and legume crops in Washington and Idaho. The individual in this position will be expected to teach an undergraduate course in cereal chemistry and develop a graduate course in the identification, extraction, fractionation, and utilization of constituents from selected cereal and legume crops identified as being of economic importance to regional producers and providing functionality and health promoting qualities of benefit to the food industry and consumers. The research and teaching expected from this position will contribute to the food safety and quality and health promoting emphases of the School of Food Science and CAHNRS. Additional contribution to the dry land farming area of preeminence, and interdisciplinary opportunities with cereal and legume geneticists and producers may result in extraordinary contributions to intramural and extramural research funding.

**Food Microbiology, Assistant Professor, Pullman (40% Research/30%Teaching/30% Extension).**

*Responsibilities:* Plan, propose, conduct, interpret and communicate independent and collaborative research directed to the fermentation of fruit juices into quality wines. Teach classes in food microbiology, wine and beer fermentations, and the quality fermentation of other foods. Potential collaboration with the proposed dairy chemistry and cereal chemistry positions on fermentations in cheese and bread making, respectively, will promote both the research and teaching programs in the School of Food Science. The extension portion of this position will be expected to collaborate with Jim Harbertson, Dong Hyun Kang, Dick Dougherty, and other Viticulture and Enology faculty to strengthen on-going face-to-face and DDP workshops and certificate programs. This position will contribute to the School of Food Science, Viticulture and Enology Program, and CAHNRS emphasis on being responsive to the expanding wine industry in Washington and Idaho. Although the potential to generate extramural research funds to improve wine fermentations may not be great from agencies supporting fundamental research, the potential to generate extramural support from the wine industry in support of fermentation research and the potential for generating extramural support for more specific research on selected microorganisms with food safety implications may be greater.

**Research Technician, Classroom and Laboratory Support, Pullman, (50% Research/50% Teaching).**

*Responsibilities:* Provide continuity to teaching and research programs in the School of Food Science by coordinating purchase and maintenance of shared instrumentation, equipment and supplies.

**Proposed Memorandum of Understanding** for the formation of a School of Food Science merging the faculty in Food Science from Washington State University and the faculty of the Department of Food Science and Toxicology at the University of Idaho.
MEMORANDUM OF AGREEMENT
between
WASHINGTON STATE UNIVERSITY
and the
UNIVERSITY OF IDAHO
Establishing the
BI-STATE SCHOOL OF FOOD SCIENCE

1. INTRODUCTION

This Memorandum of Agreement (MOA) is made and entered into by and between Washington State University (WSU) and the University of Idaho (UI), jointly referred to as UNIVERSITIES, to form a Bi-State School of Food Science (BSSFS).

UI and WSU have a mutual interest in promoting research and education related to food science and human nutrition. Both UNIVERSITIES have major education and research lines encompassing food science and wish to strengthen these education and research lines by combining available resources and establishing a more dynamic food science program. In addition to efficient and effective use of resources, this collaboration will facilitate the interaction and exchange of faculty, graduate students, and research scientists, and the sharing of publications, data, scientific and educational materials, and other information. The Interlocal Cooperation Act, RCW 39.34, authorizes WSU to enter into this MOA. _____________ authorizes UI to enter into this MOA.

2. PURPOSE OF THE MOA

This MOA sets out the terms and conditions for establishing BSSFS by merging selected and designated faculty, staff, facilities, and resources presently in the WSU Department of Food Science and Human Nutrition (WSU FSHN) and the UI Department of Food Science and Toxicology (UI FST) into one administrative unit jointly administered by UI and WSU.

UI and WSU agree that this MOA governs both UNIVERSITIES’ rights and obligations with respect to BSSFS, BSSFS’s administration and support, and all research and intellectual property arising from BSSFS.

3. ADMINISTRATION AND OPERATION

3.1 Administration

3.1.1 The Deans of the UI College of Agricultural and Life Sciences and WSU College of Agricultural, Human, and Natural Resource Sciences, or their designated representatives (DEANS) shall oversee and facilitate the implementation of this MOA and BSSFS in coordination with each University’s administrators and in compliance with both WSU and UI academic norms, policies, and procedures.
3.1.2 The DEANS shall mutually appoint one Director of BSSFS (DIRECTOR). The 1.0 FTE DIRECTOR position will be funded with 0.50 FTE at WSU and .50 FTE at UI. Benefits will be funded equitably and allocated at the university which was the DIRECTOR’s home university prior to appointment as DIRECTOR. If the DIRECTOR was not a faculty member of either UI or WSU prior to appointment as BSSFS DIRECTOR, the Deans and the Provosts of UI and WSU shall mutually agree which university will provide the full-time faculty appointment of the DIRECTOR. The DIRECTOR will report to both the WSU Dean the UI Dean informally. Formal line of report and terms and conditions of employment shall be at the university where the DIRECTOR holds a full-time faculty appointment.

3.1.3 The DIRECTOR will be responsible for administration and oversight of budgets, personnel and programs in teaching, research and extension/outreach/service for BSSFS faculty, staff and students at both WSU and UI.

3.1.4 Procedures for conducting the business of BSSFS will be developed by the DIRECTOR and faculty in close cooperation with appropriate administrative personnel at both WSU and UI.

3.2 Funding

3.2.1 The scope of activities under this MOA will be determined by the funds available at both UNIVERSITIES and by other financial assistance that may be obtained by the Universities, individually or together, from internal or external sources. The terms of mutual assistance and the necessary budget for BSSFS will be mutually discussed and agreed upon in writing by the DEANS prior to the initiation of BSSFS.

3.2.2 Any inter-university transfer of funds will be by mutual agreement of the appropriate administrators at both UNIVERSITIES. Funds originating from both UNIVERSITIES will be used according to financial policies and procedures established at the respective UNIVERSITIES.

3.3 Equipment. Equipment owned by one university may be located at the other university, but if so will remain the property of the university providing the equipment. Equipment purchased on grants will be the property of the university through which the grant is received unless ownership is retained by the sponsor of the grant. Equipment shall be tracked according to policies in place at each university, and the DEANS or their designees will document location of specific equipment if it is located at the university which does not own the equipment. This documentation shall contain the information reasonably necessary to inventory the equipment, designate ownership and establish responsibility for maintenance, improvement, loss and damage of the equipment.
3.4 Faculty

3.4.1 Faculty Member Appointments. A faculty member of UI or WSU may be appointed to BSSFS upon the approval of the DEANS. The faculty member shall retain his or her underlying appointment at one of the universities and shall remain subject to the terms and conditions of employment at that university. A faculty member so appointed (APPOINTEE) shall abide by the policies and procedures of both UNIVERSITIES (except as otherwise provided in this MOA), but shall remain an employee of his or her employing university (HOME UNIVERSITY), which shall remain responsible for the usual indicia of employment, such as salary, taxes, visa requirements (for non-U.S. citizens), benefits, and liability coverage. It is agreed and understood that the APPOINTEE remains the employee of the HOME UNIVERSITY for any and all purposes and is not to be considered an employee of the other university (RECEIVING UNIVERSITY).

3.4.2 Appointee Agreements. The APPOINTEE will be required to enter into a separate BSSFS-specific memorandum of agreement with the RECEIVING UNIVERSITY and HOME UNIVERSITY (three-party agreement) recognizing and acknowledging, among other things, that although the HOME UNIVERSITY remains her/his employer, s/he will be required to comply with the RECEIVING UNIVERSITY’s policies and procedures while engaged in scholarship, teaching, services and/or other activities within the scope of his/her work at the RECEIVING UNIVERSITY. The MOA shall further provide that the faculty member will immediately resign his or her appointment at BSSFS upon termination of this MOA. At the discretion of the Dean of the RECEIVING UNIVERSITY, and with the concurrence of the BSSFS DIRECTOR, the APPOINTEE may be given the status of faculty without tenure (or some other status) at the RECEIVING UNIVERSITY. The RECEIVING UNIVERSITY may provide support to the APPOINTEE, such as laboratory space or administrative assistance, as agreed upon in writing between the RECEIVING UNIVERSITY and the HOME UNIVERSITY. The two UNIVERSITIES may also agree on ways to share the costs associated with an APPOINTEE, at the convenience and discretion of each university. The APPOINTEE shall not have voting rights at the RECEIVING UNIVERSITY unless the Dean of the RECEIVING UNIVERSITY explicitly in writing grants the APPOINTEE voting rights.

3.4.3 Tenure and Promotion. Faculty in BSSFS will be evaluated for promotion, tenure, performance and salary adjustments according to the relevant policies and procedures in the HOME UNIVERSITY.
3.4.4 An APPOINTEE physically located at a RECEIVING UNIVERSITY is located there at the pleasure of the RECEIVING UNIVERSITY and may be asked to relocate to the HOME UNIVERSITY and/or his/her MOU with the RECEIVING UNIVERSITY cancelled for any reason not prohibited by law. Notice of such a demand shall be made forthwith to the BSSFS Director.

3.4.5 Effect of Termination on Appointees’ Status at Receiving University. Upon the termination of this MOA, all APPOINTEES’ rights and privileges as faculty members of their respective RECEIVING UNIVERSITY will be extinguished insofar as such rights and privileges arise under or derive from the appointing MOA.

3.5 Students

3.5.1 Enrollment. Graduate and undergraduate students at WSU or UI may apply for acceptance into the BSSFS but will remain a student of the university at which they are enrolled (HOME UNIVERSITY). Students will be required to meet financial and undergraduate and graduate curricular requirements of the HOME UNIVERSITY.

3.5.2 A student who earns a degree will be granted a degree from his or her HOME UNIVERSITY.

3.6 Curricula

3.6.1 External Advisory Board. An external advisory board (ADVISORY BOARD) comprised of individuals from regional and national food and allied industries, alumni, and state and federal governmental agencies will be invited to advise the faculty in creation and evaluation of programs and strategic planning for BSSFS. Representation on the ADVISORY BOARD will include members with interests in food-related programs in Idaho and Washington. The ADVISORY BOARD will meet at least twice a year. Membership on the ADVISORY BOARD will be determined by a cooperative effort of the faculty and DIRECTOR, with oversight by college administrators at both UNIVERSITIES.

3.6.2 With due consideration for the recommendations of the ADVISORY BOARD, the curricula for the undergraduate and graduate degree programs will be formulated by a BSSFS curriculum committee which must be approved by a majority of the BSSFS faculty prior to submission to the appropriate approval process at WSU and UI.

3.6.3 General education and other degree requirements (i.e., non-food science courses such as mathematics, social sciences, humanities, etc.) will be satisfied by existing courses at the student’s HOME UNIVERSITY.
3.6.4 Food science courses will be the responsibility of faculty in BSSFS from both campuses, depending on expertise, facilities and scheduling logistics. It is anticipated that an appropriate balance of courses in Food Science curricula will be taught on each campus.

3.6.5 Food science courses will be cross-listed at both UNIVERSITIES unless exempted by a faculty consensus.

3.6.6 **Productivity and Scholarly Activity (Research).** Productivity measures such as undergraduate and graduate student numbers, student credit hours, certified majors, research proposals, publications, and grant funding resulting from the efforts of BSSFS faculty will be acknowledged by both UNIVERSITIES.

3.7 **Grant Submission and Indirect Costs**

3.7.1 An Appointee may submit grants through either UI or WSU, provided that submissions shall be made through the university where the larger proportion of the proposed research will be conducted (LEAD UNIVERSITY).

3.7.1.1 Indirect costs will be retained by the university through which the grant is submitted unless otherwise agreed in writing between UI and WSU’s Office of Research.

3.7.1.2 Prior to submitting a grant proposal, the APPOINTEE shall discuss the proposed project with the DEANS and identify through which university he or she intends to submit the grant. If the Deans agree as to which university will process the grant proposal, the Appointee may then submit the proposal. If the Deans do not agree, then they will make reasonable efforts to resolve the question. If the question remains unresolved for longer than sixty (60) days after having been raised with the DEANS, it will be referred to the dispute resolution procedure in this MOA.

3.7.1.3 It is anticipated that BSSFS faculty from both Universities will perform research at both Universities to maximize effective and efficient use of resources. To facilitate this interaction, BSSFS shall be considered one entity when BSSFS faculty and investigators are fulfilling a grant to BSSFS through either university. In such case, funding will be allocated to reflect each university’s direct expenditures in fulfillment of the project.
3.7.2 **Disclosure of Intellectual Property.** If an APPOINTEE is a developer of any technology that may be protectable as intellectual property (IP) or commercializable, such APPOINTEE shall disclose it to both UI and to WSU’s Office of Intellectual Property Administration.

3.7.3 **Determination of Intellectual Property Ownership.** After such disclosure, each university shall determine whether it has an ownership interest in the IP. In making such determinations, the university shall be guided by the following principles:

3.7.3.1 IP developed solely by an APPOINTEE will be the property of the Appointee’s HOME UNIVERSITY if no facilities, resources, personnel, students, or grant funds administered by the RECEIVING UNIVERSITY were used in the development of the IP.

3.7.3.2 Either university may have an ownership position in IP if that university’s facilities or resources were used in the IP’s development, or if that university administered a grant that funded the research leading to the IP.

3.7.3.3 If an APPOINTEE develops IP in collaboration with one or more researchers at either UI or WSU, then equitable principles of proportional ownership may be applied.

3.7.4 **Technology Administration MOAs.** If both UI and WSU have an ownership interest in any IP developed pursuant to this MOA, then the UNIVERSITIES shall negotiate a Technology Management MOA to address issues of their respective ownership, financial interests, and management and control over the IP, as well as any related technology transfer activities.

3.7.5 **Royalties and Income.** Distribution of license income shall be proportioned in accordance with the ownership determination made pursuant to this MOA. Thereafter, each university shall follow the policies of each university regarding benefits accruing to the research foundations, UNIVERSITIES, BSSFS, and inventors apportioned by the inventors.

4. **MISCELLANEOUS PROVISIONS**

4.1 **Dispute Resolution.** All disputes arising under or in connection with this MOA and the Programs and activities implemented under it shall be addressed pursuant to the procedures described in this section.
4.1.1 If a dispute arises under or in connection with this MOA, the UNIVERSITIES shall first attempt to resolve the dispute by informal discussions between the DEANS. If informal discussions by the DEANS fail to resolve the dispute, the UNIVERSITIES agree to refer the matter to a three-person panel (PANEL) composed of one individual selected by the UI Dean (UI DELEGATE), one individual selected by the WSU Dean (WSU DELEGATE), and one individual selected jointly by the UI DELEGATE and WSU DELEGATE.

4.1.2 The PANEL shall have authority to conduct fact-finding and hearings at its discretion and in accordance with procedures of its choosing. The PANEL shall issue a written opinion announcing its decision, which shall be binding upon the UNIVERSITIES and not subject to further appeal.

4.1.3 The UNIVERSITIES shall share equally all costs incurred by the PANEL and associated with the dispute resolution procedures defined herein. Each university shall be responsible for its own incidental costs, including any attorneys’ fees.

4.2 Liability

4.2.1 Liability. Each UNIVERSITY shall remain responsible to third parties for its own acts and omission and for those of its employees and agents but to the extent allowed by law, and each of the UNIVERSITIES hereby agrees to hold harmless the other university for claims, judgments, losses, and/or costs (exclusive of attorney’s fees) arising from specific tasks, acts or omissions arising from the operation of BSSFS. The respective liability of either of the UNIVERSITIES is subject to the application of limitations of each of the UNIVERSITIES as a government entity and by the application of laws of each state.

4.2.2 Claims. Each of the UNIVERSITIES shall promptly notify the other of any and all claims for which that university possesses knowledge each shall fully cooperate with the other or its respective representatives in the defense of any and all claims, complaints or causes of action, except in circumstances where the universities’ interests are adverse or as otherwise provided by law.

4.3 Nondiscrimination. Neither of the UNIVERSITIES will discriminate in it programs or contracts against any person, student, APPOINTEE or applicant for an APPOINTEE position because of race, color, creed, religion, national origin, sex, sexual orientation, age, marital status, disability, or status as a disabled or Vietnam-era veteran.
4.4 **Amendments.** This MOA may be amended by mutual agreement of the UNIVERSITIES. Such amendment will be binding only if it is in writing and signed by an authorized representative of each of the UNIVERSITIES.

4.5 **Duration and Termination**

4.5.1 Unless terminated, this MOA will remain in force for a period of five (5) years. After the initial five-year period, and at each five-year anniversary thereafter, this MOA may be renewed by mutual written consent.

4.5.2 **Termination with Notice.** Either of the UNIVERSITIES may terminate this MOA by giving six (6) months’ written notice to the other university.

4.6 **Entire Agreement.** This MOA and any attachments constitute the entire understanding between the UNIVERSITIES with respect to the formation of a Washington State University and University of Idaho Bi-State School of Food Science and supersedes any and all prior understandings and MOAs, oral and written, relating hereto. Any amendments hereof must be in accord with the following paragraph on “Amendments”.

4.7 **Counterparts.** This MOA may be executed in counterparts, each of which so executed will be deemed to be an original, and such counterparts together will constitute one and the same MOA.

**5. SIGNATURES**

The UNIVERSITIES have signed below to indicate their acceptance of the terms of this MOA, which shall be effective as of the date of the last signature.

**WSU**

Robert C. Bates  
Provost & Executive Vice President

Daniel J. Bernardo  
Dean  
College of Agricultural, Human, & Natural Resource Sciences

**UI**

Douglas D. Baker  
Provost

John E. Hammel  
Dean  
College of Agriculture & Life Sciences
RELATING TO GRANTS AND CONTRACTS:

James Petersen  Polly Knutson
Vice Provost   Interim Director
Office of Research  Office of Sponsored Programs

RELATING TO INTELLECTUAL PROPERTY:

Keith Jones  Gene A. Merrell
Director  Assistant Vice President
Office of Intellectual Property  Research and Chief Technology Administration
   Transfer Office

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It was requested a statement be added regarding the crucial nature of the Libraries for the Schools success. The statement will be added.

Motion carried.

6. Recommendation from Academic Affairs for Revisions to the Honors Curriculum Exhibit H from 2/7/08 agenda is as follows:

MEMORANDUM

TO: Barry Swanson, Executive Secretary
    Faculty Senate
FROM: Becky Bitter, Registrar’s Office
FOR: Academic Affairs Committee
DATE: 4 February 2008
SUBJECT: Honors College Curriculum Changes

On January 30, 2008, AAC members reviewed and approved the attached proposal to change the Honors College curriculum.

The committee approved these changes following discussion with representatives from the Honors College as well as the Associate Dean of the College of Engineering and Architecture, the Vice Provost for Undergraduate Education, and the Director of General Education. The committee noted that the revised curriculum is in keeping with WSU’s goals for undergraduate education, is globally focused, and provides students with the preparation to be leaders. The changes to the curriculum are supported by every academic unit.
In addition, AAC approved the following alternate curriculum for students in the College of Engineering and Architecture in order to accommodate the heavy curricular requirements within CEA. The following proposal will result in a reduction of six credits in the curriculum as it would apply to CEA majors, but will not impact the spirit of the Honors College curriculum as proposed.

- Revise Physics 205 to include the learning goals of UH 290 – “Science as a Way of Knowing.” Accept this course as an approved substitute for UH 290 for engineering majors.
- Request that departments within the College of Engineering and Architecture consider accepting UH 390 – “Application of Science to Global Issues,” as a technical elective for CEA accreditation requirements.

At this time, Faculty Senate review and approval is recommended, to be effective fall 2008.

FROM: LIBBY WALKER, INTERIM DEAN OF HONORS COLLEGE
DATE: JANUARY 18, 2008
RE: HONORS COLLEGE CURRICULUM PROPOSAL

As requested, we have developed a brief synopsis of the rationale for the Honors College proposal for a new 4-year curriculum.

The proposed Honors College curriculum

- is the culmination of meetings with Honors teaching faculty, both the internal and external Honors College advisory boards, and numerous Honors Program alumni over the course of four years to provide an integrated and comprehensive curriculum that prepares students for the challenges of the 21st century
- incorporates all of the Six Learning Goals of the Baccalaureate, i.e. critical thinking, oral and written communication, information literacy, cultural competence, quantitative and symbolic reasoning, and disciplinary knowledge
- includes a foreign language proficiency requirement to prepare graduates for diverse challenges and environments as they enter their careers and/or graduate and professional programs and quantitatively and qualitatively documents their foreign language skills
- is vertically integrated so that required lower level courses provides students with the necessary skills for more advanced work
- reduces substantially the number of advanced placement and Running Start credits that may be used as substitutions to complete the Honors requirements
- includes a “thematic” approach to the curriculum – global issues and problems
- addresses the need for students to learn “how research is done” in social science, the arts and humanities, and the sciences, in order to be better prepared for upper division Honors courses in these knowledge areas
- includes the capstone Honors experience – the thesis – including a one-credit thesis preparation class
The new curriculum will naturally be subject to a phase of implementation until its substantial benefits are obvious. The fact that fewer AP, IB, and Running Start credits will be accepted as substitutions for the core UH classes may initially discourage some students. The requirement of proficiency in a foreign language will obviously necessitate attention to this discipline, but the curriculum provides space for obtaining this proficiency as well as promotes a variety of ways of achieving competency. Because it does not include an Honors economics class as a designated course, it will add 3 credits to the curricula in CEA. However, this CEA requirement may be satisfied by a UH 270 section developed to satisfy the economics requirement.

Above all, we encourage Committee members to keep the rationale for the new Honors curriculum in mind:

- It is the mission of the Honors College to prepare our students to be tomorrow’s leaders. We are attempting to educate people who will make the most important decisions in our nation.
- They need to be exposed to a variety of interdisciplinary courses which supplement the courses in their majors. To quote Mary Sanchez Lanier: “Do we want science students to only be good at science when they graduate?” Clearly the answer is “no.”
- Our new curriculum includes courses which introduce our students to a skills base which prepares them for future work in academe as well as in the career of their choice.
- Critical thinking, integrated approaches, competency in a foreign language, and stimulating university course work are all integral to the mission of producing the nation’s next leaders.
HONORS CURRICULUM FOR SCIENCE STUDENTS

GLOBAL PROBLEMS AND ISSUES

THESIS¹
UH 450 – 3 credits
AND
UH 398 – 1 credit
Research Seminar

UH 370: Case Study: Global Issues in Social Science
3 credits

UH 380: Case Study: Global Issues in Arts and Humanities
3 credits

UH 390: Case Study: Global Issues in Science
3 credits

UH 270: Principles and Research Methods in Social Science
3 credits

UH 280: Contextual Understanding in the Arts and Humanities
3 credits

UH 290: Science as a Way of knowing²
3 credits

MATHEMATICS
4 credits
Math 140, 171, 172

ENGLISH
3 credits
Engl 298

SCIENTES
4 credits
Chem 105/106
Biol 106/107, Phy...

FOREIGN LANGUAGE & WSU WRITING PROFOLIO COMPETENCIES

FOUNDATIONAL SKILLS

¹Engineering students do not complete the Honors Thesis requirement or the Research Seminar.
²May be satisfied by Physics 205 or 206.
It was moved and seconded to table the motion until the second meeting of the fall. Motion failed.
Agenda Items (Discussion Items).

1. Recommendation from Academic Affairs to Extend the BA in Women’s Studies to DDP (Exhibit D).—J. Drzewiecka
   No discussion

2. Recommendation from Academic Affairs for Undergraduate and Professional Major Change Bulletin #9 & #10 (Exhibit E).—J. Drzewiecka
   No discussion

3. Recommendation from Academic Affairs Committee for the Conversion of the Murrow School of Communication to the Murrow College of Communication (Exhibit F).—J. Drzewiecka
   Questions were asked about the budget. E. Austin stated the budget for the Murrow College will not have a negative impact on CLA.

4. Recommendation from Faculty Affairs for Revisions to the Faculty Salary Allocations in the Faculty Manual (Exhibit G).—M. Kallaher
   Kallaher stated that in forming this proposed distribution of faculty salary increases the Committee first priority was "Maintenance". By that we mean maintenance of real salary. i.e., to the extent made possible by the State's allocation a faculty member's salary increase will at least match inflation. Also, the proposed formula will create a uniform floor across campus for faculty salary increases. It will also mitigate to a small extent the inversion of faculty salaries.

Statements and Concerns raised:

This will provide a cost of living increase for all faculty;
May cause the legislature to keep up with cost of living;
Concerned about undefined term “substandard”
Concern was raised that across the board raises with no money for merit it will be a disaster
Taking merit out disadvantages quality
If the proposal passes be ready for conflicting views of the President and Regents
Without merit proposed salary increases will reduce excellence; some of the super-stars will leave;
Since 1981 a total of 1% has gone to merit;
When giving merit, minimal salary increases leaves others with shrinking income;
There is inequity when the faculty who do all the work do not get raises;
Merit must be kept in to keep quality
If the nation goes into high inflation, the proposed salary increases will put merit at thin margin;
If we don’t provide right incentives, maintenance of high quality is difficult.
Constituents' Concerns.

No concerns.

Adjournment.

Meeting adjourned at 5:30 p.m.

Barry Swanson
Executive Secretary