The Faculty Senate was called to order by Val Limburg, Chair, on Thursday, April 17, 1997, in FSHN, T101, at 3:40 p.m. Fifty-two (52) members were present, twenty-five (25) were absent with five (5) vacancies. Ten (10) non-voting members were present. (See attached attendance sheet)

Minutes of April 3, 1997 Meeting were approved as circulated.

Announcements (Information Items).

1. Faculty Senate officers and administrators met on April 8, 1997.

2. Response from Attorney General’s Office regarding Resolution passed by the Faculty Senate dealing with Make up Hours for University Holidays is attached to Exhibit K.

3. Minor Change Bulletin #9 Exhibit B is as follows:

   M E M O R A N D U M

   TO:        Deans and Chairs
   FROM:      Julia Pomerenk, Assistant Registrar
   DATE:      10 April 1997
   SUBJECT:   MINOR CHANGE BULLETIN NO. 9

   The courses listed below reflect the minor curricular changes approved by the catalog editor since approval of the last Minor Change Bulletin. All changes are underlined. Deletions are crossed out. The column to the far right indicates the date each change becomes effective.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit</th>
<th>Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A S 380</td>
<td>Seminar 1 Prereq junior standing. Issues and preparation for careers in animal sciences areas. For juniors and seniors.</td>
<td>3</td>
<td>8-97</td>
</tr>
<tr>
<td>A S 406 (404)</td>
<td>[M] Non-ruminant Nutrition 3 Prereq A S 313. Physiology of digestion, nutrient requirements and metabolism, deficiency signs; ration formulation and mixing.</td>
<td>3</td>
<td>8-97</td>
</tr>
<tr>
<td>Ag Ec 409 (410)</td>
<td>Applied Statistical Methods in Agricultural Economics 3 Rec Math 201, 202; Stat course. Application of sampling techniques, linear regression and analysis of variance and covariance to agricultural economics research problems. Credit not granted for both 409 and 509.</td>
<td>3</td>
<td>8-97</td>
</tr>
<tr>
<td>AgTM 346</td>
<td>Turf Irrigation Systems 2 Soil-water-plant-atmosphere relations; pumps and pumping; layout, construction and operation of irrigation systems for turf and landscape plantings. Cooperative course taught by WSU, open to UI students (ASM 346).</td>
<td>2</td>
<td>8-97</td>
</tr>
<tr>
<td>Aging 130</td>
<td>drop Nutrition for Living 3</td>
<td>3</td>
<td>8-97</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
</tr>
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</tr>
<tr>
<td>Am St 471</td>
<td>Cultural Politics Since World War II</td>
<td>3</td>
<td>American popular culture, social movements politics and culture of the 1960s, or other topics in recent cultural politics.</td>
</tr>
<tr>
<td>Am St 500</td>
<td>Colloquium</td>
<td>1</td>
<td>May be repeated for credit; cumulative maximum 12 hours. Current research in American studies culture. S, F grading.</td>
</tr>
<tr>
<td>AMT 317</td>
<td>Cultural Diversity and Appearance</td>
<td>3</td>
<td>Prereq 3 hours Anth or Soc. The influence of cultural patterns, standards, ideals, beliefs, and values on dress and appearance in cross-cultural contexts. Cooperative course taught by WSU, open to UI students (FCS 429).</td>
</tr>
<tr>
<td>AMT 420</td>
<td>History of Contemporary Dress</td>
<td>3</td>
<td>Overview of fashion design and social history from mid-1800s to present.</td>
</tr>
<tr>
<td>Anth 260</td>
<td>Introduction to Physical Anthropology</td>
<td>3</td>
<td>Evidence for human evolution; processes of racial diversification differentiation; techniques of physical anthropology.</td>
</tr>
<tr>
<td>Anth 302</td>
<td>Cross-Cultural Human Development Childhood and Culture</td>
<td>3</td>
<td>Prereq Anth 101, 203 or H D 240 3 hours Anth or H D. How culture patterns infant, child and adolescent development.</td>
</tr>
<tr>
<td>Anth 506</td>
<td>Research Design and Methods</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Bdest 355</td>
<td>Broadcast Writing and Studio TV Production</td>
<td>3</td>
<td>Prereq Bdest 150, 350.</td>
</tr>
<tr>
<td>Bdest 455</td>
<td>Advanced Field TV Production</td>
<td>3</td>
<td>Prereq Bdest 355. May be repeated for credit; cumulative maximum 6 hours. Field production; editing; advanced studio production.</td>
</tr>
<tr>
<td>Bio S 372</td>
<td>General Ecology</td>
<td>4</td>
<td>Prereq Bio S 104, two one semesters Chem. Relationship of organisms with physical and biotic components of their environment; at the population, community, and ecosystem level.</td>
</tr>
<tr>
<td>BSysE 441</td>
<td>Process Control</td>
<td>3</td>
<td>Same as Ch E 441. Cooperative course taught by WSU, open to UI students (AgE 424).</td>
</tr>
<tr>
<td>BSysE 482</td>
<td>Food Process Engineering Design</td>
<td>3</td>
<td>Prereq BSysE 386 or Ch E 330. Design of food processing systems; design and simulation of sterilization and pasteurization processes in foods. Credit not granted for both BSysE 482 and 582. Cooperative course taught by WSU, open to UI students (AgE 482 487).</td>
</tr>
<tr>
<td>C E 418</td>
<td>Hazardous Waste Engineering</td>
<td>3</td>
<td>Prereq C E 341, hydrology course. Hazardous waste properties, chemodynamics, and health effects; introduction to risk assessment; design of soil and groundwater remediation systems. Cooperative course taught by WSU, open to UI students (CE 435).</td>
</tr>
<tr>
<td>C E 475</td>
<td>Groundwater Hydrology</td>
<td>3</td>
<td>Same as Geol 475.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prereq</td>
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<tr>
<td>C E 518</td>
<td>Advanced Hydrology</td>
<td>3</td>
<td></td>
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<tr>
<td>C E 519</td>
<td>Hazardous Waste Treatment</td>
<td>4</td>
<td>C E 446</td>
</tr>
<tr>
<td>CAC 101</td>
<td>[I] Introduction to Comparative American Cultures</td>
<td>3</td>
<td></td>
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<tr>
<td>CAC 355</td>
<td>Chicanas/os and the Educational System</td>
<td>3</td>
<td>CAC 151</td>
</tr>
<tr>
<td>CAC 357</td>
<td>Chicana/o Identity Power and Empowerment</td>
<td>3</td>
<td>CAC 151</td>
</tr>
<tr>
<td>Com 538</td>
<td>Seminar in Training and Consultation Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Cpt S 105</td>
<td>Personal Computing Computer Literacy and Applications</td>
<td>4</td>
<td></td>
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<tr>
<td>Cpt S 442</td>
<td>Computer Graphics</td>
<td>3</td>
<td>Cpt S 350, Math 220</td>
</tr>
<tr>
<td>Cpt S 530</td>
<td>Multirate Signal Processing</td>
<td>3</td>
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<tr>
<td>CropS 411</td>
<td>[M] Crop Environmental-Interactions</td>
<td>3</td>
<td>Bot 320, CropS 201</td>
</tr>
<tr>
<td>CropS 569</td>
<td>Seed Physiology and Seedling Establishment</td>
<td>2 (1-3)</td>
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<tr>
<td>Dec S 416</td>
<td>Introduction to Simulation Methods</td>
<td>3</td>
<td>Cpt S 150 or 203, Dec S-215</td>
</tr>
<tr>
<td>Drama 272</td>
<td>Intermediate Acting</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Drama 273  Intermediate Acting  3 or 4 (3-3)  8-97

E E 417 (418)  Numerical Solutions to Electromagnetic Problems  3  Prereq E E 351, knowledge of FORTRAN or extensive programming experience. Numerical solutions to electromagnetic problems including moment method; finite element method; variational methods; finite difference methods and the finite difference time domain algorithm. Cooperative course taught by WSU, open to UI students (EE 433).

E M 517  Simulation Modeling of Engineering Systems  3  Prereq Rec Stat 430; experience with computer programming. Analyzing and developing representative models for complex systems such as project or operations management using a variety of simulation styles.

Econ 411 (415)  [M] Introduction to Econometrics  3  Prereq Dec S 215, Econ 311, or Stat 443; Econ 101. Econometric methods in relation to the substantive achievements of empirical econometrics.

Econ 504  drop

Engl 100  Basic Writing  3  Prereq permission of director of composition placement exam. Designed to improve the student’s writing ability to a level appropriate for entrance into Engl 101. S, F grading. (Credit does not apply toward graduation.)


Engl 102  Writing Tutorial  V 1 (0-3) to 3 (0-9)  May be repeated for credit; cumulative maximum 5 hours. Prereq permission of Writing Lab Director placement exam. Assigned tutorials in the WSU Writing Lab for students with an identified need.


Engl 198  [W] English Composition Honors  3  [Open only to students in the Honors Program.] Credit not granted for both Engl 101, 105, and 198.

Engl 201  [W] Expository Writing and Research  3  Prereq Engl 101. For students needing further development of writing skills before taking advanced writing courses; emphasizes research writing in the disciplines.
Engl 402  **[W] [M] Technical and Professional Writing**  3  Prereq Engl 101, junior standing. Research writing: defining, proposing, reporting progress; presenting a final product; other professional writing needs. Credit not granted for both Engl 402 and 403.


Engl 405  **Advanced Professional Writing and Editing**  3  Prereq Engl 402 or by interview. Professional writing and editing; textual alterations, design, and layout; including internship experience.

Engl 593  **Language Arts: Theories of Composition**  3  By interview only. Contemporary theories of composition and their application to the language arts classroom. Cooperative course taught jointly by WSU and UI (ED 558).

Entom 542  drop  **Insect Behavior**  4 (3-3)

Entom 545  drop  **Toxicology of Pesticides**  3

ES/RP 210  **Microcomputer Models of Environmental Systems**  3  Prereq Math 140 or 171; Rec ES/RP 101. Introduction to using microcomputers to model environmental systems. Cooperative course taught by WSU, open to UI students (EnvS 210).

ES/RP 429  drop  **Animal Population Dynamics**  3

ES/RP 550  **System Dynamics Models of Environmental Systems**  3  Prereq Math 140 or 171; graduate standing. Analysis of environmental system dynamics; development and uses of simulation models using the Stella software on Macintosh. Cooperative course taught by WSU, open to UI students (EnvS 550).

ES/RP 575  **Geographic Information Systems**  3  Prereq course in computer programming ES/RP 385. Computerized management of data organized on regional geographic bases; preparation overlay, coding, and manipulation of data for regional planners and land managers. Cooperative course taught by UI (Geog 475), open to WSU students.

ES/RP 576  drop  **Advanced Remote Sensing**  3 (1-4)

Fren 101  **First Semester**  4  Fundamentals of speaking, reading, and writing.  Credit not granted for Fren 101, 102, and 104.  

Fren 102  **Second Semester**  4  Prereq Fren 101.  Continued development of basic skills in speaking, reading, and writing.  Credit not granted for Fren 101, 102, and 104.  


Fren 318  **Topics in French Civilization--Study Abroad**  3  (Avignon)  

FSHN 281  **Quantity Food Production Laboratory**  1 (0-3)  Prereq FSHN 120, 121, c// in H A 359.  Recipe adjustment and costing; preparing and serving food in quantity.  

FSHN 512  **Food Proteins and Enzymes**  2  Prereq Rec biochemistry, FSHN 460, food chemistry (FSHN 460).  Chemistry/biochemistry of proteins/enzymes applied to food research and industry; protein functionality/enzyme technology application to industry.  Cooperative course taught by WSU, open to UI students (FST 513).  

GenCB 496  **[M] Special Problems and Reports**  V 2-4  Prereq GenCB 301.  Independent project with written progress report and final report required.  S, F grading.  

GenEd 302  **[W] Advanced Writing Tutorial**  V 1 (0-3) to 3 (0-9)  May be repeated for credit; cumulative maximum 5 hours.  Prereq permission of Writing Lab Director/Writing Assessment Coordinator.  Assigned tutorials in the WSU Writing Lab for students in [M] courses.  S, F grading.  

Geol 101  **[P] Introduction to Geology**  4 (3-3)  Introductory physical geology for non-science majors; emphasis on western U.S.  Credit not granted for both Geol 101 and 102--more than one of Geol 101, 102, 180.  

Geol 102  **[P] Physical Geology**  4 (3-3)  For science majors and honors students.  Modern concepts of earth science; mineral rock, resource, and map study.  Field trip required.  Credit not granted for both Geol 101 and 102--more than one of Geol 101, 102, 180.  

Geol 180  **Honors Geology**  4 (3-3)  Prereq honors student or by interview.  Introduction to physical geology with emphasis on original research and scientific writing.  Credit not granted for Geol 180 and Geol 101 or 102--more than one of Geol 101, 102, 180.  

Geol 308  **[M] Geology Field Camp**  6 (1-15)  Prereq junior standing; Geol 404, 340, 350.  Detailed geologic mapping of an area; practice in methods of geologic field work.  Cooperative course taught jointly by WSU and UI (Geol 301).
Geol 475  **Groundwater Hydrology**  3 (2-3) Prereq C E 317 or Geol 101, 102 or 260; Chem 105; Math 172 or c//; Phys 101, 201; C E 317; or Geol 315; or the following four courses: Chem 106; Geol 101; Math 140 or 172; and Phys 102 or 202. Introduction to groundwater occurrence, movement, quality, and resource management, emphasizing physical and biogeochemical principles.

HD 464  **Administration of Early Childhood Programs**  3 By interview only. Organization, administration, and management of early childhood programs; finance, program development, service delivery, personnel concerns, resource development, and evaluation.

Hist 308  **North American Indian History, Prehistory Precontact to Present**  3 History of North American Indian peoples from circa 1350 to present.

Hist 409  **[S] American Environmental History**  3 A history of environmental change, ideas of nature, natural resource development, conservation politics, science and environmental policy.

Hist 421  **The Frontier and the American West**  3 Multicultural exploration of the frontier experience and western America; environment, economic development, gender, class and race emphasized. Credit not granted for both Hist 421 and 521.

Hist 425 (325)  **[I] The City in History**  3 Prereq completion of one Tier I and three Tier II courses in an appropriate area of coherence. Description and comparison of the city through history in European and one or more non-western cultures (usually India).

Hist 483 (383)  **[T] Technology and Social Change to 1950**  3 The emergence of modern technological society with emphasis on the period 1750-1950.

Hist 521  **The Frontier and the American West**  3 Graduate-level counterpart of Hist 421; additional requirements. Credit not granted for both Hist 421 and 521.

Hist 526 drop  **Seminar in American Diplomatic History**  3

Hist 562  **History of Imperial Russia**  3 Prereq graduate standing. Graduate-level counterpart of Hist 462; additional requirements. Credit not granted for both Hist 462 and 562.

Hist 563  **History of the Soviet Union**  3 Prereq graduate standing. Graduate-level counterpart of Hist 463; additional requirements. Credit not granted for both Hist 463 and 563.

Hist 565  **East-Central Europe**  3 Prereq graduate standing. Graduate-level counterpart of Hist 465; additional requirements. Credit not granted for both Hist 465 and 565.
<table>
<thead>
<tr>
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<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hort 356</td>
<td>Preparation for Entering the Horticulture Profession</td>
<td>1</td>
<td>Prereq junior in Hort. Resume writing; job application; interviewing; investigation of job opportunities; contact with employers; internship reports; practice in oral communication.</td>
<td></td>
</tr>
<tr>
<td>Hort 416</td>
<td>Advanced Horticultural Crop Physiology</td>
<td>3</td>
<td>Prereq Bot 320. Growth and development of horticultural crops; effect of mineral nutrition and environment on physiological processes. Physiological processes related to growth, development, and productivity of horticultural crops; advances in recombinant DNA technology; the impact on horticultural practices. Credit not granted for both Hort 416 and 516.</td>
<td></td>
</tr>
<tr>
<td>Hum 303</td>
<td>[H] Reason, Romanticism, and Revolution</td>
<td>3</td>
<td>Integrated humanities; European literature, philosophy, history, art, and music of the modern world from the 18th century to WWI.</td>
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<tr>
<td>Kin 236</td>
<td>Educational Gymnastics/Tumbling</td>
<td>1</td>
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<tr>
<td>Kin 296/297</td>
<td>Applied Computer Technology in Physical Education, Sport, and Recreation</td>
<td>1</td>
<td>(0-3)</td>
<td>Application of scholarly concepts with the help of multimedia technology.</td>
</tr>
<tr>
<td>Kin 391</td>
<td>Practicum in Athletic Training</td>
<td>V 1</td>
<td>(0-3) to 4 (0-12)</td>
<td></td>
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<tr>
<td>M E 406</td>
<td>[M] Experimental Design</td>
<td>3</td>
<td>(1-6) Prereq M E 305; 404; major in engr M E; Rec M E 348. Designing, conducting, and reporting of experimental investigations involving mechanical equipment.</td>
<td></td>
</tr>
<tr>
<td>Math 107</td>
<td>Precalculus Algebra Elementary Functions</td>
<td>4</td>
<td>Prereq Math 101 or satisfactory math placement score. Graphs, properties, and applications of polynomial, rational, exponential, logarithmic, and trigonometric functions.</td>
<td></td>
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<tr>
<td>Math 251</td>
<td>Mathematics for Elementary School Teachers I</td>
<td>3</td>
<td>Prereq satisfactory math placement score or passing the Math 251 competency test at the 80% level 101 or 107 with a C or better. Logical and historical development of present-day number systems and associated algorithms; methods of problem solving.</td>
<td></td>
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<tr>
<td>Math 416 (417)</td>
<td>Introduction to Simulation Methods</td>
<td>3</td>
<td>Same as Dec S 412 416. Credit not granted for both Math 416 and 516.</td>
<td></td>
</tr>
<tr>
<td>Math 420</td>
<td>Linear Algebra</td>
<td>3</td>
<td>Prereq Math 220. Advanced topics in linear algebra including similarity transformations, canonical forms, dual spaces, Hermitian matrices, bilinear forms.</td>
<td></td>
</tr>
<tr>
<td>Med S 503</td>
<td>Methods in Rural Health Research</td>
<td>1</td>
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### Faculty Senate Minutes
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<table>
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<tr>
<th>Course Code</th>
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<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Mgt 501</td>
<td>Management of Organizations</td>
<td>3</td>
<td></td>
<td>Leading, organizing, decision making, planning, controlling, conflict management, and behavior in work organizations. Cooperative course taught by WSU, open to UI students (E M 504).</td>
<td>8-97</td>
</tr>
<tr>
<td>Micro 416</td>
<td>Food and Applied Microbiology</td>
<td>2</td>
<td>Prereq Micro 301</td>
<td>Microorganisms important in foods; spoilage; preservation; food-borne disease. Purpose for enumeration, detection and identification of microorganisms in food products; physical, chemical and environmental factors influencing growth and survival of foodborne microorganisms; pathogenic and spoilage microorganisms in food and their control. Cooperative course taught by UI (MMBB 402 FST 416), open to WSU students.</td>
<td>8-97</td>
</tr>
<tr>
<td>Micro 417</td>
<td>Food Microbiology Laboratory</td>
<td>2 (0-6)</td>
<td>Prereq Micro 416 or c//</td>
<td>Methods of enumeration, detection, and identification of spoilage and pathogenic microorganisms in foods. Cooperative course taught jointly by WSU and UI (FST 417).</td>
<td>8-97</td>
</tr>
<tr>
<td>Mil S 384</td>
<td>U.S. Military History</td>
<td>3</td>
<td></td>
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<td>8-97</td>
</tr>
<tr>
<td>MIS (Mgt) 580</td>
<td>Information Systems Management</td>
<td>3</td>
<td>Prereq Mgt 502</td>
<td>Data processing organization; operations, application development, computer selection, management of computer personnel and systems.</td>
<td>8-97</td>
</tr>
<tr>
<td>MSE 412</td>
<td>Polymers Laboratory</td>
<td>1 (0-3)</td>
<td>Prereq MSE 402 or c//</td>
<td>Laboratory experiments exploring polymer synthesis, mechanical testing, physical characterization.</td>
<td>8-97</td>
</tr>
<tr>
<td>Mus 485</td>
<td>Seminar in Vocal Pedagogy</td>
<td>2</td>
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<td>8-97</td>
</tr>
<tr>
<td>Mus 490</td>
<td>General Music Material/Methods</td>
<td>4 (3-2)</td>
<td>Prereq Mus 491</td>
<td>Materials and methods for general music education majors; accompanying, instruments, Orff, Kodaly, ETM, classroom management, observations multiculturalism, collaboration, developmental, curriculum and research issues; addressing national standards; observations. Credit not granted for both Mus 490 and 590.</td>
<td>8-97</td>
</tr>
<tr>
<td>Mus 491</td>
<td>Voice Techniques Vocal Pedagogy</td>
<td>2 (1-3)</td>
<td>Prereq Mus 254</td>
<td>Voice techniques for music education majors. Pedagogy methods course in voice; anatomy of the singing process; methodology of teaching voices in various learning and teaching styles.</td>
<td>8-97</td>
</tr>
<tr>
<td>NATRS 305</td>
<td>Silviculture</td>
<td>3</td>
<td>Prereq NATRS 204, 300, 302, 304</td>
<td>Stand dynamics, natural regeneration methods, intermediate stand treatment, relationships of natural resource management to silvicultural practice. Field trips required.</td>
<td>8-97</td>
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<tr>
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<td>Prerequisites</td>
<td>Description</td>
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<tr>
<td>NATRS 321</td>
<td>Introduction to Wood Technology</td>
<td>3</td>
<td>Bio S 103, Lab 277</td>
<td>Anatomy of woody plants, identifying characteristics and properties of woods; relation of wood properties to processing and use. Field trips required. Cooperative course taught by UI. Open to WSU students.</td>
<td></td>
</tr>
<tr>
<td>NATRS 371</td>
<td>Wildland Recreation</td>
<td>3 or 4</td>
<td>junior standing</td>
<td>Historic development; benefits; federal, state, and local involvement; current problems and trends in the field of wildland recreation. Field trip required. Cooperative course taught jointly by WSU and UI.</td>
<td></td>
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<tr>
<td>NATRS 406</td>
<td>Issues and Ethics in Natural Resources</td>
<td>3</td>
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<tr>
<td>NATRS 416</td>
<td>Principles of Fisheries Management</td>
<td>4</td>
<td></td>
<td>Application of principles toward managing recreational and commercial aquatic resources. Cooperative course taught jointly by WSU and UI. Fish 419 418.</td>
<td></td>
</tr>
<tr>
<td>NATRS 420</td>
<td>Wood, Wood Products and Marketing</td>
<td>2</td>
<td>NATRS 304 or c/l</td>
<td>Wood science and its role in the manufacture and marketing of forest products. Credit not granted for both NATRS 420 and 520.</td>
<td></td>
</tr>
<tr>
<td>NATRS 430</td>
<td>Introduction to Wildland Fire</td>
<td>3</td>
<td>Bio S 372 or NATRS 300</td>
<td>Physical nature and behavior of wildland fire; the fire environment; fire ecology; practice of wildland fire management.</td>
<td></td>
</tr>
<tr>
<td>Neuro 301</td>
<td>Exploring the Brain</td>
<td>3</td>
<td>Bio S 103, Chem 102 105</td>
<td>Structure and function of the nervous system from single neurons to behavior.</td>
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<tr>
<td>Nurs 461</td>
<td>Nursing Practice: Clinical Decision Making</td>
<td>3</td>
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<tr>
<td>Nurs 514</td>
<td>Human Resources in Nursing</td>
<td>3</td>
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<tr>
<td>Nurs 515</td>
<td>Financial Management in Nursing</td>
<td>2 or 3</td>
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<tr>
<td>Nurs 516</td>
<td>Practicum in Nursing Service Administration</td>
<td>4 or 5</td>
<td>(1-9) or (1-12)</td>
<td></td>
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<tr>
<td>Nurs 523</td>
<td>Nursing Education: Theory and Role Analysis and Curriculum Development</td>
<td>4</td>
<td>graduate standing in Nurs</td>
<td>Prerequisites affecting nursing education; application of educational theories in a variety of nursing education settings; critical analysis of concepts.</td>
<td></td>
</tr>
<tr>
<td>Nurs 538</td>
<td>Acute Care Clinical Nurse Specialist</td>
<td>4</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Nurs 543  Psychiatric/Mental Health Nursing: Groups and Families  4 (3-3)  8-97
Prereq graduate standing in Nurs. Therapeutic approaches and key issues affecting psychiatric/mental health nursing; implications for clients, families, society, mental health care delivery systems including interdisciplinary relationships.

Nurs 546  Practicum in Psychiatric/Mental Health Nursing  4 (1-9) or 5 (1-12)  8-97
Prereq Nurs 541-543. Individualized clinical experience/seminar designed to provide advanced competency, accountability, leadership in psychiatric/mental health nursing.

Nurs 553  drop

Nurs 553  Community and Family Analysis  4 (3-3)  8-97

Nurs 563  Pharmacology: Advanced Pharmacological Concepts and Practice  3 (2-3)  8-97
Prereq graduate standing in Nurs. Advanced pharmacology concepts focused on pharmacokinetics, clinical decision making, administration, monitoring drug therapy, patient education, and legality of prescriptive authority. Pharmacology for clinical practice including decision making, prescribing, drug monitoring, and patient education associated with prescriptive authority.

Nurs 566  Community Analysis and Program Analysis Planning  3 (2-3) or 4 (2-6)  8-97
Prereq graduate standing in Nurs. Application of core public health functions in community analysis, program development and program evaluation.

Nurs 567  Primary Care: Adults and Elders  4 (1-9)  8-97
Prereq Nurs 562, 563, 564. Assessment, differential diagnosis, therapeutic intervention with adults; developmental changes; opportunities to provide diagnostic maintenance, and follow-up care.

Nurs 568  Primary Care: Infants, Children and Adolescents  3 (1-6)  8-97

Nurs 569  Primary Care: Family  4 (1-9)  8-97
Prereq Nurs 562, 563, 581, 568. Assessment, differential diagnosis, therapeutic intervention with individuals in childbearing, childrearing, and multigenerational families.

Nurs 576  Advanced Concepts in Nursing Practice: Research Application  2  8-97
Prereq graduate standing in Nurs. Exploration of linkage between nursing science concepts and nursing practice through analysis of relevant research.

Nurs 583  Advanced Gerontological Nursing  3 or 4  8-97
Prereq graduate standing in Nurs. Comprehensive analysis of research studies regarding nursing care of elderly persons; nursing interventions and health of elderly persons.

Nutr 531  Nutrition and Aging  2 or 3  8-97
Same as FSHN 531.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>P R 495</td>
<td>Public Relations Professional Internship V 2</td>
<td>2 (0-6)</td>
<td>May be repeated for credit; cumulative maximum 12 hours. Prereq Jour 306, P R 313; P R 312; by interview only. S, F grading.</td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 301</td>
<td>Orientation 1</td>
<td></td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 415</td>
<td>Human Pathology 3</td>
<td></td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 452</td>
<td>Pharmacy Practice II 2</td>
<td>2</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 454</td>
<td>Pharmacy Practice IV 4</td>
<td>4</td>
<td>Prereq PharS 433, 437, 443, 442. Professional competence in applying principles of pharmaceutics, medicinal chemistry, and pharmacology to selecting therapeutic products, dispensing procedures.</td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 455</td>
<td>Pharmacy Practice V 5</td>
<td>5 (4-3)</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 457</td>
<td>Clinical Pharmacokinetics 2</td>
<td>2</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 463</td>
<td>[M] Clinical Clerkship 7</td>
<td>7 (0-21)</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 473</td>
<td>Pharmaceutical Care Laboratory II 1</td>
<td>1 (0-3)</td>
<td>Prereq PharP 454, 453 or c/. Practicum designed to integrate classroom-acquired knowledge, behaviors and values into professional skills.</td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 474</td>
<td>Pharmaceutical Care Laboratory III 2</td>
<td>2 (0-6)</td>
<td>Prereq PharP 454, 454 or c/. Practicum designed to integrate classroom-acquired knowledge, behaviors and values into professional skills.</td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 475</td>
<td>Pharmaceutical Care Laboratory IV 2</td>
<td>2 (0-6)</td>
<td>Prereq PharP 454, 551 or c/. Practicum designed to integrate classroom-acquired knowledge, behaviors and values into professional skills.</td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 476</td>
<td>Pharmaceutical Care Laboratory V 2</td>
<td>2 (0-6)</td>
<td>Prereq PharP 454, 552 or c/. Practicum designed to integrate classroom-acquired knowledge, behaviors and values into professional skills.</td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 485</td>
<td>Practice Seminar 1 or 2</td>
<td></td>
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<td>8-97</td>
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<tr>
<td>PharP 501</td>
<td>Health Sciences Seminar Series I 1</td>
<td></td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Prerequisites</td>
<td>Description</td>
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</tr>
<tr>
<td>PharP 502</td>
<td>Health Sciences Seminar Series II</td>
<td>1</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 511</td>
<td>Communications for the Health Professional I</td>
<td>1</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 512</td>
<td>Communications for the Health Professional II</td>
<td>1</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 521</td>
<td>Contemporary Topics I</td>
<td>1</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 522</td>
<td>Contemporary Topics II</td>
<td>1</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 534</td>
<td>Pharmacy Informatics</td>
<td>2</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharP 557P</td>
<td>Clinical Pharmacokinetics 2 (1-3)</td>
<td>2</td>
<td>Prereq PharP 443, PharS 433</td>
<td>8-97 Applications of pharmacokinetic principles to safe and effective therapeutic management of individual patients in a clinical setting.</td>
</tr>
<tr>
<td>PharP 600</td>
<td>Special Projects or Independent Study</td>
<td>Variable credit</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharS 437</td>
<td>Pharmaceutics Laboratory I</td>
<td>1</td>
<td>Prereq PharS 431 or c//</td>
<td>8-97 Laboratory in the preparation of solutions, solid, semisolid, and dispersed liquid dosage forms.</td>
</tr>
<tr>
<td>PharS 441</td>
<td>Pharmacological Basis of Therapeutics II</td>
<td>3</td>
<td>Prereq PharS 440</td>
<td>8-97 Mechanisms of drug action, physiochemical and physiological factors involved in drug disposition, drug biotransformation, micronutrients. Cooperative course taught by WSU, open to UI students (Phar 441).</td>
</tr>
<tr>
<td>PharS 442</td>
<td>Pharmacological Basis of Therapeutics III</td>
<td>8</td>
<td>Prereq PharS 441</td>
<td>8-97 Structure activity relationship, mechanism of action, pharmacodynamics of chemotherapeutics, peripheral nervous system, cardiovascular, renal and gastrointestinal drugs. Cooperative course taught by WSU, open to UI students (Phar 443).</td>
</tr>
<tr>
<td>PharS 443</td>
<td>Pharmacological Basis of Therapeutics IV</td>
<td>4</td>
<td></td>
<td>8-97</td>
</tr>
<tr>
<td>PharS 444</td>
<td>Pharmacological Basis of Therapeutics V</td>
<td>3</td>
<td>Prereq PharS 442, 443</td>
<td>8-97 443. Medicinal chemistry, pharmacology of drugs acting on the central nervous system and endocrine system. Cooperative course taught by WSU, open to UI students (Phar 444).</td>
</tr>
<tr>
<td>Phys 546</td>
<td>Quantum Electronics</td>
<td>3</td>
<td>Prereq Phys 541, 542, 551 or c//</td>
<td>8-97 The physics of lasers and of coherent optical radiation generation and propagation.</td>
</tr>
</tbody>
</table>
PI P 421  **General Mycology**  4 (2-6) Rec Bio S 103 or Bot 120. The structure, life histories, classification, and economic importance of the fungi. Cooperative course taught by WSU, open to UI students (PlSc 421). Credit not granted for both PI P 421 and 521.

PI P 429  **General Plant Pathology**  3 (2-3) Rec Bio S 103 or Bot 120. Classification, symptoms, causes, epidemiology, and control of plant diseases. Credit not granted for both PI P 429 and 529.

Pol S 405  Topics--Study Abroad  3  8-97

Pol S 504  **Quantitative Methods in Political Science and Criminal Justice**  3  Prereq introductory statistics course. Applied statistical skills, enabling understanding of substantive political and social questions.

Pol S 515 (514)  **Governmental Policy and Program Analysis**  3  Techniques used to analyze policy alternatives and to evaluate programs; developing program objectives, management by objectives, productivity analysis, program evaluation, and policy analysis. Cooperative course taught by UI (PolSc 556), open to WSU students.

Psych 100  drop

Psych 101  drop

RLS 231  Recreational Dance  1 (0-3)  8-97

RLS 421  [M] **Assessment in Recreation and Leisure**  3  Prereq RLS 321 or approved statistics course; Rec Math 205. Designing, implementing, and interpreting the information generated by instruments which evaluate recreation and leisure needs, leisure service programs, and personnel.

S W 190  **Introduction of Social Work**  3  Survey of practice; social workers and social service agencies, individual, group, and community practice. Cooperative course taught jointly by WSU and UI (SW 140).

S W 340  drop

S W 345  drop

S W 354  drop

S W 365  drop
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW 390</td>
<td>Social Welfare History and Policy</td>
<td>3</td>
<td>Prereq SW 190. Current social welfare programs; income maintenance, health services, criminal justice, public housing, child welfare; historical development of social welfare programs.</td>
<td>Cooperative course taught by WSU, open to UI students (SW 390).</td>
</tr>
<tr>
<td>SW 393</td>
<td>Social Work Methods in Community Organization</td>
<td>3</td>
<td>Prereq SW 190. Social legislation creation and impact on delivery services by professional/paraprofessional social workers.</td>
<td>Cooperative course taught by WSU, open to UI students (SW 393).</td>
</tr>
<tr>
<td>SW 395</td>
<td>Child Welfare</td>
<td>3</td>
<td>Prereq SW 190. Social work practice in child welfare; adoption, foster homes, child protection, group homes, day care, children’s institutions, dependency, traditional and non-traditional family.</td>
<td>Cooperative course taught by WSU, open to UI students (SW 242).</td>
</tr>
<tr>
<td>SW 440</td>
<td>Methods of Social Work</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SW 493</td>
<td>[M] Social Work Methods: Individual and Groups</td>
<td>3</td>
<td>Prereq SW 190. Social work values, ethics; technical aspects of interviewing and working with client systems; communication; group work skills.</td>
<td>Cooperative course taught by WSU, open to UI students (SW 493).</td>
</tr>
<tr>
<td>SW 495</td>
<td>Social Work in Corrections</td>
<td>3</td>
<td>Prereq SW 190. Applying social work methods to the field of corrections; community-based programs for adult offenders; interventions with juvenile offenders.</td>
<td>Cooperative course taught by WSU, open to UI students (SW 495).</td>
</tr>
<tr>
<td>SHS 471</td>
<td>Speech-Language Pathology and Audiology in Schools</td>
<td>3</td>
<td>Prereq SHS 460 461 or c/. Therapy methods and procedures in speech-language pathology and audiology; state/federal laws affecting public school therapy.</td>
<td></td>
</tr>
<tr>
<td>Soc 320</td>
<td>Introduction to Social Research</td>
<td>3</td>
<td>Methods of collecting data; surveys, experiments, field observations; organization and interpretation of data; reading social research findings.</td>
<td></td>
</tr>
<tr>
<td>Soils 432</td>
<td>Soil Microbial Ecology Laboratory</td>
<td>1 (0-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Span 130</td>
<td>Beginning Spanish--Study Abroad</td>
<td>V 1-12</td>
<td>Equivalent to Span 101, 102, 203.</td>
<td></td>
</tr>
<tr>
<td>Span 540</td>
<td>Beginning Instructional Practicum</td>
<td>1</td>
<td>An introduction to foreign language instruction for beginning teaching assistants.</td>
<td></td>
</tr>
</tbody>
</table>
Span 542 Advanced Instructional Practicum 1 May be repeated for credit; cumulative maximum 4 hours. Supervised practical experience in foreign language teaching. S, F grading.

Stat 390 SAS Programming 1 SAS system, primarily using the mainframe computer and CMS; main emphasis: SAS DATA STEP and INPUT statement. S, F grading.

T & L 100/101 Reading Efficiency and Study Skills 1 8-97

T & L 301 Learning and Development 3 Prereq certified Education major, Psych 105, T & L 300, c// in T & L 315/316 or 317/318. Reflective inquiry about human learning, development, diversity and individual differences, examination of implications for teaching and education reform.

T & L 315/316 Elementary Practicum and Seminar 3 (0-9) Prereq certified Education major, c// in T & L 301. Extended classroom experience prior to student teaching providing gradual classroom involvement and teaching responsibility. S, F grading.

T & L 317/318 Secondary Practicum and Seminar 3 (1-6) Prereq certified Education major, T & L 303; c// in T & L 328 plus 10 semester hours in subject-matter credit. Extended classroom experience prior to student teaching providing gradual teaching responsibility. S, F grading.

T & L 328 [M] Classroom Management 2 Prereq certified Education major, T & L 317/318 or c//. Strategies for developing positive and supportive classroom learning environments.

U H 330 Development of Western Civilization 3 Required of all Honors Program students in their junior or senior year. Examination of the literary, cultural, philosophical, and historical traditions within western civilization.

V Ph 564 Brain-Endocrine Interaction 3 Neuroanatomy, physiology, and neuropharmacology and role of neuroendocrinology; and the integrative regulation of endocrine and visceral functions.

W St 460 [K] Gender, Race, and Nature in America 3 Prereq W St 200 or 300. Exploration of American culture through examination of cultural representations of nature in mainstream and environmental politics.

W St 481 [M] Theoretical Issues in Women Studies 3 Prereq W St 200 or 300. Introduction to the field of feminist theory, including classic interdisciplinary methods, and applications of this scholarship to contemporary women’s issues.

1Not open to native speakers except with permission. Bilingual speakers should consult departmental guidelines for proper placement.

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Reports.

1. Remarks by the Chair.-V. Limburg

Limburg reported that the constituent's concern raised at the last meeting about the electronic communication document is being worked on by the Faculty Affairs Committee.

2. Report from Legislative Representatives.-E. Austin, C. Clark

Austin reported that she is in regular communication with Carolyn Clark who is in Olympia. Articles which refer to across the board pay raises for faculty do not mean that all faculty will receive a 3% raise. There has been no lobbying for any particular allocation strategy by either Carolyn Clark or the administration. The money comes to the University and is distributed according to University procedures. Past salary allocation figures from 1991-1996 were available and were discussed by Austin. These figures will be an exhibit with the next Faculty Senate agenda. When the legislature uses the term across the board that means the money is available to all faculty at all institutions. The Conference Committee is proposing 3% raises for faculty for the first year and zero the second year but there is the opportunity to use tuition money to provide another 1% the first year and 2% the second year. Salary increases are linked to tuition which is not an ideal situation. Tuition increases are coming back to the institutions this time for the institutions' use which has not been done before. We will only be allowed to keep tuition increases if we meet our enrollment targets and part of the appropriation will be tied to accountability. The money for graduate student health benefits has been added back into the budget and at present it looks like there will an increase in employee's contribution to health care. Tuition increases will likely be limited to 4% per year but it is up to each institution as to how much they want to increase it. Austin acknowledged all the hard work Carolyn Clark is doing in Olympia on behalf of the University. Clark asked that the hard work on the part of the administration be acknowledged as they worked very hard for faculty salary increases this year as well as the student lobbyists working on behalf of the faculty.

Additions or Changes to the Agenda.

There were no additions or changes to the agenda.

Agenda Items. Action Items

1. Resolution from Budget Committee for Faculty Senate Budget Committee Participation in Budget Review Hearings Exhibit M from 4/3/97 is as follows:

**MEMORANDUM**

TO: Faculty Senate
FROM: Thomas Brigham, Chair, Budget Committee
DATE: March 13, 1997
SUBJECT: Resolution
The Budget Committee recommends the following resolution to the Faculty Senate for approval and forwarding to the central administration:

Because the allocation of funds to activities is the ultimate step in university governance, if shared governance is to be a reality the faculty must play a role in those decisions. At present, faculty may have input to their dean’s budget requests, but the faculty have no actual role in the crucial budget allocation process. The Budget Committee proposes to rectify this flaw in shared governance by requesting that the Faculty Senate have two representatives on the Executive Budget Committee during budget review hearings and allocation process. These representatives will be the Executive Secretary of the Faculty Senate and the Chair of the Faculty Senate Budget Committee (other committee members may substitute for the chair as needed), and they will have full privileges as members during this period.

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Motion carried.

2. Nominations from Committee on Committees to fill Vacancies on Faculty Senate Committees with terms beginning on August 16, 1997 unless otherwise indicated

FROM THE COMMITTEE ON COMMITTEES

The Committee on Committees submits the following names as candidates to serve on Senate committees with terms beginning August 15, 1996, and ending on the year indicated. Senators are encouraged to study the Committee Manual along with the vitae of the nominees, prior to the meeting of April 3, 1997. Senators desiring to nominate additional persons from the floor MUST PROVIDE written information about the nominees for distribution before the meeting.

Academic Advising & Reinstatement

F - 2000 HENSCHENDE, Jean M., Assistant Director, SALC. Faculty. WSU 5 Years. Relevant Experience and Qualifications: Three years as academic advisor, seven years experience in Student Affairs, current adjunct faculty for Educational Leadership/Counseling Psychology; five years experience in university admissions; dissertation research on freshman. WSU Committee Experience: Current: Student Publications Board Previous: Staff Senate Publications Committee.

Academic Affairs

F - 2000 BEERMAN, Kathy A., Associate Professor, Food Science Human Nutrition, Faculty, Graduate Faculty. WSU 8 Years. Relevant Experience and Qualifications: Teach large enrollment introductory nutrition course. A lot of experience relating to and dealing with students. WSU Committee Experience: Current: Extended University Affairs Committee; Online WSU, Computer/University WWW Planning Committee. Previous: Science GER Committee, CAHE Computer Use Committee.

F - 2000 HOEKSEL, Renee, Associate Professor, ICNE. Faculty. WSU 7 Years, Relevant Experience and Qualifications: Nursing Program Coordinator on WSLTV campus. Started the undergraduate program here; teach 2-3 courses in undergrad program each semester. WSU Committee Experience: Current: ICNE Undergraduate Curriculum Committee; ICNE Graduate Program Committee. Previous: WSU Vancouver Building Program Committee.
F - 2000 LOWINGER, Thomas, Professor, Economics. Faculty, RIS. WSU 29 Years. 
WSU Committee Experience: Previous: Graduate Studies Committee, Extended University Services.

Admission Subcommittee
F - 2000 MICHAELIS, Karen L., Assistant Professor, Educational Leadership and Counseling Psychology, Faculty, RIS. WSU 2 Years. Committee Experience: Current: COE Scholarship Committee; Department Curriculum Committees: Higher Ed; Leadership Area Previous: University Intellectual Property Committee (Illinois State University) Faculty Search Committee (Illinois State University).

Budget Committee
F - 2000 FREDERICK, Bonnie, Associate Professor, Foreign Languages. Faculty, RIS, Graduate Faculty. WSU 11 Years. Committee Experience: Previous: Faculty Status Committee, Dean's Advisory Committee; Miscellaneous Committees.

F - 2000 MURPHY, Mary E., Associate Professor, Program in Biology, Department of Zoology. Faculty, RIS. WSU 10 Years. Committee Experience: Previous: Ad Hoc Committee on WSU Resignations Search Committee for Director, Owen Science and English Library; Faculty Committee evaluating Graduate School Summer Assistantships; Reviewer, Panel for Graduate Student Summer Research Assistantships; Member of the Provost's Selection Committee for Distinguished University Researcher.

Catalog Subcommittee of AAC & GSC
F - 2000 TOOLSON, Richard B., Associate Professor, Accounting. Faculty, RIS, Graduate Faculty. WSU 10 Years.

F - 2000 KALLAHER, Michael, Professor, Mathematics, Faculty, RIS, Graduate Faculty. WSU 26 Years. Committee Experience: Current: Catalog Subcommittee; Advisory Task Force for Provost; Committee to Review Graduate Program, Material Sciences Previous: Academic Affairs Committee; Member of Senate Library Committee; Faculty Senator; Associate Dean of Sciences; Chair of Department of Mathematics; Committee to Review Graduate Program and College of Education; Committee to Review Graduate Program and Physics.

Distinguished Faculty Address Committee
F - 2000 GILLESPIE, Diane, Professor, English. Faculty, RIS. WSU 23 Years. Committee Experience: Previous: WSU Faculty Status Committee; WSU Libraries Steering Committee; Senate Library Committee; University Graduate Studies Committee; Selection Committee for Faculty excellence Award.

Extended University Affairs
F - 2000 ORR, Leonard, Associate Professor, English. Faculty, RIS, Graduate Faculty. WSU 6 Years. Relevant Experience and Qualifications: I have been teaching at WSU Tri-Cities since 1991. I have taught over WHETS to both Pullman and Vancouver. Committee Experience: Current: University Scholars Program Committee. Previous: Many search committees, departmental undergraduate and graduate studies. WSU TriCities Diversity Task Force, Arts & Letters College Council (Notre Dame) and Academic Council (Notre Dame).
F - 2000 **PETERSON**, Karen L., Professor, Human Development. Faculty, RIS, Graduate Faculty. WSU 12 Years. **Relevant Experience and Qualifications:** Service on Extended University Affairs; Graduate Studies Committee; Faculty Status Committee. **Committee Experience:** Current: Departmental Committees - WSUV, Tenure Review Committees; WSU Pullman; Department Committees Previous: Faculty Senate (Central Michigan University) Undergraduate Curriculum Committee (Central Michigan University).

F - 1999 **WHITE**, John R. Jr., Associate Professor, Pharmacy, Faculty. WSU 7 Years. **Relevant Experience and Qualifications:** Chair -Faculty Search, Member, Curriculum Committee; Member, Admissions Committee; Member, Tenure Promotion - Review Committee.

F – 1999 **ELGAR**, Steve, Professor, EECS. Faculty, RIS, Graduate Faculty. WSU 11 Years. **Committee Experience:** Current: IT Task Force, College of Engineering, Dean's Advisory Committee for Tenure and Promotion Previous: Many national committees related to my research.

Graduate Studies

F -2000 **KRAMER**, John W., Veterinary Clinical Pathologist, Veterinary Clinical Science. Faculty, Graduate Faculty. WSU 24 Years. **Relevant Experience and Qualifications:** Chairman Whitman County Board of Adjustment, NIH Task Force Chair **Committee Experience:** Current: Planning Review Committee, Faculty Affairs Committee. Previous: Faculty Affairs Committee, Committee on Committees, Legislative Affairs Committee.

F - 2000 **JANKOWSKI**, Theodora A., Assistant Professor, English, Faculty, RIS, Graduate Faculty. WSU 1 Year **Relevant Experience and Qualifications:** Graduate Faculty, taught Graduate courses since 1988; English Department Graduate Studies Committee; English Department MA Exam Committee. **Committee Experience:** Current: English Department: Hiring, Graduate Studies; M.A. Exam; Awards and Scholarships Previous: Committee to Restructure major; Library Assessment; Multicultural.

Legislative Affairs

F – 1998 **HUFFAKER**, Ray, Associate Professor, Agricultural Economics, Faculty, Graduate Faculty, RIS. WSU 7 Years. **WSU Committee Experience:** Current: Graduate Studies.

Library Committee

F –2000 **LINDEN**, Stanton J., Professor, English, Faculty. WSU 28 Years. **Relevant Experience and Qualifications:** Past service on Senate Library Committee; Current Chair of English Department/Library Committee. Service on various search committees for library positions. **WSU Committee Experience:** Current: External Scholarships Committee member; Numerous department committees: Library, MA Exam, Faculty Search **Previous:** Senate Library Committee, Graduate Studies Committee, Senate Steering Committee, University Senate.
Organization and Structure Committee

F - 2000 MOSELEY, David, Associate Professor, Chemistry. Faculty RIS. WSU 28 Years Relevant Experience and Qualifications: School Board Member; President WSSDA; Past Years with WSSDA, President Elect, VP!, VP2 WSU Committee Experience: Recent: Faculty Affairs Committee, Registration and Records Committee Previous: FSC Committee; Catalogue Subcommittee of AAC; AARS of AAC; Conduct Committee; Library Committee; Senator.

Research and Arts Committee

F - 2000 JERRELLS, Thomas R., Professor, College of Pharmacy. Faculty, RIS, Graduate Faculty. WSU 1 Year. Relevant Experience and Qualifications: Served on University Committees since 1987. Committee Experience: Recent: Animal Care and Use Committee Previous: Animal Care and Use; Bio-safety; Promotion and Tenure; Graduate Admissions.

Teaching Assistant Training Program Subcommittee of GSC

F - 2000 PLACE, Helen, Instructor, Director of General Chemistry, Chemistry. Faculty, WSU 10 Years. Relevant Experience and Qualifications: 26 Years at WSU: 10 Classified staff, 6 Exempt, 10 Faculty all in Chemistry WSU Committee Experience: Current: Students Affairs; Science Subcommittee of General Education, College of Sciences: Curriculum, Advisory to Chair, Scholarships SALC; New Student Orientation. Previous: Faculty Address Award, Chair; Faculty Excellence Award; New Student Orientation; Registration and Records. Chair, Science Gen Ed; Ad Hoc Advisory, Safety Committee; Building Committee.

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The following three degree proposals and external review, are available in the Faculty Senate office for review. Selected parts of the proposals are attached as exhibits. These proposals have been approved by all appropriate Faculty Senate committees.

3. Recommendation from Academic Affairs Committee for a B.S. in Neuroscience Exhibit F from 4/3/97 is as follows:
MEMORANDUM

TO: Richard Crain, Executive Secretary Faculty Senate
FROM: Julia Pomerenk, Assistant Registrar
FOR: Academic Affairs Committee
DATE: 28 March 1997
SUBJECT: Bachelor of Science in Neuroscience

At its meeting today, the Academic Affairs Committee (AAC) approved the Bachelor of Science in Neuroscience, effective fall 1997.

Members of the AAC approved the BS in Neuroscience following discussion with representatives from the Program in Neuroscience and consideration of the proposal and the external reviews received in response to the proposal. The proposed undergraduate neuroscience degree program is an extension of the existing Program in Neuroscience, which offers a PhD in Neuroscience. Initially, faculty will come from the Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology and the Department of Psychology, with involvement of other faculty expected in the future.

At this time, Faculty Senate review and approval is recommended.

NEW UNDERGRADUATE DEGREE PROGRAMS

PRELIMINARY APPROVAL OF DRAFT PROPOSAL

DEGREE PROGRAM: Bachelor of Science in Neuroscience

TO BE OFFERED AT THE FOLLOWING LOCATIONS: WSU Pullman

PRELIMINARY APPROVAL: The following individuals have given their preliminary approval to the draft proposal to develop the degree program identified above. With such approval, the proposal can be submitted to the Executive Secretary of the Faculty Senate for Senate review.

Charles Barnes Chairman/Dept. of VCAP 12/9/96
Bjore Gustafsson Dean/College of Vet. Medicine 12/10/96
Karl Boehmke Budget Director 12/13/96
Nancy Baker Director of Libraries 12/17/96

A Proposal to Establish an Undergraduate Major in Neuroscience

Institution: Washington State University

Degree-Granting Unit: College of Veterinary Medicine, Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology (VCAUP)
Degree: Bachelor of Science in Neuroscience

Proposed Starting Date: August, 1997

Academic Department Representative:
Charles D. Barnes, Ph.D.
Professor and Chairman
Dept. of VCAPP, WSU, Pullman, WA 99164-6520
Phone: (509) 335-7898
FAX: (509) 335-4650
E-MAIL: brabb@vetmed.wsu.edu

Endorsement by Chief Academic Officer:

DATE: ________________________________

Undergraduate Degree in Neuroscience

I. Program Need

A. Relationship to Institutional Role and Mission

The proposed Undergraduate Program in Neuroscience will contribute significantly to the University's efforts to satisfy its mission of excellence in teaching, research and service. The excellence of the current Graduate Studies in Neuroscience offered through VCAPP, while collaborating with other colleges and departments at WSU, is evidenced by the contributing faculty, by the amount of research activity and funding of the faculty and their students, by the many achievements of past and current students, and by the national and international services the faculty provide.

The neuroscience faculty include nationally and internationally noted scholars in such as neuropharmacology, neurophysiology, and neuroendocrinology. The amount of funding for neuroscience research by VCAPP faculty was over $2 million in 1994-95 alone. The faculty provide service through the organization of national and international meetings in which the graduate students participate, and through guest lectures, international exchanges, and other programs and activities at the community and national level.

An undergraduate degree program in neuroscience would bring a higher level of rigor to the neuroscience studies program and would enhance the prospects for increased and growth both for the university and the department. The additional benefit of an advanced pool of undergraduate students prepared to tackle the rigors of schools such as medical school, will aid the University's progress toward to ensure quality and relevance in undergraduate education.
B. Documentation of Need for Program

The fastest growing area of science is in the field of neuroscience. Nationally, however, graduate programs in neuroscience must begin at a very basic level because the students are typically inadequately prepared at the undergraduate level. We propose that the current Studies in Neuroscience at WSU be expanded to include an undergraduate program leading to the Bachelor of Science in Neuroscience.

The majority of graduate programs in neuroscience are at medical school campuses and are not associated with, or are physically separate from, the undergraduate campuses. Therefore, graduate programs usually don't have access to, or the interest in, developing undergraduate neuroscience programs.

To respond to the need for undergraduate curriculum in neuroscience, a number of schools have put programs together out of biology or psychology departments. However, the slant of the program results in a curriculum which often times does not fully represent neuroscience.

Our program has the advantage of having faculty of anatomy, pharmacology, and physiology, as well as faculty in psychology, biology, chemistry and engineering. This allows our program to offer a curriculum which fully represents the optimum in neuroscience.

Additionally, by its interdisciplinary nature and the fact that the undergraduate as-the graduate faculty in neuroscience (and in many cases are also associated with the professional courses in medicine or the veterinary school), the proposed undergraduate program is an ideal pre-graduate school, pre-medical, pre-veterinary, pre-dental, etc., program and should make the students' more competitive for entrance into the school of their choice. Students should also do better in their courses once they begin the professional curriculum.

A survey taken of 754 students in six undergraduate science courses at WSU (see Appendix C), indicates that 11% (83 students) would take neuroscience as a major, if it were available. An additional 15% (114 students) indicated they would be interested in taking neuroscience as a minor. Thus from this sampling of students, fully 25% (188 students) indicated an interest in taking neuroscience as either a major or a minor.

The majority of students majoring in neuroscience at WSU are anticipated to be pre-professional and pre-graduate students. The program will better prepare these Washington state residents to enter the professional program of their choice and will provide the institutions of higher education in Washington a better prepared applicant base from which to choose. Those students who enter the program with the goal of immediate preparation for a job will be prepared to apply for technician positions in education, government, and pharmaceutical research laboratories, or for government regulatory agencies and political advisory positions.

Finally, in an age where people strive to be well-informed about their health and well-being, individuals who view their college education as preparation for living a fuller life will be better prepared to understand and evaluate the endless list of daily choices with regard to, the plethora of drugs (prescription, over-the-counter, and illicit) and nutritional substances which, act upon the nervous system and human body in general.
C. Relationship to Other Institutions

Neuroscience involves disciplines as diverse as psychology, physiology, anatomy, and genetics. Training in this field has expanded rapidly over the past decade. This is underscored by the growth of the Society for Neuroscience. In 1982 there were fewer than 9,000 members world-wide, but by 1992 the number had grown to more than 20,000 members.

Map 1 (page 5) displays the status and location of undergraduate neuroscience programs in 1994. Note that the Northwest is not represented, while there are only four programs west of the Mississippi River.

Of the non-behavioral sciences, anatomy, pharmacology and physiology are the three largest areas represented in neuroscience and are usually separate departments which traditionally offer specialization in this field. Fortunately, these three areas form the administrative makeup of the Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology (VCAPP). Thus, the Undergraduate Program in Neuroscience can be assured a breadth not found in a single discipline offering only a specialization in neuroscience.

Colleges and Universities offering the BS in Neuroscience

1. Amherst College, MA
2. Baylor University, TX
3. Bowdoin College, ME
4. Brandeis University, MA
5. Central Michigan University, NE
6. Central College, KY
7. Clark University, MA
8. Colorado College, Co
9. Davidson College, NC
10. Franklin and Marshall College, PA
11. Hamilton College, NY
12. Ithaca College, NY
13. Lawrence University, WI
14. Macalester College,
15. Manhattanville College, NY
16. Muskingum College, OH
17. New York University, College of Arts and Science, NY
18. Smith College, MA
19. State University of NY at Binghamton
20. State University of NY at Old Westbury
21. Trinity College, CT
22. University of Pittsburgh College of Arts and Science, PA
23. University of Rochester, College of Arts and Science, NY
24. Washington College, MD
25. Wellesley College, MA
26. Wesleyan University, CT
27. Westminster College, PA
28. Westmont College, CA
II. Program Description

A. Goals and Objectives

The central mission of the Undergraduate Program in Neuroscience is to provide a much needed quality, interdisciplinary educational program to students in an area under-served by this field. The specific program goals and objectives are as follows:

1. Produce highly qualified graduates for entrance to medical, dental, veterinary, and similar professional schools; or to produce highly qualified graduates ready for careers in engineering, civil service, laboratory research (technicians); or for careers in research via graduate school.

   Objectives:
   
   a) Develop a structured, interdisciplinary core program of courses required of all students.
   
   b) Develop an individualized program of elective courses for each student that would match their specific interests in the neuroscience subfields.

2. To provide a series of courses designed to serve as minor study requirements for undergraduate students in other related disciplines (e.g., engineering, biology, psychology, etc.)

   Objective:

   a) Develop a series of courses which are both interesting and instructive, and can be used by students who have certified a major other than neuroscience.

3. To offer a survey course in neuroscience (Neuro 201 – ‘The Brain and Society') available to all undergraduate students.

   Objective,

   a) To compliment the students' general understanding of life, the survey course in neuroscience will examine the rudimentary elements of the human brain including common terminology, neurological diseases, and attempt to provide students with an appreciation for the affects of drugs on the central nervous system.

1 Neuro 201 is not a required course for Neuroscience majors.
B. Curriculum

Admission Requirements

Before students are admitted to the program, each student must satisfactorily complete the Neuroscience Core Course prerequisites, Years 1 and 2 (see below) and have a cumulative 2.0 grade point average. The College of Veterinary Medicine and Department of VCAPP follow all equal opportunity guidelines when reviewing program admission requests.

General Program Requirements

Each student will be expected to complete the General Education Requirements (GER) described in the WSU Catalog, as well as the requirements of the Undergraduate Neuroscience Program (see "Core Courses" below). Program requirements will be subject to periodic review by the Program Director and Neuroscience Faculty.

Credits Required to Earn the Bachelor of Science Degree in Neuroscience

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Prerequisite Courses</td>
<td>35</td>
</tr>
<tr>
<td>Major Core Courses</td>
<td>46</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>5</td>
</tr>
<tr>
<td><strong>Major Total</strong></td>
<td><strong>86</strong></td>
</tr>
<tr>
<td>GER Courses</td>
<td>25</td>
</tr>
<tr>
<td><strong>Graduation Total</strong></td>
<td><strong>111</strong></td>
</tr>
</tbody>
</table>

Core Courses

The following core course prerequisites (or an approved equivalent) must be taken by each student admitted to the Undergraduate Program in Neuroscience. Students are also responsible for completing the University's General Education Requirements (GER) as stated in the WSU Catalog. Curriculum which satisfy a GER requirement are identified below.

Year 1 and 2 courses are prerequisite for the major core courses listed in Years 2 and 3 (see page 8). These prerequisites must be taken prior to admission to the program (usually in the students' freshman and sophomore years).

Survey Course (For non-majors) |
---|
Neuro 201 The Brain and Society 3

2/25/97

MEMORANDUM

TO: Faculty Senate, Academic Affairs Committee
FROM: Sue Ritter, Director-Elect, Undergraduate Program in Neuroscience
SUBJECT: Recommendation of Catalog Subcommittee
At the AAC Catalog Subcommittee meeting Friday, February 21, it was recommended that 500 level courses be removed from the major electives list for the Undergraduate Program proposal in Neuroscience.

After discussing this recommendation with the Policy and Curriculum Committee of the Program in Neuroscience, we accept the recommendation and have made the necessary changes to the curriculum as shown in the attachment.

**UNDERGRADUATE NEUROSCIENCE CURRICULUM**

**CORE PREREQUISITES**

<table>
<thead>
<tr>
<th>Years 1 &amp; 2</th>
<th>[GER]</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio Sci 103, 104</td>
<td>[B] Introduction to Biology</td>
<td>4/4</td>
</tr>
<tr>
<td>Chem 105, 106</td>
<td>[P] Principles of Chemistry</td>
<td>4/4</td>
</tr>
<tr>
<td>Chem 240</td>
<td>Elementary Organic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Math 140</td>
<td>Math for Life Science (Calculus)</td>
<td>4</td>
</tr>
<tr>
<td>Physics 101, 102</td>
<td>[P] General Physics</td>
<td>4/4</td>
</tr>
<tr>
<td>Psych 105</td>
<td>[S] Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

_Year 1 & 2 Total 35_

**MAJOR CORE COURSES**

<table>
<thead>
<tr>
<th>Years 3 &amp; 4</th>
<th>Note: All 300 &amp; 400 level courses will be offered every year in the semester indicated.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credits</td>
<td>Faculty</td>
</tr>
<tr>
<td>F/s/SBC/BP3 364</td>
<td>Introductory Biochemistry 4 BC/BP Faculty</td>
</tr>
<tr>
<td>F/s/SGenCB 301</td>
<td>General Genetics 4 GenCB Faculty</td>
</tr>
<tr>
<td>F Zool 352</td>
<td>Cell Physiology 4 Zool Faculty</td>
</tr>
<tr>
<td>S Zool 353</td>
<td>Mammalian Physiology 4 Zool Faculty</td>
</tr>
<tr>
<td>F/s/S Psych 311</td>
<td>Element&quot; Statistics in Psychology 4 Patterson/Faculty</td>
</tr>
<tr>
<td>F/s/SPPsych 312</td>
<td>Experimental Methods in Psychology 4 Psych Faculty</td>
</tr>
<tr>
<td>F 97 Neuro 301</td>
<td>Exploring the Brain 3 B&amp;S Faculty</td>
</tr>
<tr>
<td>S 98 Neuro 303</td>
<td>Neurochemistry 3 Sorg/Harding</td>
</tr>
<tr>
<td>F 98 Neuro 404</td>
<td>Neuroanatomy 3 White/Churchill</td>
</tr>
<tr>
<td>S 99 Neuro 405[M]</td>
<td>Neuroscience of Behavior 3 Ulibarri/See</td>
</tr>
<tr>
<td>S 99 Neuro 406[M]</td>
<td>Research Techniques in Neuroscience 2/1 Speth &amp; Lab</td>
</tr>
<tr>
<td>F 99 Neuro 430</td>
<td>Principals of Neurophysiology 4 Simasko/Fung/Moffett</td>
</tr>
<tr>
<td>S&amp;F Neuro 499</td>
<td>Special Problems 4</td>
</tr>
</tbody>
</table>

_Year 3 & 4 Total 47_

**Major Elective Courses—Five Credits**

| Neuro 201 | The Brain and Society 3 Patterson |
| VAn 308 | Functional Anatomy of Domestic Animals 3 Burns |
| Psych 384 | Psychology of Perception 3 Psyh Faculty |
| S 99 Neuro 436 | Fundamentals of Synaptic Organization 3 Kalivas |
| S 99 Neuro 464 | Integrative Neural-Endocrine Function 3 Briski |
| S Psych 473 | Advanced Physiological Psychology 3 Craft |

_Major Elective Credits 5_

[M] Satisfies writing in the major requirement.
Core Prerequisites

<table>
<thead>
<tr>
<th>Years 1 &amp; 2</th>
<th>[GER]</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio Sci 103,104</td>
<td>[B] Introduction to Biology</td>
<td>4/4</td>
</tr>
<tr>
<td>Chem 105,106</td>
<td>[P] Principles of Chemistry</td>
<td>4/4</td>
</tr>
<tr>
<td>Chem 240</td>
<td>Elementary Organic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Math 140</td>
<td>Math for Life Science (Calculus)</td>
<td>4</td>
</tr>
<tr>
<td>Physics 101,102</td>
<td>[P] General Physics</td>
<td>4/4</td>
</tr>
<tr>
<td>Psych 105</td>
<td>[S] Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Year 1 & 2 Total 35

Major Core Courses

<table>
<thead>
<tr>
<th>Years 3 &amp; 4</th>
<th>Credits</th>
</tr>
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<tr>
<td>BC/BP 364</td>
<td>Introductory Biochemistry 4</td>
</tr>
<tr>
<td>GenCB 301</td>
<td>General Genetics 4</td>
</tr>
<tr>
<td>GenCB 450</td>
<td>Introduction to Cell Biology 3</td>
</tr>
<tr>
<td>Zool 353</td>
<td>Mammalian Physiology 4</td>
</tr>
<tr>
<td>Psych 311</td>
<td>Statistics 4</td>
</tr>
<tr>
<td>Psych 312</td>
<td>Experimental Methods in Psychology 4</td>
</tr>
<tr>
<td>Neuro¹ 301, 302L</td>
<td>Exploring the Brain &amp; Laboratory 3/1</td>
</tr>
<tr>
<td>Neuro² 303</td>
<td>Neurochemistry 3</td>
</tr>
<tr>
<td>Neuro³ 404</td>
<td>Neuroanatomy 3</td>
</tr>
<tr>
<td>Neuro⁴ 405</td>
<td>Neuroscience of Behavior 3</td>
</tr>
<tr>
<td>Neuro⁵ 406</td>
<td>Research Techniques in Neuroscience 2</td>
</tr>
<tr>
<td>Neuro</td>
<td>430 General and Comparative Neurophysiology 4</td>
</tr>
<tr>
<td>Neuro⁶ 499</td>
<td>Special Problems 4</td>
</tr>
</tbody>
</table>

Plus 5 credits from the list of electives (see page 9). 5

Year 3 & 4 Total 51

¹New course Curricular Change Form submitted 9/96. Neuro 301/302L is a prerequisite for all higher level neuroscience courses required in the major.

²New course. Curricular Change Form submitted 10/96

³New course. Curricular Change Form submitted 9/96

⁴New course.

Major Elective Courses

At least five credits selected from the courses listed below, in addition to the core on the previous page, must be included in the student's program. The selection from among these courses is at the discretion of the student and her or his advisor.

| Neuro 436 | Synaptic Organization of the Brain 3 |
| Neuro 464 | Brain Endocrine Interaction 3 |
| Neuro 505 | Generation, Degeneration, Regeneration in the Nervous System 2 |
| Neuro 513 | Advanced Neuroanatomy 4 |
| Neuro 528 | Behavioral Mechanisms in Physiology 3 |
| Neuro 529 | Neurochemistry 3 |
| Neuro 534 | Advanced Neurophysiology 3 |
| Neuro 537 | Physiology & Biochemistry of Neuropeptides 3 |
| Neuro 538 | Neuroendocrinology 3 |
| Neuro 540 | Neuropharmacology 3 |
| Neuro 543 | Ion Channels 3 |
## C. Faculty

### Table 1—Undergraduate Neuroscience Faculty Profile

<table>
<thead>
<tr>
<th>Name</th>
<th>Area of Specialty</th>
<th>Home Department</th>
<th>Rank</th>
<th>Years at WSU</th>
<th>Highest Degree</th>
<th>Status</th>
<th>% Effort*</th>
</tr>
</thead>
<tbody>
<tr>
<td>(New Faculty)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Barnes, Charles D.</td>
<td>Comparative Neuroanatomy Electrophysiology</td>
<td>VCAPP</td>
<td>Assist Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenure Track</td>
<td>1.0</td>
</tr>
<tr>
<td>*Ritter, W. Sue</td>
<td>Behavioral Neuroanatomy</td>
<td>VCAAP</td>
<td>Professor Chair</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.50</td>
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<tr>
<td>**Patterson, Robert</td>
<td>Depth and Motion Perceptions</td>
<td>Psychology</td>
<td>Assistant Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.40</td>
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<tr>
<td>Harding, Joseph</td>
<td>Neuropeptide Chemistry</td>
<td>VCAPP</td>
<td>Professor</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.30</td>
</tr>
<tr>
<td>See, Ronald</td>
<td>Neuropsycopharmacology</td>
<td>Psychology</td>
<td>Associate Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.30</td>
</tr>
<tr>
<td>Sorg-Ingermann, Barbara</td>
<td>Neuropharmacology</td>
<td>VCAPP</td>
<td>Assist. Professor</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Untenured</td>
<td>.30</td>
</tr>
<tr>
<td>Briski-Sylvester, Karen</td>
<td>Neuroendocrine-Reproduction</td>
<td>VCAPP</td>
<td>Associate Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.20</td>
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<tr>
<td>Moffett, Stacia B.</td>
<td>Invertebrate Neurophysiology</td>
<td>Zoology</td>
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<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.20</td>
</tr>
<tr>
<td>Ritter, Robert</td>
<td>Visceral Neurobiology</td>
<td>VCAPP</td>
<td>Professor</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.20</td>
</tr>
<tr>
<td>Burns, Gilbert</td>
<td>Neurochemistry</td>
<td>VCAPP</td>
<td>Assistant Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
<tr>
<td>Churchill, Lynn</td>
<td>Neuropharmacology</td>
<td>VCAPP</td>
<td>Associate Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Untenured</td>
<td>.10</td>
</tr>
<tr>
<td>Craft, Rebecca</td>
<td>Neuropharmacology</td>
<td>Psychology</td>
<td>Associate Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenure Track</td>
<td>.10</td>
</tr>
<tr>
<td>DeSantis, Marc</td>
<td>Neuroanatomy</td>
<td>University of Idaho</td>
<td>Professor/Adjunct</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
<tr>
<td>Fung, Simon</td>
<td>Electrophysiology of Brainstem</td>
<td>VCAPP</td>
<td>Associate Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Untenured</td>
<td>.10</td>
</tr>
<tr>
<td>Kalivas, Peter</td>
<td>Neuropharmacology</td>
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<td>Professor</td>
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<td>Ph.D.</td>
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<td>.10</td>
</tr>
<tr>
<td>Laskowski, Michael</td>
<td>Developmental Neurophysiology</td>
<td>University of Idaho</td>
<td>Professor/Adjunct</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
<tr>
<td>Reddy, Venkat</td>
<td>Neuroanatomy</td>
<td>VCAPP</td>
<td>Professor</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
<tr>
<td>Sarkar, Dipak</td>
<td>Neuroendocrinology</td>
<td>VCAPP</td>
<td>Professor</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
<tr>
<td>Schenk, James</td>
<td>Neurochemistry</td>
<td>Biochemistry</td>
<td>Associate Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
<tr>
<td>Simasko, Steve</td>
<td>Membranes</td>
<td>VCAPP</td>
<td>Assistant Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
<tr>
<td>Speth, Robert</td>
<td>Receptor Neuropharmacology</td>
<td>VCAPP</td>
<td>Associate Prof</td>
<td></td>
<td>Ph.D.</td>
<td>Perm. Tenured</td>
<td>.10</td>
</tr>
</tbody>
</table>

*The table includes all faculty members with a focus on neuroscience, their home departments, ranks, years at WSU, highest degrees, status, and percentage of effort.*
### D. Students

**Recruitment**

Recruitment for the undergraduate program will be coordinated through the program's Recruitment Committee. This committee is comprised of three neuroscience faculty members and a staff member (VCAPP's Principal Assistant) whose membership is on an ex-officio basis. Faculty committee members serve a staggered two-year term.

The committee has already developed a homepage on the World Wide Web ([http://www.vetmed.wsu.edu/neurosci.html#intro](http://www.vetmed.wsu.edu/neurosci.html#intro)) which introduces VCAPP's Programs in Neuroscience. The homepage includes program requirements, faculty biographies, and application instructions among other items.

In order to better recruit minority students, the Program Director will work with Dr. Ken Meyers, College of Veterinary Medicine Associate Dean of Student Affairs, who is the Principal Investigator of several programs for minorities and undergraduates in the College of Veterinary Medicine.

Our recruitment efforts will also be assisted by the WSU Multicultural Student and various university recruitment officers. The Multicultural Student Services unit has an African American Student Center, a Chicano/Latino Student Center, a Native American Student Center and an Asian/Pacific American Student Center. These centers have counselors of the appropriate ethnic backgrounds. The Neuroscience Recruitment Committee will work with the WSU recruitment officers, the Multicultural Student Services unit contacting and meeting with individual centers as well as high school and junior college counselors in the Northwest to promote the Neuroscience Program.

However, the most important recruitment activity will consist of visitations by the neuroscience faculty to Northwest high schools and junior colleges to discuss the undergraduate program, answer students’ questions, and encourage counselors to tour WSU and VCAPP facilities.

When approval is imminent, the Program Director will submit grant proposals to the National Science Foundation for Undergraduate Course and Curriculum Development, the National Institutes of Health for program funding such as NINDS High School Student Summer Program in the Neurosciences, High School Student Summer Research Fellowships in the Neurosciences, Research Supplements for Underrepresented Minority High School Students,
and Research Supplements to Promote the Recruitment of Individuals with Disabilities into Biomedical research Careers. In addition, other proposals will be made requesting funds to cover recruitment, teaching assistant salaries, and teaching equipment.

To help retain students in the program, VCAPP will work with several professional organizations capable of assisting us with this goal. One such organization is Women in Math, Science and Engineering (WIMSE). This organization has several programs currently in place to assist undergraduate women students with the transition from high school to college. WSU facilitates a number of WIMSE's programs such as the residence hall program (Gannon-Goldsworthy) and the College of Engineering's Bridge Program.

The residence hall program groups undergraduate women majoring in science, math or engineering into homogeneous living groups. Entering freshman students who have selected a science major, for instance, are selected roommates with similar academic goals. Students in this type of arrangement have similar demands on their time, take similar classes and often end up supporting each other. The WIMSE program also arranges for tutors for entry-level courses, computer labs, and guidance services.

Engineering's "Bridge" program brings freshman to school one week early for a special orientation in association with the Alive! Summer Orientation program. Students are acclimated to the university environment through programs such as college course expectations, forming good study habits, extracurricular activities, and group enrolling. Statistics show that students participating in programs like these have a greater success rate.

**Projected Enrollment**

In April, 1996, approximately 1,000 WSU students were surveyed to determine the level of interest students had in a B.A. in neuroscience. Appendix C contains a copy of the survey and a table of the results. Based on these results, we anticipate that there will be a slight shift of students into the undergraduate neuroscience program from other WSU programs during the first two years of the program. In the second and third years, we anticipate the number of students majoring in Neuroscience enrolling at WSU or transferring from other colleges or universities will equal the anticipated enrollment in the program.

Table 2 projects student enrollment in the program during a four year period. By the fourth year, the program will have reached its full enrollment.

**Table 2 - Projected Student Enrollment for 4 years**

<table>
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<tbody>
<tr>
<td>Headcount</td>
<td></td>
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</tr>
<tr>
<td>Academic Year</td>
<td></td>
<td></td>
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<tr>
<td>Summer</td>
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<td>Academic Year</td>
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<td>Summer</td>
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<tr>
<td></td>
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<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>150</td>
<td>250</td>
<td>350</td>
</tr>
</tbody>
</table>

* Year in which the program plans to reach full enrollment.
E. Administration

Program Directorship

The undergraduate program will work through the administrative structure in the Department of Veterinary and Comparative Anatomy, Pharmacology and Physiology (VCAPP), and through the neuroscience faculty comprised of faculty from departments across campus who hold a joint appointment in VCAPP. Due to the nature of neuroscience, the undergraduate neuroscience faculty and graduate neuroscience faculty are one and the same.

The program is under the immediate supervision of the Program Director. The director position is voted on by the Neuroscience Faculty for a three year term. One year prior to the end of the director's term, a director-elect is selected so that there will always be a one year overlap in administration. This will provide continuity in the program. The director and director-elect are selected from the Neuroscience Faculty of whom all are eligible for nomination and election to the position.

Any WSU faculty member with sufficient interest and credentials may become a member of the Neuroscience Faculty, they need only apply to be included.

To better handle the administrative and support functions anticipated, the VCAPP Administrative Manager and Program Coordinator positions will be increased by 50 percent. (This will require an internal reallocation of funds.) Table 3 includes descriptions of the additional responsibilities for each person.

Table 3 - Administrative and Support Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Responsibilities</th>
<th>% Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Becky Morton</td>
<td>Administrative Manager</td>
<td>Coordinate, track and administer changes in curriculum, policy, and scholarship award process for the Undergraduate NS Program</td>
<td>.50 FTE</td>
</tr>
<tr>
<td>Pam Colbert</td>
<td>Program Coordinator</td>
<td>Coordinate distribution of recruitment and application materials; coordinate recruitment of prospective students; assist in scholarship awarding process; monitor progress of students through completion of degree.</td>
<td>.50 FTE</td>
</tr>
</tbody>
</table>

TOTAL FTE STAFF DEVOTED TO DEGREE PROGRAM: 1.0

III Program Assessment

A. Assessment Plan

The program will be assessed in the following manner:

1. **Collection of Baseline Information.** Admissions and enrollment data on program participants will be summarized and compared with data on other WSU students to determine area of similarities and differences. This information may be used to make program modifications. In the future, other baseline data such as writing and mathematics placement examination scores, and entering student surveys may so be included in the comparison.
2. **Intermediate Assessment of Quantitative and Writing Skills.** Students in the program will be included in any intermediate assessments conducted by the University.

3. **End-of-Program Assessment.** The University has established a policy governing end-of-program assessment in the major. Students in the proposed program will be compared with the performance and outcomes of other WSU students.

4. **Post-Graduate Assessment of Satisfaction of Alumni and Employers.** Program participants who graduate from this program will be included in the annual survey of graduates. They will also be eligible for inclusion in any employer surveys conducted for assessment purposes.

5. **Periodic Program Review.** A biennial unit review is required by WSU for all academic units. This is a self-study conducted by each academic program and is used by the University to measure progress toward unit goals and objectives. There is no actual accreditation mechanism for evaluation of the Neuroscience Program. However, the Association of Neuroscience Departments and Programs (ANDP) has agreed to perform periodic program evaluations which the Program Director and Neuroscience Faculty will be held accountable for this review.

**B. 3, 5 and 10 Year Formal Evaluation of Program**

Rather than wait three years to find out if the undergraduate program is successful, the program will take advantage of the Program Director's membership in the ANDP as mentioned above.

At years three and five, a self-evaluation will be performed and a committee from the ANDP will review and recommend changes. In addition, the Program Director will meet yearly with ANDP members at the annual meeting where discussions of this type are the subject of special sessions.

**MEMORANDUM**

TO: Glen Hower, Chair, Academic Affairs Committee  
CC: Senate Office  
From: J.R. Powers, Chair, Library Committee  
Date: February 4, 1997  
Re: Neuroscience Degree

The Senate Library Committee met Wednesday January 29, 1997 to evaluate the proposed undergraduate degree in Neuroscience. The committee voted to approve the proposal. Note however that the librarian preparing the report to our committee concerning the adequacy of our collection expressed some concern with the ability of the library to support this program in the future. In the same area the committee notes that if the program is as specified in the proposal (several hundred undergraduates in the next few years), that the number of hours that the area library serving this area (Vet-Pharmacy) may need to be increased. The latter is not only a reflection of the proposal but is related to the recent library survey in which a major concern of students was the number of library open hours.
TO: Faculty Senate Library Committee  
FROM: Vicki Croft, Veterinary Medical/Pharmacy Library  
DATE: December 17, 1996  
SUBJECT: Library Resources to Support an Undergraduate Major in Neuroscience

1. Both the Veterinary Medical/Pharmacy (VPL) and Owen Science and Engineering Libraries have maintained collections and services to support the neurosciences for many years. Currently the Libraries maintain subscriptions to neuroscience journals such as *Brain Research, Journal of Comparative Neurology, Journal of Neurosciences*. Over 40 neurosciences journals are currently received in VPL alone. During the past three years new books in neurosciences have been purchased, many of which were purchased with special funds from Alcoholism and Drug Abuse Program. Since 1994 interlibrary loan photocopies have been ordered and received directly from VPL using DOCLINE.

2.  
   a) The current journal subscriptions are adequate to support the Neuroscience Program at the undergraduate level. The need to maintain these expensive subscriptions is vital for a viable neurosciences program at all levels.
   b) The current monographic collection has been developed using regular VPL and Owen book funds, supplemented by funding from the Alcoholism and Drug Abuse Program. However, it is necessary to continue to buy in this area because of new scientific developments and monographs are particularly useful at the undergraduate level. With the escalating costs of journals (e.g. 14%), there has been increasing pressure to shift funds from the monographic budget to serials.
   c) No media needs have been identified, other than additional public use workstations.

3. Although some specialized support is currently available, the growing need for additional reference librarian assistance is becoming apparent, as more new programs are developed and enrollment increases. Support for the Libraries’ collections, from ICR or otherwise, to enhance the collections may be crucial in the near future.

4. Current library services such as free Internet access to MEDLIFNE, *Current Contents*, and other such databases via the University of Washington, offer good support for the program. Direct ordering and receipt of interlibrary loan photocopies supplement current resources.

5. Not applicable

6. In short the current collections and services are adequate, but with the rapidly escalating costs of biomedical journals, the ability to sustain the collections at an adequate level is questionable. Unfortunately neuroscience books and journals are among the most costly, and often photocopies or faxes of the grayscales, plates, and color images are inadequate substitutions for original copies. Supplemental funding from neuroscience program grants, as indicated (p. 16, Table 4), will help the library meet these needs.

MEMORANDUM

TO: Karen DePauw and Academic Affairs Catalogue Subcommittee  
FROM: Sue Ritter, Director-elect, Program in Neuroscience  
SUBJECT: Revisions to Undergraduate Degree Proposal in Neuroscience

After reviewing the recommendations made by the Faculty Senate Academic Affairs Committee and Catalog in Neuroscience has made the following changes to the undergraduate degree
<table>
<thead>
<tr>
<th>Page Number</th>
<th>Heading</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Degree-Granting Unit Program in Neuroscience</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Program Description</td>
<td>Deleted footnote 1</td>
</tr>
<tr>
<td>7</td>
<td>General Program Requirements</td>
<td>Other elective courses changed to 8 credits.</td>
</tr>
<tr>
<td></td>
<td>Major Core Courses</td>
<td>Graduation Total adjusted to 120 credits.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zool 352 replaced GenCB 450</td>
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<tr>
<td></td>
<td></td>
<td>Neuro 405 and 406 designated as M courses (meets writing in the curriculum requirements)</td>
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<tr>
<td></td>
<td></td>
<td>Neuro 301 - deleted lab. Lowered to 3 credits.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neuro 406 - Added lab. Raised to 2/1 credits.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neuro 301, 303, 404 and 409 courses have been approved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neuro 405, 406 and 430 course change forms have been submitted</td>
</tr>
<tr>
<td>9</td>
<td>Major Elective Courses</td>
<td>Added the following courses to the list: Neuro 201, VAn 308, Psych 473.</td>
</tr>
<tr>
<td>11</td>
<td>Faculty Profile Table</td>
<td>Dr. J. Schenk's home department changed to Chemistry.</td>
</tr>
<tr>
<td>17</td>
<td>External Expert Reviewers</td>
<td>Changed notation for director-elect's term in office.</td>
</tr>
<tr>
<td></td>
<td>Appendix A Requirement Sheet</td>
<td>Added the following names to the list: Bartley Hobeal, Ph.D., Thomas Scott, Ph.D., James Gibbs, MD. Removed Julio Ramirez, Professor, from the list.</td>
</tr>
<tr>
<td></td>
<td>Appendix B: Major Curricular Change Forms</td>
<td>Updated with changes as listed above.</td>
</tr>
<tr>
<td></td>
<td>Appendix D: Faculty Resources and Vitas</td>
<td>Added new electives.</td>
</tr>
</tbody>
</table>

The changes listed above address the following specific concerns communicated to me with Julia Pomerenk and Scott Wherland regarding the curriculum for the undergraduate neuroscience degree.

1. **That the total number of credits required for graduation be reflected in the General Program Requirements.**

   This was done.

2. **That the student would be required to take 500 level courses to complete the credit requirements for the major.**

   This was not the case since the two 400 level electives listed in the proposal would have been sufficient to fulfill the requirements. However, there was some inconsistency noted on different pages of the proposal. In addition, 3 more electives were added: Neuro 201, Van 308 and Psych 473. This brings the total to 15 elective credits below the 500 level. Five elective credits are needed.

3. **That Neuro 201 could not be taken for credit in the major.**

   This course is now listed as an elective.
(4) **Other.**

Zool 352 replaced GenCB 450, so that both 352 and 353 are now included as core courses. This was done in response to changes currently being made in the Zool course series. Zool 353 is now being taught as the second course in a 352/353 sequence. Thus, 352 would be a "hidden" requirement. Since 352 covers some of the same cell biology students need for the neuro core, it was felt that GenCB 450 would not be needed. In addition, this change has the advantage of reducing the number of 400 level courses required for the neuro major.

In addition to the concerns about the curriculum requirements, several additional concerns or questions were raised.

(1) **The number of prerequisites is high.**

Students are not required to take all of the prerequisite courses before beginning the neuroscience core. The foundation course in the core, Neuro 301, requires only Chem 102 and BioS 103. Neuro 405 and 406 require only Neuro 301 (and the prerequisites for that course). Thus, students can sample the courses with very little commitment to the program and can also make progress on their major while completing prerequisites for other core courses and electives. Also, it should be noted that the degree requirements were structured, in part, to also satisfy pre-professional requirements.

(2) **Are faculty listed in the program informed of and able to perform the designated functions?**

All have been informed of the program. The program proposal was distributed to all neuroscience faculty. A meeting was held on Feb. 11 to update everyone on the status of the proposal. Courses in the curriculum have been designed and submitted by the faculty who will be teaching them. Several of the faculty listed are currently teaching courses in the graduate neuroscience program (Stacia Moffett and Mark DeSantis). Since these will be available as electives in the undergraduate program, they were included in the list of and a percentage of FTE representing their commitment was listed. Dr. Mike Laskowsi’s FTE is at this time a "potential contribution" as the course he would like to teach is still in the development phase. Similarly, Dr. James Schenk's FTE designation is for "potential contributions", but also reflect his stated interest in participating and contributing to team taught courses as the program gets underway.

(3) **How were the projections of student participation in the program made and are they realistic?**

The projected enrollment in the program was based on the results of the student survey in the appendix of the proposal. Four classes in chemistry and two in psychology filled out questionnaires. Of this relatively small sampling base, 85 students indicated a *definite* interest the neuroscience major and 116 indicated a *definite* interest in a minor. Two hundred eleven additional students indicated a *possible* interest in a major and 266 indicated a *possible* interest in a minor. Many
more were interested in taking classes in this field. We have no way of knowing whether these responses provide a basis for realistic projections. However, they provide a strong index of interest in the program. In addition, the proposal was submitted, we have been swamped with inquiries from students on the Pullman and branch campuses about the program. For these reasons, the projections seem at least a reasonable estimate.

(4) **Should the program be centered in one department?**

The undergraduate neuroscience program is an extension of the existing Neuroscience Program which offers a PhD in neuroscience. This is a campus wide program, and also neuroscientists at UI. By definition, programs are separate from departments. The impetus and start-up commitments for the undergraduate program will come primarily from the College of Veterinary Medicine and Humanities, since most of the neuroscience faculty involved in the start-up phase of the program are in the Department of VCAPP and Psychology. Nevertheless, the concept of the program is that it will be campus-wide and the structure of the program as outlined is consistent with that concept. Additional organizational matters are being addressed at the deans’ level currently and will gain momentum if the program is approved.

*****

Motion carried.

4. Recommendation from Academic Affairs Committee for a B.A. in Sport Management **Exhibit G** from 4/3/97 is as follows:

**MEMORANDUM**

TO: Richard Crain, Executive Secretary Faculty Senate  
FROM: Julia Pomerenk, Assistant Registrar  
FOR: Academic Affairs Committee  
DATE: 28 March 1997  
SUBJECT: Bachelor of Arts in Sport Management

At its meeting today, the Academic Affairs Committee (AAC) approved the Bachelor of Arts in Sport Management, effective fall 1997.

Members of the AAC approved the BA in Sport Management following discussion with representatives from the Educational Leadership and Counseling Psychology Department and consideration of the proposal and the external reviews received in response to the proposal. The BA in Sport Management, compared to the former sport management major (which was discontinued as a result of reconfiguration under a previous department), was noted as including more sport management (SpMgt) courses and fewer recreation and leisure studies (RLS) courses and offering stronger individual options.

At this time, Faculty Senate review and approval is recommended.
EXECUTIVE SUMMARY

DEGREE TITLE

Bachelor of Arts in Sport Management

DATE OF IMPLEMENTATION

Fall 1997

ESTIMATED ENROLLMENTS

FTE headcount of 25 students initially, projected enrollment is 65 students by the third year.

NEED FOR PROGRAM

The opportunity to major Sport Management will provide students in the State of Washington with a unique course of study, available only at WSU. Student demand was high before the major was discontinued; interest remains high, and notices of internship and employment placements continue to be received.

Sport is an institution in the country. Economically, it is one of the 25 largest industries. Graduates with management and leadership skills and a sense of social responsibility will contribute to the direction of the sport industry in the future.

Traditionally, women and ethnic minorities have been underrepresented in sport leadership and sport management roles. A Sport Management degree will enable these students to meet their career goals by giving them the qualifications for a variety of entry level positions.

ESTIMATED COST/SOURCE OF FUNDING

No new state funds are requested. Classes and faculty are in place for initiation of the program. Internal relocations within the College will support future growth.

DELIVERY MECHANISM

Coursework will be delivered on the Pullman campus, where intramural sports, intercollegiate athletics, and community sports settings are available. Internship sites will be located throughout the state/region and will be supervised by WSU Pullman faculty.

Proposal to Offer the Bachelor of Arts in Sport Management

WSU Pullman

INTRODUCTION

Sport is institutionalized in our society, as evidenced by television programming, newspaper coverage, and the sport activities in our schools, colleges, and communities. Leadership on sound knowledge and principles, is important if sport is to make a positive contribution to our
society. The original Sport Management major, discontinued in 1993, sought to provide students with the leadership skills to take their place in, and contribute to, sport in our society. This proposal seeks to reinstate the Sport Management major, and to acquire a degree in Sport Management.

I. PROGRAM NEED

A. Relationship to Institutional Role and Mission

This program of study places an emphasis on management issues in sport and encourages responsibility. Ethics and moral development are examined, which will benefit students in both their personal and professional lives. Skills and knowledge are stressed through formal and experiential opportunities, giving the students the tools for decision-making and self evaluation. The ability to communicate, both orally and in writing, is emphasized and is related to professional requirements. Students have a variety of opportunities to meet and work with persons from other cultures through their participation in the sport arena. A sense of service to the community is valued.

B. Need for Program

1. Student Demand: High student demand is anticipated, based on the demand for the program before it was discontinued, as well as the continued interest of resident students and the inquiries received from prospective students. There were 118 majors and pre-majors in the program 5 years after it was established (1985). A 1989 survey of majors showed that 60% of the majors would not have attended WSU, had it not been for the Sport Management major. A more recent informal survey of the introductory class showed that a high percentage would have preferred to major (rather than minor) in Sport Management, had the major been available. Inquiries about the program are received at the rate of 1-3/week from students who have heard about WSU and the Sport Management program.

Student demand reflects the fact that few Sport Management programs are available at other state institutions. (See Relationships with other Institutions.) Also, WSU offers a PAC 10 athletic program and one of the largest Intramural programs west of the Mississippi. These programs provide a win-win situation for both students and the sports programs. Students are attracted to WSU because of these factors. In turn, the programs benefit from students who fulfill both laboratory and practicum requirements in these programs. These experiences provide hands on experience valued by potential internship supervisors and employers.

3. Employment: Students should find employment positions similar to those held by past graduates of the program (See Appendix D). In general, initial employment is found in such as professional d minor league sports, college and university athletics, facility the YMCA/YWCA, community sports programs, boys and girls clubs, retail sales, governance organizations, and the private sport business. Requests for employment and to be received from local colleges and universities, the Ys, and several professional sports organizations. In most cases, there is no way to fulfill

4. Diversity: Ethnic minorities and women are underrepresented in management organizations. This proposal seeks to provide avenues for these career paths. A prior survey (1989) showed the enrollment of ethnic minorities in Sport Management to be 15%, at that time twice the
percentage of ethnic minorities at WSU. Enrollment of women in Sport Management had increased from 25% to 33% of the total students, at the time the program was discontinued.

Women and minority students have expressed their appreciation of the opportunity to join the “front office” of sport organizations, their opportunity to be a part of a growing field, and that finding the right major was a factor in their staying in school and attaining success.

C. Relationship to other Institutions

The proposal to offer a degree and major in Sport Management will provide a unique opportunity for students in the State of Washington. A review of catalogs from the four-year institutions in State of Washington reveals little in the Sport Management area. Central Washington University offers a major in Fitness and Sport Management (BS), but the emphasis seems to be on fitness management. Most courses are science oriented and drawn from the physical education offerings. This is quite a different emphasis from the WSU proposal. (See Appendix A.) Pacific Lutheran University offers a Sports Administration specialization of 16 credit hours. Again, this includes physical education classes, first aid, and is supplemented by 2 electives. Western Washington offers a BA in Physical Education/Exercise and Sport Studies, with the main emphasis on fitness/exercise. No other institution offers any program close to the Sport Management degree and major contained in this proposal.

Sport Management at WSU has its own specific course work, designated by the SPMGT prefix. It is designed for entry into a variety of sports professions, not for the fitness/exercise area. In this respect, there seems to be no parallel in the state, perhaps none in the Pacific Northwest. Thus the request to award a BA degree.

4. Effective use of Resources

Currently WSU offers a minor in Sport Management. Approximately 40 students are enrolled in the minor. Additional students can be accommodated in the classes now offered and some classes can be taught each semester rather than once a year. Reinstating the Sport Management major will provide access to classes of interest to more students during this time of increasing enrollment new major students, added to the current number of minors, will make more effective use of time involved in teaching and advising.

This proposal requires no laboratory resources. In fact, because of experiential requirements, the Sport Management major will benefit athletic and intramural programs as students assist with various aspects of those activities (event management, marketing, sports information, intramural supervision and officiating).

II. PROGRAM DESCRIPTION

A. Goals and Objectives

The degree and major in Sport Management will provide students with a broad background in sport studies and an opportunity to select an area of specialization which best meets their career objectives and interest. Flexibility exists in the choices of General Education Requirements, the selection of a specialization, and the option of a variety of classes within each specialization. The curriculum is designed for students who desire an entry level position in sport organizations
or programs, or for those who may wish to pursue an advanced degree in areas where it may be required such as college or university athletics. Students will be able to complete their undergraduate degree in four years, with a continued emphasis on excellent advising.

B. Curriculum

1. Course of Study: Sport Management majors will complete a core course of study plus a specialization area which will lead to a supporting minor. Current, full-time faculty have the appropriate expertise for delivering the core Sport Management courses. Areas of specialization consist of existing minors and existing courses offered on campus. (See Appendices A & C) for specific courses, descriptions of courses, and teaching rotation.)

2. Admission Requirements: The admissions requirements will be the current WSU requirements as stated in the WSU Catalog.

3. Accreditation: The accrediting body for Sport Management is a joint agency of the North American Society for Sport Management (NASSM) and the National Association for Sport and Physical Education (NASPE). WSU will initiate the accreditation process in Year 3 of the program. Current course work meets most accreditation requirements, with the possible exception of marketing and finance. Sport Management faculty FTE already meets the FTE requirements.

4. Partnerships: Partnerships will be developed with representatives of sports organizations through Internship placement. These organizations, primarily within the State of Washington, will include community organizations such as Boy's and Girl's Clubs, the YMCAs and YWCAs, college and university athletic and intramural programs, professional sports, and private sector agencies. These partnerships for Internship placement will need to remain flexible as they are designed to meet the needs and career interests of the students.

An Advisory Board will be established. This will include practitioners, internship supervisors and sport administrators. Advisory board members will provide input on preparation of sport professionals and advice on Internship placement. Members of the Advisory Board and other practitioners will be scheduled to speak to classes and to alumni groups.

Partnerships will be established with the Washington State University athletic program and the Washington State University intramural program. These programs will provide laboratory and practicum experiences and on-site supervision for Sport Management students. Additional partnerships will be sought with sport programs in the Pullman community.

Good working relationships already exist with WSU programs in Business, Communications and Leadership Studies, where course work in the Areas of Specialization will be taken. Each unit will oversee its respective minor and work to ensure enrollment opportunities for Sport Management students.

C. Faculty

Instruction and advising for the Sport Management core courses will originally be provided by 2.2 FTE faculty in the Department of Educational Leadership and Counseling Psychology. The teaching load for these faculty would be the same as that now required to provide the Sport
Management minor. A third full-time faculty member, added in year 3 of the program, would help meet the demands of additional students and the scheduling of additional sections of the classes. This new hire would lend expertise in areas that would strengthen the bid for accreditation.

Internal reallocation of a teaching assistant (year 1) will provide support in lab supervision (Sport Program class), supervision of practica and internships, and assistance with Writing in the Major (M) classes. This is a natural reallocation because of the interest and enrollment in the graduate Athletic Administration specialization.

Advising will be assigned to current faculty members. As numbers of students increase, a return to the very successful peer advising system used previously will be implemented. The peer advising system provides leadership opportunities for upper classmen, while leaving the ultimate decisions about classes and programs with the individual student and the advisors.

Table 1 - Program Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Status</th>
<th>% Effort in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durrant, Sue</td>
<td>Assoc.</td>
<td>Full</td>
<td>100%</td>
</tr>
<tr>
<td>Washburn Joanne</td>
<td>Assoc.</td>
<td>Full</td>
<td>100%</td>
</tr>
<tr>
<td>Adams, Sam</td>
<td>Full</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>New Hire</td>
<td>Asst.</td>
<td>Full</td>
<td>100%</td>
</tr>
</tbody>
</table>

TOTAL FTE FACULTY IN DEGREE PROGRAM: 3.20

D. Departmental Support Faculty

The Department offers an interdisciplinary Leadership Studies minor, one of the proposed Areas of Specialization. This minor provides a natural choice of specialization of Sport Management majors. The faculty in Leadership Studies, Dr. Jack Bums and Dr. Lee Jones, provide support through their areas of expertise in leadership styles, critical thinking, and team building.

E. Students

1. **Projected enrollments:** Based on enrollment figures from the previous major, it seem reasonable to expect enrollment to reach 100 FFE in year 5, perhaps earlier. The previous major was initiated in 1985, and 118 majors and pre-majors were being advised 5 years later. In 1985, Sport Management was virtually unknown in the State of Washington and in the Pacific Northwest. During that time (1985-1990), the only recruitment was word-of-mouth and the listing of the program in one national publication. Students from other states and countries (Japan, Finland, Greece) created a wealth of cultural diversity within the major group.

Recruitment efforts would include national listings, direct contact with the community, state of Washington, and efforts to reach the state high schools through direct communication and work with the Office of Admissions, including minority recruitment efforts. Of recruitment efforts, combined with the needs of students currently enrolled and wishing to major yield 25 FTE the first year of the program. Conservative estimates place the enrollment at 65 in the third year of the program.
Table 2 - Size of Program

<table>
<thead>
<tr>
<th>No. of Students</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTE</td>
<td>25</td>
<td>40</td>
<td>65</td>
<td>100</td>
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2. **Expected time of program completion:** The great majority of students will be full time, in residence on the WSU campus. Guided by a four year plan for completion of degree, the students will be able to finish in 4 years. The only exception to this is the student who, for professional and seasonal reasons, delays the internship until a later term. Many internships in baseball occur during the summer, as do many community sport programs. Conversely, most internships related to schools and colleges occur during the academic year. The student is likely to enroll when the best educational experience, and the best internship, is available.

Good advising has been, and will be, stressed, which is the key to program completion. Full use of summer school, correspondence course work, and enrollment at the branches will be utilized for those students having special scheduling needs due to work or other commitments.

3. **Diversity:** The Sport Management faculty have a long history of commitment to diversity, fully realizing the need for involvement of women and people of color in sport. Equity in sport had been the topic of a number of presentations by the faculty. Several courses examine the history of discrimination and the current efforts to overcome that history. Class coverage of past problems provides an opportunity to increase awareness and to add to the solution. Women and ethnic minorities are encouraged to pursue leadership positions within the program and on campus.

The faculty will participate in College minority recruitment efforts and will pursue all avenues to reach all students who may be interested in the Sport Management program. The history of high interest and enrollment by women and students of color leads to the conclusion that the program will continue to support the diversity initiatives of WSU.

**F. Administration**

The general coordination of the Sport Management degree and major will be provided by one of the senior members of the faculty, under the direct supervision of the chair of the Department of Educational Leadership and Counseling Psychology. The coordinator will be responsible for curriculum, course scheduling, assignment of teaching loads and advisees, the peer advising system, internship placement and recruitment. In consultation with the chair, the coordinator will oversee the accreditation process. The internal reallocation of an Office Assistant III (.5 FTE) will lend clerical and program support to the department office. Duties will include general faculty support, student records, graduate lists (including Senior To Do lists), and minor completion forms), inquiries from potential students, recruitment brochures, and program assessment records.

**PROGRAM ASSESMENT**

The requirements of the Sport Management program provide a variety of instruments which lend themselves to assessment of student progress during the undergraduate career. Additionally, typical university measures and requirements will be incorporated in the individual student's records.
1. **GPA Component:** The GPA of each student will be recorded each semester. Early indications of weakness will lead to increased emphasis on advising, suggestions for tutors, or recommendations for improvement.

2. **Writing Component:** Results of performance on the Writing Portfolio (required during the sophomore year), combined with grades on written assignments in sophomore-level classes, give an early indication of proficiency at that level. Early weakness could be identified and visits to the Writing Lab recommended. Grades for the Writing in the Major classes, as well as the English class in technical writing will be recorded. Improvements will be noted, and continued weakness will receive the continued attention of the faculty advisor.

3. **Senior Seminar and Senior Portfolio:** Senior Seminar (Trends in Sport Management) requires an oral presentation and a written research report. This is, in essence, a Senior Evaluation, as well as evaluation of in-program assessment during each student's undergraduate career. These scores will be recorded and may provide opportunity for analysis to seek improvement in the preparation of future students. The Senior Portfolio will be an outgrowth of a personal file started by each student during the introduction class. The Senior Portfolio will contain a resume, all practicum evaluations, awards and nominations, letters of commendation, and contributions to the program. Two faculty members will review the Portfolios and give ratings, using a standardized rating form.

4. **Internship Component:** The internship has a final Evaluation form which must be completed by the on-site supervisor. The form includes numerical ratings as well as subjective comments. This evaluation provides an opportunity to judge the student's ability to apply skills and knowledges to a real-life experience. The evaluation form also asks for the on-site supervisor's comments on the intern's preparation, the intern's strengths and weaknesses.

5. **Exit Interview:** Exit interviews will be conducted with all seniors, preferably after the internship.

6. **Employment Component:** Records will be kept on employment and graduate school acceptance. It is the intent to survey employment and placement every 3 years. From these surveys and records, reports can be developed to trace employment patterns and career changes.

7. **Accreditation:** The bid to have the Sport Management program accredited will require external assessment. Competency areas within the Sport Management core courses will be reviewed, as well as policies and procedures of the program. Preparing for accreditation through constant internal review will provide on-going program assessment.

**IV. FINANCES**

**A. Personnel**

Instituting the BA in Sport Management will involve only a minimal increase in funding. During the start up years (years 1-3), current faculty will retain the same teaching schedule, requiring only the support of a teaching assistant (internal reallocation). Current faculty will experience an increase in enrollment and an emphasis in writing will occur in the new M classes; major advising will be added to their work load. A teaching assistant will have assignments in lab and practicum supervision and provide support in the M classes to offset these work load.
By the third year, an additional faculty member will provide expertise in the areas of marketing and finance. Examples of potential classes in these areas include Sport Marketing, Sponsorship in Sport, or Fund Raising and Sport Budgeting or Strategic Planning. Classes taught once a year will be scheduled each semester; the additional faculty member will be assigned to teach some of those classes.

Immediate reallocation of .5 FTE Office Assistant III will provide program support in the department office. Early duties will include recruitment and establishing of program procedures. These will shift with growth of the program, to more work with student records, advising, and internships.

B. Library

The libraries on the Pullman campus have adequate collections to support the Sport Management program. Some internal reallocation of funds is possible because of disbanded programs in the same funding area and the related drop in acquisitions. This minimal reallocation will be used to supplement the journals currently available.

The Internet provides a wealth of information on sport and sport organizations. Class assignments will involve use of this resource. Examples include the NASSM sport resource page, the North American Sport Library Association home page, and the official NCAA web site. Various Usenet news groups will be used such as employment news groups and sport psychology news groups.

C. Budgetary Impact

This proposal to establish a new degree and a major in Sport Management requires few new resources, which will be more than offset by the efficient use of current resources and the provision of far greater access to students. It will serve the needs and interests of the students from the State of Washington, will respond to needs of employers in the state, and will assist minorities and women is seeking useful career roles in sport.

Table 3
Administrative/Support Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Responsibilities</th>
<th>% Effort in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donald B. Reed</td>
<td>Department Chair</td>
<td>General Supervision</td>
<td>10%</td>
</tr>
<tr>
<td>Reallocation</td>
<td>Office Assistant M</td>
<td>Program Support</td>
<td>50%</td>
</tr>
<tr>
<td><strong>TOTAL FTE STAFF DEVOTED TO DEGREE PROGRAM</strong></td>
<td></td>
<td></td>
<td><strong>0.6</strong></td>
</tr>
</tbody>
</table>

Table 4

<table>
<thead>
<tr>
<th>Line Item</th>
<th>Internal Reallocation</th>
<th>New State Funds</th>
<th>Other Sources</th>
<th>Year I Total</th>
<th>Year 3 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative salaries (0. FTE) benefit @ 26%</td>
<td>8,586</td>
<td></td>
<td></td>
<td>8,586</td>
<td>8,586</td>
</tr>
<tr>
<td><strong>Faculty</strong> salaries (3.20 FTE) benefits @ 26%</td>
<td>149,506</td>
<td></td>
<td></td>
<td>111,239</td>
<td>149,506</td>
</tr>
</tbody>
</table>
### TA/RA salaries (.5 FTE)
- benefits @ 26%
  - 15,024

### Clerical salaries (.5 FTE)
- benefits @ 26%
  - 18,575

### Goods & Services (phone list)
  - 1,500

### Travel
  - 2,600

### Equipment
  - 0

### Library
  - 300

### Indirect (if applied to program)
  - 0

**Total Cost of Program**
- 6,229
- 3,017

<table>
<thead>
<tr>
<th>FTE Students</th>
<th>Cost Per FTE Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>6,229</td>
</tr>
<tr>
<td>65</td>
<td>3,017</td>
</tr>
</tbody>
</table>

### WSU LIBRARY RESOURCES IN SUPPORT OF A SPORT MANAGEMENT DEGREE PROGRAM: RESPONSES TO SENATE LIBRARY COMMITTEE QUESTIONS

Prepared by Ron Ziegler, Area Subject Specialist

1. **The adequacy of existing library collections, services, etc.**

   Sport Management (SPMGT) in its varying departmental forms/emphasis over the years is a program to which the WSU Library has always given good long-term collections support. This level of library support has been maintained throughout periods of teaching department change.

   While there has been no retrospective tracking of either specific SPMGT titles added or specific SPMGT materials expenditures, the on-going expenditure figures for monographs and serials within the general cost center used for the Departments of Educational Leadership & Counseling Psychology, and Kinesiology and Leisure Studies (account 490) indicate that overall support levels have been maintained despite the variables of publication output, internal budget allocations, and inflation (see attachment "A"). Collection count samples and comparison (see attachment "B").

   Of course, the sample figures in attachment “B” do not include the dozens of SPMGT-related theses in the Univ. of Oregon HPER Microform Publications series to which we have long subscribed, nor do they include the many very useful general sports and leisure studies titles—especially the important sport indexes and abstracts, e.g., SportSearch; Leisure Recreation and Tourism Abstracts; and, Physical Education Index). Moreover, SPMGT students also use the resources in several other major library support areas (business/management, education, communications, sociology, psychology, and law) where monographs and periodicals—and their access tools—are critical in SPMGT coursework.)
Since the mid eighties, SPMGT-specific bibliographic instruction has been provided by a Librarian Subject Specialist to individual students, extra-credit study groups, and formal classes—most often SPMGT 276 (introduction to Sport Management) and its predecessor RLS 276. This type of service and liaison with teaching faculty continues to this day, and by all reports, has been very satisfactory. At no time has there been a reduction or change of library services, liaison to faculty, etc., even while SPMGT itself was undergoing change. The same satisfactory level of library services should be able to continue in a predictable way with a new program.

For the several reasons cited above, the SPMGT collection exceeds the "adequate" threshold, and the library services associated with the program can be provided at a satisfactory level.

2. The need for new library collections.
   a. **Serials** (See attachments "C" "D" & "E")
      1) New serials titles needed: 6; Cost: $312.00
      2) No new funds required. The $312.00 is covered by internal reallocation of standing orders money generated through canceling several journals in the recently disbanded dance program.
      3) No cancellations other than the aforementioned dance journals, are necessary.
      4) No additional equipment required.
   
   b. **Monographs**
      1) Minimal purchases may be required above the present level. (The SPMGT holdings will be surveyed Fall, 1996; any gaps discovered will be filled.)
      2) Funding can be accommodated within the Acct. 490 allocation.
      3) No additional equipment required.
   
   c. **Media**
      1) No new media purchases needed.
      2) No special funds required.
      3) No additional equipment required.

3. The need for new library personnel.
   a. No, current personnel level adequate.
   b. No.
   c. --

4. The need for additional library services.
   a. No additional services required above the current satisfactory level.
   b. No special funds required.

5. N/A

   a. None anticipated,

Motion carried.
5. Recommendation from Academic Affairs Committee for a B.A. in Earth Science Exhibit H from 4/3/97 agenda is as follows:

MEMORANDUM

TO: Richard Crain, Executive Secretary Faculty Senate  
FROM: Julia Pomerenk, Assistant Registrar  
FOR: Academic Affairs Committee  
DATE: 28 March 1997  
SUBJECT: Bachelor of Arts in Earth Sciences

At its meeting today, the Academic Affairs Committee (AAC) approved the Bachelor of Arts in Earth Sciences degree, effective fall 1997.

Members of the AAC approved the BA in Earth Sciences following discussion with representatives from the Geology Department and consideration of the proposal and the external reviews received in response to the proposal. The BA in Earth Sciences shares a common two-year geology core with the Bachelor of Science in Geology, but diverges into a more flexible curriculum for the final years, to include a wider variety of courses (those required for teacher certification and others). The curriculum includes all the areas set by national standards for earth sciences and is modeled after the existing biology teacher preparation curriculum.

At this time, Faculty Senate review and approval is recommended.

NEW DEGREE PROPOSAL

Institution: Washington State University  
Unit: Department of Geology  
Degree: Bachelor  
Type: Arts  
Major: Earth Science  

Proposed Starting Date: August 15, 1997

Academic Department Representative:

Franklin F. Foit, Jr.  
Professor and Chair  
Department of Geology, Washington State University,  
Pullman, WA 99164

Phone: 509 335-3009  Fax: (509) 335-7816  
E-mail: foit@mail.wsu.edu

Endorsement by  
Chief Academic Officer:

Date:
1. Program Need

A. Relationship to Institutional Role and Mission

As the land-grant institution of higher learning in Washington, W.S.U. has always had service to the State as one of its primary missions. Washington now faces an increasing number of difficult public policy issues in the areas of drinking water quality, municipal waste disposal, planning for earthquake and volcanic hazards, and Hanford Site cleanup programs. As a state, we need to have more citizens who are comfortable with the broad range of technical ideas crucial to considering these types of challenges. A Bachelor of Arts program in the Earth Sciences will help produce citizens with the background to address technically based questions. In addition to its original land-grant mission, W.S.U. has also taken on the task of offering undergraduate training in the liberal arts to thousands of students. Most of these liberal arts majors choose to study subjects in the humanities or social sciences. But, both historically and logically, learning in science is one of the 'arts'. The B.A. program in Earth Science will allow undergraduates to study geology and allied sciences within the liberal arts program. Such broad training helps our students take up their role as responsible citizens in a variety of ways, especially by developing their abilities to:

- evaluate information, including quantitative information
- reason on the basis of evidence and logic
- understand differing arguments, both in the technical and social realms, and articulate their own, reasoned, opinions

At an even more basic level, modern science has come to undergird much of business, medicine, criminal justice, and national defense. Therefore, understanding the scope and nature of modern science is part of being an informed citizen of our nation. Unfortunately, many undergraduate students at Washington's public institutions of higher learning cannot usefully answer such questions as:

What is scientific research?
What can science say about questions which cannot be addressed experimentally?
* How do the methods of pseudo-science, such as astrology or 'Creation Science', differ from what professional scientists consider standard methods of investigation?

The other side of this problem is that students majoring in science often have a narrow, highly technical training within one part of science, but they have no understanding of such questions as:

* How have the methods used in scientific research changed through time, and can such methods be expected to continue to evolve?
* What class of questions can science address, and what questions do not admit of scientific investigation?
* Do we know why the scientific style of understanding the physical world has been so successful, or how it can rest on such non-empirical disciplines as logic and mathematics?
* How have science and technology shaped our history? How do they currently shape our economy?
The Bachelor of Arts Degree in Earth Science will help broaden the pool of citizens equipped to address the nature and impact of science and technology. That is its primary purpose, and sufficient reason for the program in itself, but it is also true that the presence of B.A. students in our upper-division science classes will help our B.S. students to understand that the scientific method, in fact, results from the history of certain branches of the humanities and from our general cultural heritage.

Smith and Morrison (1989, J. of College Science Teaching, 18, 307-311) believe that a student's understanding of science will increase when it is taught with an interdisciplinary focus and that the role of science in society will become clearer when scientific principles are placed in cultural context. Many college science programs are so discipline/subject specific that they fail to incorporate the evaluation of current and future citizen concerns for the science-related issues confronting society. In the words of John A. Moore (1993, J. of College Science Teaching, 22, 233),

"the future of humanity depends on society's leaders and citizens knowing enough about science. They must have such knowledge to make decisions that will permit a continuation of the human experiment in a finite world dominated by science and technology and characterized by insupportable levels of consumption of natural resources".

Because of its eclectic nature, a broad integrated view of science and cultural contexts of science could grow naturally out of a study of earth science, where the influence and interaction of the sciences and social sciences/humanities are incorporated.

Lastly, the scope and nature of science needs to be understood by more than just college students. Given the increasing importance of science and technology in our complex society, these subjects must be passed along -- at least in general terms -- to the next generation of our state's public school children. Undergraduates interested in education are specially accommodated in our B.A. program under the Education Option for grades 4-12 certification.

B. Documentation of the Program

1. Student interest or demand:

Recent statistics published by the American Geological Institute show that total enrollments in the geosciences increased by 5.6% during the 93/94-94/95 academic year despite a decline in employment in the domestic mining and oil industries. The growth in enrollment is largely due to the fact that many earth science graduates are now finding employment in other related industries. The shift in employment over the past few years has been so dramatic that many, including the Director of the United States Geological Survey, Dr. Gordon Eaton, are calling for changes in the geoscience curricula in the colleges and universities so as to better meet the needs of society. The proposed B.A. in Earth Sciences with its Earth Systems and Education Options is designed to help meet these needs.

For a variety of reasons, including the fact that earth science is virtually never taught in the latter years of a young person's high school education, almost no students arrive at any college or university intending to major in earth science. Students are, by and large, simply unaware of the possibility of studying earth science as a major. On the other hand, many undergraduates at W.S.U. need to earn an undergraduate degree --- of more or less any description --- for their
planned futures in the officer core of the military, for service in the Peace Corps, or for application to law school and other professional careers. To cite one specific example of a student in this general category, years ago Colin Powell was an undergraduate at C.U.N.Y. and a member of the ROTC program. He chose to earn his college degree by majoring in the Earth Sciences. It provided him with a broad but technical background while giving him the credential he needed for commissioning as an army officer. In more general terms, the government, in the form of the National Park Service, Bureau of Land Management, U.S. Forest Service, and Environmental Protection Agency hires individuals with broad backgrounds in geology, anthropology, resource management, and the biological sciences. The B.A. program in Earth Science (Earth Systems Option) would suit students better than has the B.S. in Geology for work such as that offered in government agencies. Again, an increasing number of undergraduate students are seeking admission to law programs with the intention of working in environmental law. As more and more science is being brought into the courtroom, it is to our state's advantage to have members of the legal profession who have some background in earth sciences. Two of our graduates have gone on to law school, one with the intention of practicing environmental law. By any standard, a B.A. degree in Earth Science which incorporates coursework in a broader foundation of science is as good or better preparation for law school than is an undergraduate degree in English or history. The need for policy makers at the State and Federal levels with educational backgrounds in the earth sciences is illustrated in the article by Houseknecht (p. 16-19, Geotimes; May, 1996; Appendix A).

Many students at W.S.U. take Geology 101 to partially fulfill the university's general education requirements. After completing Geology 101, some students talk with faculty members in the Geology Department about a possible B.S. degree, but most are put off from the idea when they realize how narrowly focused and highly specialized the B.S. degree program is. If we can offer such students a B.A. degree that both fulfills their career needs and allows them to pursue their natural interests in environmental issues, in minerals and fossils, and in earthquake and volcanic hazards we are confident students will enroll in the program and benefit throughout their lives from a broad background in earth sciences.

In its effort to promote scientific literacy in the general population and reach its goal of a citizenry which is "competent to participate in the workforce and to exercise the responsibilities of citizenship", the National Science Foundation's Directorate of Education and Human Resources has channeled much of its $606 million budget into public access to educational programs in science, mathematics, engineering, and technology (p. 18, Geotimes; February, 1996; Appendix A). A particularly glaring illiteracy in the general population is in the area of geosciences. This is largely the result of the fact that "most K-12 teachers have negligible training in earth science" (p. 19, Geotimes, June 1995; Appendix A) and that earth science is not offered in all schools. With the release of the National Science Education Standards set by the National Research Council of the National Academy of Sciences K12 education is now on the threshold of major science curriculum change. The standards not only provide for more access to science education but also bring earth science alongside physics, chemistry and biology as "an integral part of K-12 science education" (p. 19, Geotimes; February, 1996; Appendix A). Thus we anticipate an increased demand for teachers with primary training in the earth sciences and accordingly have designed the Education Option of the B.A. degree in Earth Science with them in mind.
2. Cultural artistic, and intellectual growth:

The objective of the B.A. in Earth Science is to acquaint the student with how the Earth formed, how its physical and biological history has unfolded, and how earth processes operate today on the land, the sea, and in the air. This material will be placed in a broader, less technical context than is the material required of B.S. students. Background, introductory-level coursework in math, physics, chemistry and the life-sciences will be required of B.A. students since the geological sciences rest on other branches of science. Studying earth processes and earth history with such a background will give the student room for intellectual growth both in and out of science. Increasing the number of students willing to take numerous science classes, in and of itself, adds to the university's mission to promote rigorous intellectual life and critical thought.

The discipline of earth science is ideal for acquainting students with a broad range of scientific methods, ranging from highly quantitative experimental data to descriptive, and necessarily non-experimental, observations of the ancient fossil record. Subjects within seismology (earthquakes & the behavior of the Earth's interior) and soil science have been investigated experimentally for much of this century, while questions about the extinction of the dinosaurs or the geologic history of the Pacific Northwest are investigated through empirical, but non-experimental observations. Geology uses a spectrum of approaches to address different types of questions about the Earth and its long history.

The history of the earth sciences as a discipline is also an excellent vehicle for demonstrating to students the cultural roots of science. This linkage of science with the humanities has recently been emphasized by the National Science Foundation in its recommendations of how science should be taught to the next generation. In earth science, the influence of the theological 'Argument From Design 'both speeded and retarded the eventual development of our current understanding of rock formation and the history of life on Earth. Similarly, early naturalists in the Earth sciences were often guided, consciously or unconsciously, by the major themes of ancient history as presented by the books of Genesis and Exodus. Today, the cultural prestige associated with quantitative and experimental science has helped redefine much earth science research into more physically and chemically based questions. Finally, the political and economic controls on earth science research in the United States are shifting rapidly as federal funding is redistributed.

The broader scope of an undergraduate science degree in the liberal arts is not unique to this proposal, but geology as a subject, and other non-geology courses available at W.S.U., make this educational plan more extensive than others currently available. Adding B.A. students to our classrooms will also enrich the experience of our B.S. majors.

3. Economic growth and development

A substantial degree of technical sophistication (see articles from Washington Geology, EOS and Physics Today in Appendix A) is already required of the general public to direct our local, state, and federal elected officials in matters such as:

* nuclear waste leakage and clean-up at the Hanford Site
* non-nuclear, toxic waste disposal in all parts of Washington;
* aquifer protection and drinking water quality throughout Washington
* pesticide use and regulation in many of the rural areas of Washington
* seismic risks, building codes, and emergency preparedness, especially in the greater Seattle area
* lumbering practices and their impact on erosion and water quality in our state's forests

Our state's general need for this program will only increase in coming years, as resource, land use, and environmental questions continue to press us. The economic and social consequences of the decisions which the public makes in these areas will shape our state's future. The proposed degree program will make available an understanding of a broad range of the sciences to our undergraduates. It is the earth sciences, in one form or another, which underlie the technical component of the issues above. Increasing the number of Washington State citizens who can digest and evaluate information in these areas will help create a better informed, more mature electorate.

Living as we do at the start of the Information Revolution, we can anticipate that other types of technical questions will become increasing important in daily business practices, in public education, and in the personal lives of citizens. The proposed program, by making a scientific background available to students who choose not to become professional scientists, will increase the basic technical competence of our state's future citizens. Such a background will help people to understand, adapt to, and flourish within the changes which the Information Revolution seems likely to bring us.

4. Workforce needs of local/state industry

Students with a B.A. in Earth Science will enjoy the broad applicability of liberal arts training. Fields of employment will, of course, include teaching in Washington's public schools (for undergraduates who choose the Education Option). Others will find careers in the ever-growing area of environmental management, and some may find jobs in state and local government, public relations, journalism or publishing, and in the law. To be more specific:

* Environmental consulting firms, such as EMCON in Seattle, seek students with broad foundations in geology, geohydrology, and environmental chemistry.
* The National Park and U.S. Forest Services hire individuals with a broad backgrounds in resource management, anthropology, the earth sciences and the biological sciences. The B.A. degree in Earth Science will be more attractive to an employer like the Park Service than is our more narrow B.S. program in geology.
* An increasing number of students are seeking admission to law programs with the intention of working in environmental law or resource management. The traditional pre-law background in the liberal arts is often insufficient training for environmental law.
* Medical school admissions officers are now seeking a broader spectrum of science graduates, rather than the traditional chemistry and biology majors (for example, our local neurologist has a B.A. in Geography and Earth Science)

The education option of the B.A. in Earth Sciences will be especially important. Teaching of the earth sciences is, today, a requirement in Washington's public schools (usually met in the 8th grade). It is also part of the required curriculum of most other states. With the adoption of the National Academy of Sciences' National Science Education Standards the demand for K-12 teachers with formal training in earth science will inevitably increase nation wide. Nevertheless,
few teachers are trained in the earth sciences or any of its subdisciplines. A survey of teachers in Washington State who had the primary responsibility for earth science instruction, indicated a background of less than 1 course in any of the subfields of earth science (Christman, 1989, Geological Society of America Abstracts w/Programs, 21(5), 65; Appendix A). In other words, the vast majority of teachers in the state, currently teaching earth science to our children, have never had a course in earth science. To compound the problem, those few teachers who have extensive training in the Earth Sciences are often given assignments in chemistry or mathematics because of their backgrounds in those fields.

The number of students recently admitted to W.S.U.’s College of Education teacher preparation program in five science endorsement areas are as follows:

<table>
<thead>
<tr>
<th>Major</th>
<th>93-94</th>
<th>94-95</th>
<th>95-96</th>
<th>Three Year Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>17</td>
<td>20</td>
<td>15</td>
<td>52</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Physics</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Geology</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>General Science</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

Earth Science/geology has the lowest number of education students not because the need for them is not enormous, but because W.S.U. has no true program for them at this time. If a student wants to teach Earth Science in the public schools, the only option available is a B.S. degree in geology with a teaching endorsement from the College of Education. This option has required, at a very minimum, five years of university work. Even setting aside these formidable difficulties, the current program focuses on advanced courses within geology. While this is appropriate for students training to become professional geologists, it is not helpful for teachers who must be able to teach basic material not only in geology, but in oceanography, meteorology, and astronomy.

A number of our students have, over the years, pursued careers in earth science education after receiving B.S. Degrees in Geology and teaching endorsements from the College of Education. Letters from these individuals (Appendix A) underscore the value of the proposed degree program to those seeking a career in primary/secondary education.

C. Relationship to Other Institutions

1. Duplication.

Four other state-supported universities (University of Washington, Western Washington University, Central Washington University, Eastern Washington University), a private college (Whitman) and two private universities (Pacific Lutheran University and University of Puget Sound) currently offer baccalaureate degrees in earth science and/or geology.
UW: offers both B.S. and B.A. degrees in geology along with the M.S. and Ph.D. degrees supported by a significantly larger faculty (19). Our proposed B.A. degree program differs from UW's in two respects (1) our program has more broadly focused curriculum requirements in the earth sciences. In addition to the usual supporting coursework in math, chemistry, physics and biology we require courses in the history or philosophy of science, astronomy, environmental science. As a consequence, our B.A. program is more rigidly structured with fewer electives but a broader spectrum of required coursework in allied sciences. (2) our program has two curriculum options, Earth Systems and Earth Science Education. We feel that the two options and broader curricular focus will better meet the needs of society for earth science literacy.

WWU: has slightly fewer faculty (11) and offers B.A. and B.S. degrees in Geology plus a B.A. degree in Education with an earth science endorsement at either the primary or secondary level, as well as the M.S. degree. Of all the B.A. programs in geology this is perhaps the one most similar to that being proposed for WSU. However, they differ significantly in two respects. (1) Our B.A. program has two curriculum options, Earth Systems and Earth Science Education whereas WWU offers two different B.A. degrees, a B.A. in Education with a teaching endorsement in earth science. The students in our proposed B.A. program will receive a B.A. in Earth Science with 4-12 teaching certification. Our proposed B.A degree option in earth science education provides for a broader exposure to science. In lieu of geography our program requires courses in environmental science and history/philosophy of science (2) The required supporting coursework in our Earth Systems Option is more structured and requires more credit hours in math, chemistry, physics and biology than the B.A. degree in Geology at. In addition our requirements include a geology field course as well as additional courses in environmental science, astronomy, philosophy/history of science, and soils. It is these latter courses which distinguish it as a B.A. in Earth Science versus a B.A. in Geology.

EWU: currently offers a B.A. degree (and a minor) in Earth Science (BAE) as well as B.A., B.S. and M.S. degrees in Geology. The BAE degree is offered through a interdisciplinary program in earth science administered by the Chairs of the Department of Geology and the Department of Geography and Anthropology. These departments collectively have a larger faculty than the Department of Geology at WSU, but the individual departments are much smaller. Although the proposed degree at WSU has the same title, there are very significant differences in program content. (1) Our proposed curriculum is more structured with more required courses (62 semester credit hours versus 62-63 quarter credit hours) and more rigorous math, chemistry and physics requirements. (2) EWU's BAE course requirements are more strongly focused in geography and geology while WSU's B.A. requirements include courses in history, philosophy, environmental science, soils and electives in zoology, civil engineering, and upper division soils, chemistry biological science. (3) There is no provision for a minor in the WSU proposal. Compared to EWU's B.A. in Geology, the proposed WSU B.A. in Earth Science curriculum has comparable math, chemistry, and physics requirements, fewer geology requirements and a broader spectrum of allied science requirements and electives.

CWU: also offers a B.A. degree (and a minor) in Earth Science as well as B.A., B.S. and M.S. degrees in Geology supported by a faculty of 7. Unlike the program at EWU the earth science major and minor are offered through the Geology Department. The proposed curriculum leading to the B.A. in Earth Sciences at WSU with its dual focus, earth science education and earth systems, differs from the CIW curriculum in content and focus. The earth science majors at CWU and EIW are primarily intended for those who wish to teach in secondary schools whereas the one being proposed for WSU is also designed (Earth Systems Option) to meet the needs of
students whose career choice (for example environmental law or administration) may require a strong background in earth science. The proposed B.A. program has more rigorous math, chemistry and physics requirements than either the B.A. in Geology or B.A. in Earth Science at CWU. Also the program is more structured with more credit hours of required supporting coursework in environmental science, soils, history and philosophy. The Earth Systems Option also requires more field geology and but lacks a geomorphology course.

PLU: offers a B.S. and B.A. Degrees in Earth Sciences (Geology) and a B.A. in Education with a minor in earth sciences supported by a faculty of 3. The B.A. earth science degree has a 32 semester hour geology coursework requirement with two courses chosen from the lower division and four from upper division. This program differs from the B.A. program proposed for WSU in that it does not require course work in physics, a geology field course or courses other than mathematics outside of the Geology Department.

UPS: offers only a B.S. in geology supported by a faculty of 4. The math, chemistry, and physics course requirements are similar to those of other B.S. degree granting programs in the state but like PLU the geology course requirements (8 or 9 plus field camp) are more limited due to the small size of the faculty.

Whitman: offers a baccalaureate degree in Geology and four combined majors (Astronomy-Geology, Biology-Geology, Chemistry-Geology, Geology-Physics). The degree in geology has a different and lower credit hour requirement of core and elective coursework than the program at WSU. Specifically, the WSU program has a heavy emphasis on petrology and a field course requirement. The program at Whitman has math, chemistry and physics requirements similar to those of the other programs in the state, except that courses in geophysics and geochemistry can be substituted for a portion of the required supporting coursework in physics and chemistry.

2. Uniqueness of the Program.

Although the program of courses leading to B.A. in Earth Science being proposed for WSU bears many similarities to B.A. degree programs in Geology at the other state supported institutions and the B.A. in Earth Science programs at EWU and CWU, ours is unique in that it involves two program options (Earth Science Education and Earth Systems). We feel that this is the best way to meet society's need for both earth science teachers in elementary and secondary schools as well as for earth science literate citizens, many of whom go on to other professions (e.g. law and administration) and would greatly benefit a firm background in earth systems. This latter need is currently being met in Washington's Universities by the B.A. degree programs in geology. However, all of these programs as implied by the degree title tend to be strongly focused on geology and much less on related earth sciences. The Earth Systems option in the proposed B.A. in Earth Science degree program proposed for WSU is intended to give the student a more balanced view of the nature and intimate interaction of the geo-, bio- and hydrospheres which constitute our environment.

C. Faculty

| Name       | Rank               | Status   | % Effort*
|------------|--------------------|----------|----------
| R. Allen-King | Assistant Professor | full-time | 7        
| L. Davis     | Associate Professor | full-time | 10       
| F. Foit, Jr. | Professor/Chair    | full-time | 5        
| D. Gaylord   | Associate Professor | full-time | 5        

C. Keller  Associate Professor  full-time  7
P. Larson  Professor  full-time  7
L. Meinert  Professor  full-time  2
P. Rosenberg  Professor  full-time  2
R. Thiessen  Associate Professor  full-time  5
A. Watkinson  Professor  full-time  7
G. Webster  Professor  full-time  2

Total faculty FTE devoted to program  0.59

D. Students

1. Projected Enrollment.

The program, if approved, will be advertised across campus and a first year enrollment of 2-3 students is anticipated. We expect that over a period of five years that enrollments in the B.A. program (both options) will increase to approximately 10 students.

<table>
<thead>
<tr>
<th>No. of Students</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headcount</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>FTE*</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

* It is assumed that most if not all of the students will be enrolled on a full-time basis.

2. Expected Time for Program Completion.

The minimum number of semester credit hours required for the Education Option and Earth Systems Options are 138 and 120, respectively. A full-time student enrolled in the Earth Systems Option for the recommended number (15) of semester hours should be able to complete all the requirements for the B.A. degree in Earth Science in four years plus a summer session (Geology 308 Field Camp). The Education Option will require four and a half years provided the student enrolls for one or two additional credit hours beyond the normal 15 for several semesters. If the student pursuing the Education Option elects to enroll in Geology Summer Camp (6 credit hours) then it will be possible to complete the degree requirements within 4.5 years without taking more than the recommended 15 credit hours/semester during the regular academic year.

3. Diversity.

The Department has been very proactive in its recruitment of women and minorities. As of last spring our undergraduate and graduate student body of 61 was 34% female and 6% minority. Of our 26 undergraduates, 38% and 8% are women and minorities, respectively. According to recent statistics in the *Chronicle of Higher Education* this is slightly better than average for the physical sciences nationwide. We have taken advantage of the programs on campus for the recruitment and retention of women and minorities and our success over the past decade has resulted in our central administration removing the department's graduate program from the under-represented category in terms of women.

We view the women and minorities in science issue to be particularly relevant to the proposed B.A. in Earth Sciences degree. There is an extraordinary need for women and minority earth science teachers to serve as role models. In addition to participation in campus programs
(Howard Hughes Scholars and MESA) which provide for minority group campus visitations during the summer months one scholarship funded from departmental development funds will be made available for the purpose of recruiting qualified women and minorities into the B.A. program.

E. Administration

1. Administrative and support staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Responsibilities</th>
<th>% Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Marsh</td>
<td>Office Manager</td>
<td>financial matters</td>
<td>3</td>
</tr>
<tr>
<td>S. Elder</td>
<td>Office Assistant III</td>
<td>student files</td>
<td>5</td>
</tr>
</tbody>
</table>

Total FTE administrative staff devoted to program 0.08

Support Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Responsibilities</th>
<th>% Effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>G. Chantler</td>
<td>Instructional Tech II</td>
<td>Prepare laboratory materials</td>
<td>3</td>
</tr>
</tbody>
</table>

Total FTE support staff devoted to program 0.03

III. Program Assessment

A. Assessment plan

Until last year we assessed the success of our B.S. program by requiring our students to take the Educational Testing Service's Major Field Achievement Test. This test was designed specifically to measure student knowledge over a broad range of subdisciplines in geology. Our students consistently scored well above the national average. Unfortunately, for reasons which I believe were related to economics (relatively small market) the ETS has discontinued this examination. End-of-Program assessment will take two forms:

1. An exit interview conducted by the department chair and the undergraduate advisor. This will allow assessment of how well the program has met the student's personal needs and goals.
2. Follow up interviews (questionnaires) with recent graduates and employers for the purpose of assessing both employer satisfaction and how well the program has met the career needs of the graduate.

Input from the exit interviews and follow up interviews/questionnaires will be used to fine-tune the program, especially regarding the curriculum, advising, and staffing.

IV. Finances

A. Summary of program costs

The new B.A. in Earth Science degree program will not require any new state funding because the proposed curriculum consists of courses which are currently being offered. Given current enrollment levels in geology courses, the department should be able to accommodate the projected number of new students in the B.A. program without additional lecture or laboratory
sections. Thus, the average cost per FTE undergraduate student in the Geology Department should actually decline with the establishment and growth of the B.A. program.

<table>
<thead>
<tr>
<th>Line Item</th>
<th>Internal Reallocation</th>
<th>New State Funds</th>
<th>Other Sources</th>
<th>Year 1 Total</th>
<th>Year N* Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative salaries (0.03 FTE)</td>
<td>1,287</td>
<td>none</td>
<td>none</td>
<td>1,287</td>
<td>1,609</td>
</tr>
<tr>
<td>benefits @ 26%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty salaries (0.59 FTE)</td>
<td>36,157</td>
<td>none</td>
<td>none</td>
<td>36,157</td>
<td>54,236</td>
</tr>
<tr>
<td>benefits @ 26%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TA salaries (0.5FTE)</td>
<td>4,725</td>
<td>none</td>
<td>none</td>
<td>4,725</td>
<td>11,812</td>
</tr>
<tr>
<td>benefits @ 1.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clerical salaries (0.05FTE)</td>
<td>1,372</td>
<td>none</td>
<td>none</td>
<td>1,372</td>
<td>3,430</td>
</tr>
<tr>
<td>benefits @ 26%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other salaries: Instructional Tech</td>
<td>988</td>
<td>none</td>
<td>none</td>
<td>988</td>
<td>2,470</td>
</tr>
<tr>
<td>0.03 FTE benefits at 26%</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract services</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Goods and services</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Travel</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Equipment</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Other</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>Indirect</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>TOTAL COST OF PROGRAM</td>
<td>44,529</td>
<td>none</td>
<td>none</td>
<td>44,459</td>
<td>-73,557</td>
</tr>
</tbody>
</table>

FIE students 3 10
Cost-per-FTE student 114,819 7,356

Year N is Year 5

TO: Faculty Senate Library Committee
FROM: D.R. Gaylord and F.F. Foit, Jr. Department of Geology
DATE: August 20, 1996
SUBJECT: New B.A. in Earth Sciences Degree Program need for Library Services and Materials.

The following comments follow the format set out by the Faculty Senate Library Committee and substantiates that no new funds, personnel, or materials will be needed to support the proposed B.A. in Earth Sciences Degree program.

1. Adequacy of Existing Library Collections, Services, etc.,

The proposed new degree of Bachelor of Arts in Geology has been designed to provide new opportunities for undergraduate education without causing any new impact on the WSU Libraries, its collections, services, or personnel. No new geology classes have been created for the Geology BA degree and no new geology classes are planned; rather the B.A. Degree program simply allows students to take a wider variety of existing, science/non-science, courses already supported by Library (See p. 13 of New Degree Proposal).

Our assessment of Library adequacy is based on the following:

a) no new geology courses or courses outside the Geology Department will need to be established to support the new B.A. Program
b) only a modest increase in the total number of geology undergraduate majors is anticipated. Students interested in a career in geology will now have the opportunity to enroll in either the new B.A. degree program or the B.S. degree program which is more focused on the training of professional geologists. Most of the new students will likely be attracted from other degree granting programs already on campus and supported by the Library.

2. Need for New Library Collections

No new serials (journals or indexes either in print, fiche, monographs, or via electronic media) will be needed to support the new Geology B.A. degree. It has been determined via discussions with Library personnel that existing subscriptions and collection acquisitions that currently support Geology Department courses and research will also support the needs of undergraduate students enrolled in this program. The Geology Department continues to support efforts by the University and Library Administrators to augment current Library holdings, but the proposed Geology B.A. program will not appreciably increase the demands for library services by our undergraduates.

3. Need for New Library Personnel

The proposed B.A. in Geology degree will not require additional Library personnel beyond existing circulation, reference, or support staff. Because no new serials, monographs, or media are required by the proposed Geology B.A. Degree curriculum, there will be no additional need for personnel to catalogue books or serials, reshelving books, or otherwise perform any additional duties above those already performed by existing library personnel.

4. Need for Additional Library Services

The proposed Geology BA degree courses will require no additional services such as interlibrary loan, reference time, or online access above that already used by the Geology Department (or the rest of the University). Again, as long as the University meets the existing Library needs of the Geology Department with its B.S. program, it also will meet the needs of the Geology Department with both B.S. and B.A. program options.

5. Other Library Resource Considerations

None

II. Program Description

A. Goals and objectives

The goal of the proposed program leading to a B.A. degree in Earth Sciences is to efficiently and effectively prepare students for careers in primary/secondary education and professions/career paths (e.g. environmental law, federal/state administration) which would benefit from a firm grounding in the earth sciences. To achieve this we have designed a program of study having two distinct options, Earth Science Education and Earth Systems.
There is an increasing interest among our students in careers in primary/secondary education. Currently, this requires fulfilling all of the requirements for a B.S. degree in Geology and as well as those for a teaching endorsement. The proposed curriculum for the B.A. degree in Earth Science provides for more appropriate training and disciplinary exposure with fewer required credit hours in geology. Many of the geology and supporting courses requirements in our B.S. program are geared to the training of professional geologists and therefore are not necessary for careers in primary/secondary education. The proposed B.A. program with its reduced geology course requirements offers a more efficient route and presumably a shorter time to degree for those interested in pursuing a career in education.

The Earth Systems option is designed to provide earth science literacy for those who desire it for personal intellectual enrichment or for those whose career goals would greatly benefit from it.

B. Curriculum

1. Course of study for B.A. in Earth Sciences

Geology core courses required of all students in the B.A. program in Earth Sciences

<table>
<thead>
<tr>
<th>Department</th>
<th>Course Number</th>
<th>Credit Hours</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology</td>
<td>101</td>
<td>4</td>
<td>Introductory Geology</td>
</tr>
<tr>
<td>or</td>
<td>102</td>
<td>4</td>
<td>Physical Geology</td>
</tr>
<tr>
<td>Geology</td>
<td>206</td>
<td>3</td>
<td>Petrology</td>
</tr>
<tr>
<td>Geology</td>
<td>210</td>
<td>3</td>
<td>Historical Geology</td>
</tr>
<tr>
<td>Geology</td>
<td>260</td>
<td>2</td>
<td>Quantitative Methods</td>
</tr>
<tr>
<td>Geology</td>
<td>315</td>
<td>3</td>
<td>Water &amp; the Earth</td>
</tr>
<tr>
<td>Geology</td>
<td>340</td>
<td>4</td>
<td>Structural Geology</td>
</tr>
<tr>
<td>Geology</td>
<td>350</td>
<td>4</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>23</td>
<td></td>
</tr>
</tbody>
</table>

Primary/Secondary Education Option

Required Supporting Courses (courses marked with an asterisk meet WSU General Education requirements)

| Math       | 140*          | 4            | Math for the Life Sciences   |
| or Math    | 171           | 4            | Calculus                     |
| Physics    | 101*          | 4            | General Physics I            |
| Physics    | 102*          | 4            | General Physics II           |
| Chemistry  | 105           | 4            | Principles of Chemistry I    |
| Chemistry  | 106           | 4            | Principles or Chemistry 11   |
| Biology    | 103*          | 4            | Introductory Biology         |
| Astronomy  | 345           | 3            | Principles of Astronomy      |
| Env. Sci   | 174           | 3            | Meteorology & Atmos. Envir.  |
| History    | 381*          | 3            | Science Western Civilization |
| or History | 382*          | 3            | Science Western Civilization |
| Philosophy | 350*          | 3            | Philosophy of Science        |
| Total      |               | 36           |                              |

Undergraduate Geology Electives (upper division) a course in geomorphology of oceanography is recommended
Earth Systems Option

Required Supporting Courses (courses marked with an asterisk meet WSU General Education requirements)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 140*</td>
<td>4</td>
</tr>
<tr>
<td>or Math 171*</td>
<td>4</td>
</tr>
<tr>
<td>Physics 101*</td>
<td>4</td>
</tr>
<tr>
<td>Physics 102*</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 105</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 106</td>
<td>4</td>
</tr>
<tr>
<td>Biology 103*</td>
<td>4</td>
</tr>
<tr>
<td>Astronomy 345</td>
<td>3</td>
</tr>
<tr>
<td>Env. Sci. 174</td>
<td>3</td>
</tr>
<tr>
<td>History 381*</td>
<td>3</td>
</tr>
<tr>
<td>or History 382*</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 350*</td>
<td>3</td>
</tr>
<tr>
<td>Soils 201</td>
<td>3</td>
</tr>
<tr>
<td>Geology 308</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
</tr>
</tbody>
</table>

Science Electives (a total of 23 credit hours) a course in geomorphology or oceanography is recommended

300-400 level Geology courses; Soils 301, 374, 413, 421; Environmental Sciences 210, 303, 335, 427; Chemistry 421, 422; Biological Science 372, 462; Zoology 330; Civil Engineering 341, 415, Geography/Geology 315 (U of 1)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>23</td>
</tr>
</tbody>
</table>

General Education Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>29</td>
</tr>
</tbody>
</table>

Grand Total Semester Hours 120

2. Admission requirements

There are no special admission requirements for the B.A. in Earth Sciences Program.

Motion carried.

The following two centers have been approved by all appropriate Senate committee. Full Proposals are available in the Senate office.
6. Recommendation from Research and Arts Committee for a Center for Multiphase Environmental Research Exhibit I from 4/3/97 is as follows:

February 25, 1997

MEMORANDUM

TO: Richard Crain, Jr., Executive Secretary, Faculty Senate
FROM: Nancy Shrope, Research and Arts Committee
SUBJECT: Approval of Center Proposals

The Research and Arts Committee on February 21, 1997 reviewed and approved for recommendation to the Faculty Senate both the Center for Reproductive Biology proposal and the Center for Multiphase Environmental Research proposal.

To: Richard Crain, Faculty Senate Executive Secretary
From: James N. Petersen, Professor
CC: Brian Lamb, Civil and Environmental Engineering
David Stock, Mechanical and Materials Engineering
Shulin Chen, Biological Systems Engineering
Sue Clark, Chemistry
David Gaylord, Geology
James Harsh, Crop and Soil Science
Robert A. Altenkirch, Dean College of Engineering and Architecture
Leon Radziemski, Dean College of Sciences
James J. Zuiches, Dean, College of Agriculture and Home Economics
Robert V. Smith, Dean of the Graduate School and Vice Provost for Research

Date: February 1, 1997
Re: Proposal to establish the Center for Multiphase Environmental Research

Attached, please find a proposal to establish a Center for Multiphase Environmental Research which we would like to have considered by the appropriate committees of the Faculty Senate.

A Proposal Submitted to The Faculty Senate Washington State University to establish a

Center For Multiphase Environmental Research

Prepared by:
James Petersen, Chemical Engineering
Brian Lamb, Civil and Environmental Engineering
David Stock, Mechanical and Materials Engineering
Shulin Chen, Biological Systems Engineering
Sue Clark, Chemistry
David Gaylord, Geology
James Harsh, Crop and Soil Science

NAME OF UNIT:

The proposed unit is the Center for Multiphase Environmental Research (C-MER).
NATURE AND SCOPE OF ACTIVITIES

One of the greatest challenges facing our nation is the restoration and maintenance of a healthy environment while maintaining the competitiveness of our industrial sector. To address this challenge, it is imperative that technologies be developed that can be used to restore effectively contaminated sites. However, such restoration, in and of itself, will not be sufficient to ensure that our environment is protected into the future. It is also imperative that the design of new products and processes include environmental protection from step one of the design process. To accomplish these goals, environmental professionals must be properly educated to think in terms of the environmental consequences of their actions. Additionally, there is a growing sentiment that while today's graduates have a firm foundation in fundamental science and engineering principles, there is a lack of real-world appreciation for the day-to-day issues facing environmental specialists in industry and government. We are proposing that these problems be addressed at Washington State University via two parallel efforts: an Environmental Engineering Education Initiative and the establishment of the Center for Multiphase Environmental Research. These two intimately related efforts are being undertaken in parallel; success of one will facilitate the success of the other: A stronger environmental education program will enhance research efforts, and a strong environmental research program will enhance environmental education at both the undergraduate and graduate levels. This higher level of education will be accomplished by providing a mechanism for our students to be involved in the development of new environmental technologies to solve current environmental problems for industry and government. In addition, development of industrial and governmental partners in the classroom will promote new cooperative research areas and facilitate an environmental awareness across all disciplines.

To address the research component of this solution, an interdisciplinary research center, entitled the Center for Multiphase Environmental Research is proposed. Establishment of this Center is motivated by the recognition that solving our most critical environmental problems requires a better understanding of the phenomena that occur at the boundaries between air and water, air and soils, and water and soils. For example, in the atmosphere, gas/particle conversions and particle dynamics are now recognized as major factors in pollutant fate and transport; in soil remediation, interactions between solid phases (such as biomass, clay particles, and soil surfaces) organic contaminant globules, and the continuous aqueous phase dictate the methods that can be employed for contaminant remediation efforts. Finally, the treatment of industrial process streams, and the development of clean industrial processes, will invariably involve the understanding and application of multiphase systems. Research directed toward finding solutions to such problems inherently requires an interdisciplinary approach. The proposed Center will provide the basis for this interdisciplinary effort.

The development of this initiative is timely and important to the region. For example, Hanford, located in Eastern Washington, is one of the largest contaminated sites in the nation. Environmental problems, however, are not isolated to Hanford. Other industries that have traditionally been considered clean, such as electronics processing companies, have located in the Northwest. Such industries are now finding that hazardous waste streams are being generated and must be cleaned, at considerable cost. Because of these trends, a greater percentage of engineering graduates are now being hired into environmentally related fields. For example, nation wide, the number of chemical engineers who identify their first position as environmental engineering has tripled in the last 4 years.
Research within this Center will be directed toward the development of interdisciplinary programs to address the environmental problems that occur at interfacial boundaries. Hence, it is anticipated that the research will develop along three topics:

*Atmospheric transport and fate of contaminants, particulates, and aerosols including biosphere/atmosphere interactions;
*Contaminant fate and transport in the subsurface, including interactions of the contaminant with biocatalysts and soil particles;
*Modifications of processing systems to minimize environmental discharges and the total environmental impact of the process over the lifetime of the product produced.

In addition to developing these interdisciplinary research areas, the work of the Center should also facilitate:

* the development of industrial and government partners to participate on a regular basis in classroom instruction of students and to participate in a meaningful way in the operation of the proposed Center,
* the recruitment of women and minority faculty and students to participate in the programs within the Center.

Industrial, agricultural, and governmental interactions would be an integral part of the Center's program. The successful operation of the C-MER will require an understanding of problems that are significant to member institutions, and of the societal and economic constraints that are placed on the application of potential solutions to these problems.

In addition to activities that are funded directly by the Center, academic participants will be expected to have related funding from other sources. Such activities would be coordinated and administered through the Center. This coordination will facilitate the transfer of knowledge gained in these projects to member institutions. By providing this information to member institutions, synergy between Center funded projects and the projects funded by other sources will be achieved. Additionally, this information may provide stimulus for new Center activities.

**Membership**

Through this Center, cooperation among industrial, agricultural, and governmental agencies will provide improved technologies for addressing a broad spectrum of environmental problems. This Center will have broad industrial appeal because such problems cut across industrial classes. Hence, we anticipate that industrial interaction can be expected from the aerospace industry, the chemical processing industry, the petroleum processing industry, the electronics and semiconductor processing industries, mining interests, and from environmental consulting firms. For example, potential industrial collaborators could include the Boeing Company, Shell Development Company, CH2M Hill, the Weyerhaeuser Company, Sunshine Mine, and Foster Wheeler Environmental. We also anticipate that collaborative research projects with Battelle Pacific Northwest National Laboratory, the Idaho National Engineering Laboratory, Fairchild Air Force Base, and SIRTI will be continued and expanded.
Criteria and Method of Selection of Director and Participating Faculty

The director of the Center will have the responsibilities of Center management. In this role, the Director will be the point contact between academic researchers and the member participants from industry and government agencies. The Director will be appointed by the Dean of the College of Engineering and Architecture from among the faculty participating in the Center. The person chosen to fill this position should be one of the lead researchers in the Center and have experience in working with government agencies, national laboratories, and industrial personnel.

Faculty from any department in the University may apply to participate in the Center by submitting a memo requesting that an association be established, together with a current vita. The Center Advisory Committee will review each application and approve participating faculty based on two criteria. First, each applicant must be involved in collaborative research with other faculty associated with the Center. This collaborative research may, at the time of application, be unfunded. The applicant will also be expected to already participate in a funded project that is consistent with the Center goals outlined above, or be planning to submit a proposal to obtain external funding for such a project. If the project is in the proposal stage at the time of application, a preliminary project outline, consisting of two to three pages of narrative describing the research objectives and methods, and a statement of how association with the Center will facilitate the research must also be provided. Each application must be accompanied by a supporting memo from the chair or director of the academic unit in which the faculty member is appointed.

Table 1 lists the faculty who currently anticipate being involved in the Center, together with the academic unit in which they have a permanent appointment. Vita for these faculty are attached in Appendix A.

Table I Participating Faculty

<table>
<thead>
<tr>
<th>Academic Unit</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Systems Engineering</td>
<td>Shulin Chen, Ronald E. Hermanson</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>James Lee, Reid C. Miller, James N. Petersen, William J. Thomson, Richard L. Zollars</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Sue Clark, Amy P. Gamerdinger (WSU-TC)</td>
</tr>
<tr>
<td>Civil and Environmental Engineering</td>
<td>Michael Barber, Sharon Churchill, Candis S. Claiborn, Wade Hathhorn, Donald Johnstone, Brian Lamb, Richard Watts, Hal Westberg, David R. Yonge</td>
</tr>
<tr>
<td>Crop and Soil Science</td>
<td>David P. Bezdicek, James B. Harsh</td>
</tr>
<tr>
<td>Geology</td>
<td>Richelle M. Allen-King, David R. Gaylord, C. Kent Keller,</td>
</tr>
<tr>
<td>Mechanical and Materials Engineering</td>
<td>O.A. Plumb, B.R. Ramaprian, Cill Richards, David Stock</td>
</tr>
<tr>
<td>Microbiology</td>
<td>Luying Xun (WSU-TC), New Faculty Member</td>
</tr>
</tbody>
</table>
College and/or Departments Involved

The core faculty in the anticipated Center are from the College of Engineering and Architecture, the College of Agriculture and Home Economics, and the College of Sciences. Please see Table 1 for a list of faculty who anticipate being associated with the Center. The Center will be administered by the College of Engineering and Architecture.

University Budgetary Support Requested

An anticipated budget is shown on Table 2 for the first two bienniums. In the first biennium, research will be initiated with funds generated from the Center members and governmental programs. Ongoing research contracts within the University that conform to the goals of the Center would be moved administratively to the Center. Battelle Pacific Northwest National Laboratory has donated $250,000 to establish a Distinguished Professorship in Bioprocessing and Microbiology. From these funds, $125,000 will be used during FY96 and FY97 to support the Bioprocessing efforts within the Center. These efforts will include salary support for James Petersen, who will be involved in promoting Center activities to industry and government agencies, salary support for other Bioprocessing faculty, technical staff and support staff associated with the Center, and support for travel costs for development of the Center associates. The other $125,000 received from PNNL will be used to support Microbiology efforts within the Center. In addition to the funds from PNNL, it is expected that, during the first biennium industrial associates will be recruited allowing ten member companies to contribute $50,000 per year each. In addition, further proposals will be developed to obtain $200,000 from the National Science Foundation or the Department of Energy. It is also anticipated that the number of industrial associates will increase to 20 in the second biennium.

In light of the above considerations, University budgetary support is requested as shown. These monies will be used to supplement member fees in order to pay the salary for a Center director, to purchase a subscription to a needed journal (see the Library Needs section below), and to support an interdepartmental seminar series.

In addition to the monies needed to operate the proposed Center, the College of Engineering and Architecture has committed 4 faculty positions to new faculty who will participate in the Center. Further, the College of Sciences has agreed to hire a new faculty member in Environmental Microbiology who will participate in the Center. Finally, other Colleges may hire new faculty who would participate in the Center. While these new faculty will not require additional University resources beyond those which would be accorded any new hire, the fact that these positions have already been allocated demonstrates the commitment that the deans of the College of Engineering and Architecture and of the College of Sciences has to the goals of this proposed Center.

Space Needs

Currently, space is available in Dana Hall and Sloan Hall for the Center activities. In addition, research laboratories have been identified in the new Engineering Teaching and Research Building that will be utilized by the Center. Other laboratory spaces are distributed around campus in the various departments. However, administrative offices will need to be identified for the Center. Administrative offices in the new Engineering Teaching and Research Building may be able to meet this need.
The implementation of this Center would be greatly facilitated if space could be identified that could accommodate the heart of the center. Here, faculty and graduate student offices could be located so that interaction between researchers could be maximized. Additionally, shared equipment could be located here. This would provide maximal use of equipment, and provide a mechanism for researchers to pool resources to maximum benefit. For example, a researcher in Chemical Engineering may need access on a periodic basis to an Atomic Absorption Spectrophotometer. Another in Geology may have similar needs. As currently structured, both researchers would probably purchase low end instruments and each would be responsible for the maintenance of the unit. By pooling resources within the center, a better instrument could be purchased, facilitating both research programs, and this single unit may be able to be better maintained. However, these researchers both need equal access to the instrument; shared laboratory and equipment space would satisfy this requirement.

**Equipment and Supplies Needs**

Equipment needed for Center operation is already available, or has been requested in grant applications. Hence, no additional University resources will be required for such equipment, except for matching funds for grants and contracts which would normally be submitted. Supplies will be acquired from research grants or contracts.

**Library Needs**

Needed library resources are provided by current holdings, with the exception that funds are needed to pay for the subscription to the *Journal of Contaminant Hydrology*. A memo from Adonna Fleming, the Science Librarian, and Darlene Hildebrandt, the Head of the Science Libraries, is attached which outlines this need. This memo indicates that Owen currently holds adequate monographic resources to support this proposal, but additional resources are needed to purchase this needed subscription. Note that the Water Research Center recently transferred their holdings of volumes 1 through 23 of the *J. Contam. Hydrol.* (all past copies) to the Owen Science and Engineering Library for the convenience of the researchers to be associated with the Center proposed here.

**Expected External Funding Sources**

Current external funding of projects that would be associated with the Center exceeds $1MM per year. Funding for this research is obtained from a variety of sources including region 10 of the U.S. EPA, Battelle Pacific Northwest National Laboratory, the INEL University Research Consortium, NCHRP, Washington State Department of Transportation, Washington State Department of Ecology, and the National Science Foundation. Funding from these sources is anticipated to continue.

In addition, we anticipate that one of the duties of the Center Director will be the development of industrial associates and government agencies who are willing to participate as associates. These organizations, which will include industry and national laboratories, will pay an annual fee of $50,000 in order to have access to, and the ability to help direct, the on-going research in the Center. Finally, proposals will be written to obtain Center funding from the National Science Foundation and the U.S. Department of Energy. In this fashion, we anticipate that the funding level associated with this Center can be increased by a factor of 2 to 5 within the next five years.
Expected Contributions to and Impact on the Instructional Programs

As in all academic endeavors, a focus of the Center will be on education. C-MER staff will be involved in the education of undergraduate and graduate students, and continuing education of practitioners. To train industrial practitioners, technology transfer and outreach efforts will include workshops, conferences, technical reports, special seminars, newsletters and technical advisory committee meetings. Enhanced education of on-campus students will be accomplished by involving them in research programs and in site characterization studies. In addition, new courses that condense and solidify the results of research programs will be incorporated into the teaching programs. The education of on-campus students will emphasize interdisciplinary solutions to environmental challenges. Degrees, though, are only granted by the academic units. Hence, a graduate student from Chemical Engineering may participate in the Center, interacting with researchers with diverse backgrounds such as Microbiology, Crops and Soil Sciences, Biological Systems Engineering, Civil and Environmental Engineering, Chemistry, and Geology, but his/her degree would still be granted by the Chemical Engineering Department, and the faculty in that department would be ultimately responsible to ensure that a quality thesis or dissertation is produced.

Expected Contributions to University and Other Clients

The benefits associated with the proposed Center are manifest. First, the goals of the University will be met because additional students will be educated. Such education will occur both in the research laboratory and in the classroom. Classroom instruction will be enhanced because new methods will be developed via the research programs that can be directly translated to the undergraduate and graduate instructional programs. Furthermore, because the research in the Center will be interdisciplinary in nature, students will be educated to approach problem solutions using an interdisciplinary framework. In addition, interactions between representatives of the member organizations and Center associated faculty will provide opportunities for "real-world" problems to be developed and used in the instructional programs.

Faculty associated with the Center will receive several benefits by participating in the Center. First, these faculty will have access to "real-world" industrial problems, and their industrial counterparts. Such interactions will facilitate the development of proposals that are more easily funded by government agencies. Moreover, these faculty will be able to obtain research funds via the Center that will allow them to develop ideas to the point at which they would be able to submit them to an agency able to provide greater funding. Finally, the technologies developed by these faculty should be able to be transferred to either the WSU Research Foundation or to corporate collaborators for protection of the intellectual property.

Member organizations will benefit because they will have access to cutting edge research being performed by faculty associated with the Center. These member organizations will be able to leverage their investment so that, by paying a nominal amount, they will be able to have access to applicable research that would otherwise cost many times more to perform.

Finally, society will benefit because solutions to important environmental problems will be developed, and the technology to implement these solutions will be passed to member institutions where it can be fully implemented.

These benefits are shown schematically in Figure 1, the Technology Flywheel.
To: Faculty Senate
From: Robert A. Altenkirch, Dean
Date: January 31, 1997
Re: Proposal to establish the Center for Multiphase Environmental Research

The College of Engineering and Architecture is in full support of establishing the Center for Multiphase Environmental Research as outlined in the attached proposal. This Center, and the general concepts behind it, are in keeping with current thinking, see, e.g., National Science Foundation Program Announcement Engineering Research Centers Partnerships with Industry and Academe for Next-Generation Advances in Knowledge, Technology, and Education, that many of the technological issues that are and will continue to be important to the nation and society in general are large-scale, systems-type problems whose solution demands expertise from a number of traditional disciplines. The proposed Center brings together faculty, and students, from a variety of disciplines to address a variety of problems all of which have the general character of deriving from the implications of interfacial phenomena on environmental systems. While certain aspects of interfacial phenomena are constant from problem to problem, details of application vary, and the phenomena may be embedded within the framework of a larger system, e.g., overall minimization of waste and maximization of product yield from several related chemical processes that result in value added chemical products. It is the complexity of the overall system that demands expertise from many areas.

The College has a long history of involvement in environmental research, and it is an area with potential on which to build further. Expenditure on external grants and contracts for FY 95 for Engineering and Architecture faculty listed in Table 1 of the Center proposal totaled over $1.6M. While this total is not all related to research with which the Center might be involved, a large fraction of it is, indicating the strength of the environmental research effort as well as the faculty involved in it. Through involvement of faculty from disciplines across the campus with expertise to contribute to the technical thrust of the Center, we anticipate being able to address large-scale, systems-type, interfacial environmental problems of interest to governmental agencies and industries, particularly in the region. Such problems are inaccessible to investigation by individual investigators.

In addition to research, the faculty proposed to be associated with the Center have been involved with environmentally-related education through various units, including Biological Systems Engineering, Chemical Engineering, Civil and Environmental Engineering, and the Environmental Sciences Program. Through involvement of students in Center related activities, e.g., as graduate assistants on research projects, the interdisciplinary nature of the Center will add to the educational experience. As such, the various programs from which the students will come to participate in the Center will complement the research effort of the Center, which will, naturally, lead to curriculum innovation to enhance the educational experience of students further.

The concept of interdisciplinary research and education is one that the College supports strongly. This, coupled with the fact that environmental engineering and research has been one of our strengths, makes establishment of the Center for Multiphase Environmental Research a logical next step in enhancing our efforts and contributions in environmental engineering.
Memorandum

To: Frances McSweeney, Research and Arts Committee
CC: Senate Office
From: J.R. Powers, Chair, Library Committee
Date: February 20, 1997
Re: Proposed Center for Multiphase Environmental Research

The Library Committee met on February 19, 1997 to consider the proposed Center for Multiphase Environmental Research. The committee voted to approve the center proposal contingent on a minor revision of the center budget to include purchase of the Journal of Contaminant Hydrology. The proposal points out that this serial is critical to the center. However, the subject librarian points out in a memorandum included with the proposal appendices that the Library cannot fund this serial in the future.

To: Dick Crain, Faculty Senate Secretary
From: James N. Petersen, Professor
Date: February 25, 1997
Re: Report by the Library Committee on the proposed Center for Multiphase Environmental Research

As you communicated in our telephone conversation today, the library committee approved our proposal, but noted that we needed to identify funding for a subscription to the Journal of Contaminant Hydrology. As noted on page 5 of our proposal, University budgetary support is requested to "supplement member fees in order to pay the salary for a Center director, to purchase a subscription to a needed journal (see Library Needs section below), and to support an interdepartmental seminar series." Hence, we have already addressed this concern in the proposal, and will continue to express this need in future meetings.

****

Motion carried.

7. Recommendation from Research and Arts Committee for a Center for Reproductive Biology

Exhibit I from 4/3/97 is as follows:

February 25, 1997

MEMORANDUM

TO: Richard Crain, Jr., Executive Secretary, Faculty Senate
FROM: Nancy Shrope, Research and Arts Committee
SUBJECT: Approval of Center Proposals

The Research and Arts Committee on February 21, 1997 reviewed and approved for recommendation to the Faculty Senate both the Center for Reproductive Biology proposal and the Center for Multiphase Environmental Research proposal.
February 25, 1997

TO: Richard Crain, Jr., Executive Secretary, Faculty Senate
FROM: Nancy Shrope, Research and Arts Committee
SUBJECT Approval of Center Proposals

The Research and Arts Committee on February 21, 1997 reviewed and approved for recommendation to the Faculty Senate both the Center for Reproductive Biology proposal and the Center for Multiphase Environmental Research proposal.

TO: University Administrators
FROM: L. J. Radziemski, Dean
College of Science
SUBJECT: Chair and Director Appointments in the College of Sciences

We are pleased to announce the appointment of Dr. Valipuram Manoranjan as Chair of the Department of Pure and Applied Mathematics, Dr. Kelvin Lynn as Director of the Materials Research Center, and Dr. Michael Skinner as Director of the Reproductive Biology Center.

Dr. Manoranjan obtained his B.S. (Honors) in Mathematics from the University of Sri Lanka in 1977, and a Ph.D. in Numerical Analysis from the University of Dundee, Scotland in 1982. From 1986 through 1989 he was on the faculty at the University of Surrey, England. In fall 1989, he came to Washington State University where he is now Professor of Mathematics. He became the Chair of the Department of Pure and Applied Mathematics in August 1996. His research involves studying time-dependent nonlinear partial differential equations which model various real-life problems in the biosciences and the physical sciences. Currently, his research focus is on groundwater contamination--chemical and microbial--and the associated processes such as transport and sorption.

Dr. Lynn obtained a B.S. in Materials Science in 1970, a B.S. in Mathematics in 1972 and a Ph.D. in Materials Science in 1974 from the University of Utah. He took a position as Assistant Physicist with Brookhaven National Lab in New York, stayed there 22 years and became a Tenured Senior Physicist with a research group in the Physics Dept., and Head of the Materials Science Division. He spent 1979-80 at Los Alamos National Laboratory performing neutron and muon experiments. In August 1996 he moved to Washington State University where he is now Director of the Materials Research Center, Professor of Physics and Mechanical and Materials Engineering and Boeing Chair. He has broad experience in using fundamental particles and techniques in understanding physics, materials science and industrial questions. The Materials Research Center is a joint effort between the College of Sciences and the College of Engineering and Architecture.

Dr. Skinner obtained a B.A. in Chemistry from Reed College, Portland, Oregon, in 1979 and a Ph.D. in Biochemistry from Washington State University in 1982. From 1984 through 1991, he was an Assistant Professor in the Department of Pharmacology at Vanderbilt University. In September 1991, he became Associate Professor in the Departments of Reproductive Sciences and Physiology, and a member of the Reproductive Endocrinology Center at the University of California at San Francisco. In August 1996, he was recruited to Washington State University as a Professor in the Department of Genetics and Cell Biology and was appointed Director of the Center for Reproductive Biology. The Center for Reproductive Biology is a joint effort of four
Colleges, led by the College of Sciences. His research focuses on cell-cell interactions in reproductive tissue with particular interest in the molecular and cellular aspects of testis and ovary physiology. Research is applied to a number of abnormal problems associated with cancer of reproductive tissues, as well as fertility and contraception.

The College of Sciences is pleased to welcome Dr. Manoranjan, Dr. Lynn and Dr. Skinner to our administrative team.

October 24, 1996

Richard Crain, Jr.
Executive Secretary
Faculty Senate
Washington State University
Pullman, WA 99164-1038

Dear Dr. Crain,

Enclosed is a formal proposal to establish a "Center for Reproductive Biology" at Washington State University. I understand from the University Guidelines that the proposal is submitted through your office for distribution to the appropriate committees. Three appendices are attached to the proposal that include my curriculum vitae, supporting letters, and the description of the participating faculty. Please let me know if any additional information is required or would be useful.

I have attached a cover letter to the proposal that I would like to have forwarded to each of the committees. This is an apology for the use of the term "Center" prior to formal approval by the committees and Academic Senate. I understand this formal approval is required for Center designation.

Thank you for initiating the process, and I look forward to hearing from you and the committees.

Sincerely,

Michael K. Skinner
October 24, 1996

Center Review Committees
Washington State University

Dear Committee Members,

Enclosed is a proposal to establish a "Center for Reproductive Biology" at Washington State University. Three appendices are included that are my curriculum vitae, supporting letters, and a description of participating faculty. Please let me know if any additional information is required or would be useful.

I want to apologize for the use of the term "Center" prior to formal approval by the Academic Senate and committees. I understand that formal approval is required for Center designation. My first order of business has been to prepare this proposal for submission to the Academic Senate. It is difficult in the preparation of an interdepartmental and inter-college program
involving this number of faculty to not utilize the term Center. I have attempted to use this in the small "c" context. I apologize now for any misunderstanding and hope this will not affect the review of the proposal.

Thank you for considering this request to establish a "Center for Reproductive Biology", and I look forward to hearing from you.

Sincerely,
Michael K. Skinner
October, 1996

PROPOSAL TO ESTABLISH A CENTER FOR REPRODUCTIVE BIOLOGY AT WASHINGTON STATE UNIVERSITY

Michael K. Skinner
Professor
Department of Genetics and Cell Biology
Washington State University
Pullman, Washington 99164

Note - The Center will be a joint Center for Reproductive Biology between Washington State University and the University of Idaho. A similar proposal will be submitted at the University of Idaho for consideration by the appropriate University Officials and Regents.

1) NAME: Center for Reproductive Biology

2) OBJECTIVES AND SCOPE OF ACTIVITIES:

This document proposes the establishment of a Center for Reproductive Biology at Washington State University. The Center will be an inter-College and inter-Departmental program involving faculty interested in research in Reproductive Biology.

History

Over the past eight years, investigators at both WSU and the University of Idaho interested in Reproductive Biology research have been meeting monthly to discuss specific research projects and promote more interaction among the investigators. In 1989, a training program using existing graduate programs was initiated to assist in the recruitment of graduate and postdoctoral trainees interested in reproductive biology research. The critical mass of investigators and the level of interest of several of the colleges have now increased to promote a more organized center. This has been assisted with the recent recruitment of Dr. Michael Skinner to WSU to organize and direct the Center.

Objectives
1) To foster research of the highest quality and promote collaborative interactions among members of the Center.

2) To enhance opportunities for extramural funding and obtain Center and multi-investigator grants.

3) To enhance the training and education programs of advanced undergraduate, graduate and postdoctoral fellows with an interest in the biology of reproduction.

4) To develop a nationally and internationally recognized Center for Reproductive Biology involving both research and training at Washington State University and the University of Idaho.

Activities

The following activities have been initiated to in part achieve the goals of the Center.

1) Workshop meetings on a regular basis for students, fellows and faculty to present and discuss specific research projects to obtain feedback, guidance and promote interactions between investigators.

2) Seminar program for formal presentations by outside and in-house speakers to be provided on a regular basis.

3) Yearly retreat for all faculty, students and fellows involved in the Center. This will involve research presentations to promote interactions and collaborations, as well as identify funding opportunities.

4) Formation of Core Laboratories to provide centralized services to Center members. Current Cores will be utilized and enhanced when possible. Center members will pay for the supplies and expenditures involved in a service as a recharge and the Center and University will provide the technical support and equipment. The Core will enhance the research activities of the investigators and assist in minimizing duplication of effort so as to be cost effective for the investigators. Initial cores being discussed are a Biochemistry/Molecular Biology Core, Morphology and Histology Core, Assay Core, Tissue Culture Core, and Transgenic Core.

5) Enhance extramural funding opportunities by identifying funding available, assisting in grant planning and preparation, with particular interest in multi-investigator grants.

Relationship to other Units on Campus

The Center for Reproductive Biology will be an inter-departmental program involving several colleges at Washington State University and the University of Idaho. This will be an organized research unit that will integrate the investigators throughout the Universities. It will not be organized into a centralized program or department, but instead by a center that promotes interactions between investigators in different departments and colleges. Currently no other unit exists on campus that duplicates the activities or goals of the proposed Center. The core laboratories will utilize when possible currently existing cores and not duplicate services.

Reproductive Biology Definition/Scope
The broadest definition possible will be used for Reproductive Biology and research associated with the Center. In mammals any process involved or related to reproduction including neuroendocrine control, gonadal function, gamete biology, fertilization, implantation, pregnancy, reproductive tract biology, reproductive disease (e.g., breast cancer) and fertility. In addition, reproduction in non-mammalian species and plants will also be considered. It is anticipated that the current faculty will have areas of interest from domestic animal and human reproduction to fish and plant reproduction. The diversity of the research areas will be a strength of the Center and foster collaboration not previously considered.

3) PARTICIPATING FACULTY, DIRECTOR AND ADVISORY BOARDS

Participating Faculty

The primary criterion for the selection of participating faculty will be any faculty with research projects in the area of reproductive biology interested in participating in the Center. The following list of faculty have been identified and participated in the organization of the Center. A more detailed faculty description, research interests and publications record are present in APPENDIX 1.

<table>
<thead>
<tr>
<th>Name</th>
<th>University</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen Briski</td>
<td>WSU</td>
<td>Vet Comp Anat/Pharmacol/Physiol</td>
</tr>
<tr>
<td>Boon P. Chew</td>
<td>WSU</td>
<td>Animal Sciences</td>
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<tr>
<td>Joseph G. Cloud</td>
<td>UI</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>Joanna Ellington</td>
<td>WSU - Spokane</td>
<td>Health Res. &amp; Ed. Center</td>
</tr>
<tr>
<td>Victor P. Eroschenko</td>
<td>UI</td>
<td>Biological Sciences</td>
</tr>
<tr>
<td>Michael Griswold</td>
<td>WSU</td>
<td>Biochemistry/Biophysics</td>
</tr>
<tr>
<td>Howard L. Hosick</td>
<td>WSU</td>
<td>Genetics &amp; Cell Biology</td>
</tr>
<tr>
<td>Rolf L. Ingennann</td>
<td>UI</td>
<td>Biological Sciences</td>
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<tr>
<td>Shirley Johnston</td>
<td>WSU</td>
<td>Veterinary Medicine</td>
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<tr>
<td>Kwan Hee Kim</td>
<td>WSU</td>
<td>Genetics &amp; Cell Biology</td>
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<td>R. Wesley Leid</td>
<td>WSU</td>
<td>Animal Sciences/Pathology</td>
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<tr>
<td>Mark McGuire</td>
<td>UI</td>
<td>Animal &amp; Vet. Sciences</td>
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<td>Rodney A. Mead</td>
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<td>Biological Sciences</td>
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<tr>
<td>Mushtaq A. Memon</td>
<td>WSU</td>
<td>Veterinary Clinical/Medicine/Surgery</td>
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<tr>
<td>Mark A. Nerando</td>
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<td>Animal Sciences</td>
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<tr>
<td>James Nagler</td>
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<td>Biological Sciences</td>
</tr>
<tr>
<td>Richard T. Okita</td>
<td>WSU</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>Sylvia Oliver</td>
<td>WSU - Spokane</td>
<td>Health Res. &amp; Ed. Center</td>
</tr>
<tr>
<td>Joe Poovaiah</td>
<td>WSU</td>
<td>Horticulture</td>
</tr>
<tr>
<td>Jerry J. Reeves</td>
<td>WSU</td>
<td>Animal Sciences</td>
</tr>
<tr>
<td>Ray Reeves</td>
<td>WSU</td>
<td>Biochemistry</td>
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<tr>
<td>Dipak K. Sarkar</td>
<td>WSU</td>
<td>Vet Comp Anat/Pharmacol/Physiol</td>
</tr>
<tr>
<td>R. Garth Sasser</td>
<td>UI</td>
<td>Animal &amp; Veterinary Science</td>
</tr>
<tr>
<td>Hubert Schwabl</td>
<td>WSU</td>
<td>Zoology</td>
</tr>
<tr>
<td>Philip L. Senger</td>
<td>WSU</td>
<td>Animal Sciences</td>
</tr>
<tr>
<td>Steve Simasko</td>
<td>WSU</td>
<td>Vet Comp Anat/Pharmacol/Physiol</td>
</tr>
<tr>
<td>Michael K. Skinner</td>
<td>WSU</td>
<td>Genetics &amp; Cell Biology</td>
</tr>
<tr>
<td>Robert C. Speth</td>
<td>WSU</td>
<td>Vet Comp Anat/Pharmacol/Physiol</td>
</tr>
<tr>
<td>Paul Sylvester</td>
<td>WSU</td>
<td>Pharmacy</td>
</tr>
<tr>
<td>Steven R. Sylvester</td>
<td>WSU - Vancouver</td>
<td>Biochemistry/Biophysics</td>
</tr>
<tr>
<td>Loverine Taylor</td>
<td>WSU</td>
<td>Genetics &amp; Cell Biology</td>
</tr>
<tr>
<td>Gary Thorgaard</td>
<td>WSU</td>
<td>Zoology</td>
</tr>
</tbody>
</table>
The above faculty will be considered members of the Center. However, any new faculty can be considered for membership at any time. Any faculty with peripheral interests in reproductive biology or without research programs can be considered as Associate Members, if requested. Membership will be reviewed annually by the Steering Committee described below and future new members will require review and approval by the Steering Committee.

**Director**

The Director will be appointed by the Dean of Sciences after consultation with the Deans of the other colleges and interested faculty (e.g. Steering Committee). The Director was recently selected and appointed by Dean Radziemski after consultations with Deans Zuiches and Gustafsson and interested faculty. Dr. Michael Skinner was appointed and his curriculum vitae is attached in APPENDIX 2. The Director will serve a renewable 5-year term. Re-appointment will be subject to a comprehensive review.

**Advisory Boards**

An external advisory board will be established and termed the "Steering Committee". This committee will serve to assist the Director in the administration of the Center and consist of the Director and a minimum of one senior faculty member from each of the Colleges involved, University of Idaho and branch WSU campuses with multiple faculty members. In addition, the faculty members that are Directors of the Core laboratories will also serve on the Steering committee. The Steering Committee members will serve a 3-year term and be appointed by the Director with approval of the Dean of Sciences. The Steering Committee members will meet when required to discuss Center business and will be actively involved in membership review, seminar program organization, core laboratory items and general activities of the Center. The initial Steering Committee members have been selected with consideration of those faculty involved in the organization of the Center over the past five years.

**Initial Steering Committee Members:**
Michael K. Skinner (Director)
Jerry Reeves (College of Agriculture)
Dipak Sarkar (College of Veterinary Medicine)
Michael Griswold (College of Sciences)
Joanna Ellington (WSU-Spokane)
Rodney Mead (University of Idaho)

An external advisory board termed the "Advisory Board" will be formed to provide advice to the Director and assist the Dean and University in the evaluation of the Center. This Advisory Board will consist of the Center Director and a minimum of four senior faculty outside WSU or UI actively involved in reproductive biology research. This will include University, Industrial and National laboratory associated individuals. In addition, several senior faculty within WSU actively involved in research, but outside the area of reproductive biology, will also be selected to serve as members of the Advisory board. The Advisory Board members will meet minimally once per year at the annual Center Retreat to evaluate the Center and provide advice to the
Director. The Advisory Board members will be selected by the Director with approval of the Steering Committee and Dean of Sciences.

**Administrative Organization**

The Director will report to the Dean of Sciences who will consult with the Deans of the other colleges and campuses involved. The administrative assistant will report to the Director. The Steering Committee and Advisory Board will be organized by and report to the Director.

**4) COLLEGES, CAMPUSES, AND UNIVERSITIES INVOLVED**

The Center involves faculty from a number of Colleges and Campuses including the College of Science, College of Agriculture and Home Economics, College of Veterinary Medicine, WSU Spokane, WSU Vancouver, and the College of Science and Letters and College of Agriculture at the University of Idaho. The Center will be administered by the College of Sciences with consultation of the other Colleges and Campuses involved. The faculty at the University of Idaho will also be consulted in regards to Center activities and decisions.

<table>
<thead>
<tr>
<th>College or Campus</th>
<th>Participating Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Science</td>
<td>9</td>
</tr>
<tr>
<td>College of Agriculture</td>
<td>7</td>
</tr>
<tr>
<td>College of Veterinary Medicine</td>
<td>7</td>
</tr>
<tr>
<td>College of Pharmacy</td>
<td>2</td>
</tr>
<tr>
<td>WSU-Spokane</td>
<td>2</td>
</tr>
<tr>
<td>WSU-Vancouver</td>
<td>1</td>
</tr>
<tr>
<td>University of Idaho</td>
<td>8</td>
</tr>
</tbody>
</table>

**5) PROPOSED BUDGETARY SUPPORT**

The budget proposal has been established through an estimate of the cost of proposed Center activities. The budgetary support has been established or is being negotiated through discussion with the respective Deans and Vice Provost of Research.

<table>
<thead>
<tr>
<th>Annual Budget</th>
<th>Annual Expenses</th>
<th>Participating Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dean of Science WSU</td>
<td>$20,000</td>
<td>(Administrative Costs)a</td>
</tr>
<tr>
<td>Negotiating Dean of Agriculture</td>
<td>$15,000</td>
<td>(Seminar Program)b</td>
</tr>
<tr>
<td>Negotiating Dean of Veterinary Med</td>
<td>$5,000</td>
<td>(Retreat Costs)c</td>
</tr>
<tr>
<td>Negotiating Dean of Graduate School</td>
<td>$5,000</td>
<td>(Faculty/Recruiting Booklet)</td>
</tr>
<tr>
<td>Negotiating WSU, Spokane</td>
<td>$25,000</td>
<td>(Core labs, Start-Up)d</td>
</tr>
<tr>
<td>Negotiating Vice Provost of Research, UI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$70,000</td>
<td>Total</td>
</tr>
</tbody>
</table>

a) These costs include 1 month administrative supplement for the Director and a contribution to the salary of an Administrative Assistant in the Department of Genetics and Cell Biology to act as the Center Coordinator.
b) These costs are for outside speaker travel and lodging for approximately 2 speakers per month.
c) These costs are for the Annual Retreat lodging, food, and Advisory Board travel.
d) These funds are to provide modest start-up support for each of the 5 core laboratories being considered at approximately $5,000 each average. At least one core laboratory will be located in each of the colleges and campuses involved. Therefore, a portion of the support provided will be directed back to the colleges or campus to support the development or expansion of centralized core laboratory funding.

e) A projection for the annual budget is provided and two years of support is requested. At the end of the two years support will be reevaluated considering extramural funding generated and Center activities.

f) The College of Sciences at WSU has committed $20,000 for the first year and $10,000 for the second year following a reevaluation of support. In addition, not reflected is the over $240,000 support provided by the College of Sciences to Michael Skinner to move his laboratory to WSU and have him organize and direct the Center.

6) SPACE AND RESOURCES

The Center will not require designated space, however, the administration of the Center will be run out of Dr. Skinner's office and the space required for the administrative assistant.

Equipment requirements for the Core Laboratories will involve separate requests, once needs are determined, through extramural and university funding programs. Supplies needed for the Core Laboratories will be covered by individual investigators requesting the services.

No additional library resources are required.

7) ANTICIPATED EXTRAMURAL FUNDING

The faculty members currently involved in the Center generate over $2 million extramural support per year. One of the objectives of the Center is to enhance research activity and funding opportunities of these investigators to increase this level of support. In addition, the Center will promote multi-investigator grants to contribute to the funding currently provided. The average direct costs for a center or program project grant is between $500,000 and $750,000 per year. Currently three to five program areas are being examined and it is anticipated that three multi-investigator grants will be submitted within the year. Therefore, it is anticipated that the Center will promote a minimum of $1-2 million per year that will significantly increase the current level of funding.

8) CONTRIBUTIONS TO UNDERGRADUATE, GRADUATE AND POSTDOCTORAL EDUCATION

For the past eight years the reproductive biology group has organized a training program for the recruitment of graduate and postdoctoral fellows interested in reproductive biology research into existing graduate programs and laboratories. This activity will now be enhanced by the formation of the Center. Further description of this program is presented in APPENDIX 1. In addition, current undergraduate and graduate courses in Reproductive Biology listed below are being offered involving members of the Center.

College of Agriculture, WSU:

AS 350  Reproduction of Farm Animals
AS 454  Artificial Insemination and Pregnancy Detection
AS 556  Embryo Transfer in Domestic Animals
AS 557  Laboratory in Embryo Transfer
AS 550  Advanced Reproduction
College of Science, WSU
BC/BP 561 Biochemical Signaling
GenCB 405 Plant Reproduction
GenCB 505 Plant Reproduction
GenCB 450 Human Genetics
Zool 251 Human Physiology
Zool 316 Human Embryology
Zool 320 Principles of Animal Development
Zool 451 Vertebrate Reproduction

College of Veterinary Medicine, WSU
UPH 538 Neuroendocrinology
VM 577 Theriogenology

University of Idaho
Zool 411/511 Comparative Vertebrate Reproductive Physiology
Zool 501 Seminar in Reproductive Physiology/Endocrinology
AVS 452 Physiology of Reproduction
AVS 413 Physiology of Lactation
AVS 218 Artificial Insemination and Pregnancy Detection
AVS 222 Animal Reproduction and Breeding
AVS 430/530 Advanced topics in Embryo Physiology
AVS 451/551 Endocrine Physiology
AVS 530 Advanced Endocrine Physiology

Note: This does not include lower-division courses involving reproduction.

The courses above provide instruction for over 500 students per year with over 75 credits associated with these courses and over 37,500 credit hours involved.

The Center will enhance these activities by organizing an advanced courses in the Molecular and Cellular aspects of Reproduction to be taken by advanced undergraduate and graduate students. Therefore, it is anticipated that the Center will enhance and help integrate current course offerings in the area of reproduction and provide direction for students interested in this discipline. The activities of the Center involving seminar and workshop programs is also anticipated to significantly enhance the training of graduate and postdoctoral fellows. Currently, the Center members train over 45 graduate and 23 postdoctoral fellows. It is anticipated that this number will be increased with the formation of the Center. An additional training program involving a Reproductive Biology residency program for veterinary students is also currently being discussed.

9) CONTRIBUTIONS TO UNIVERSITY MISSION

Two major missions of Washington State University are teaching and research. The creation of Centers of Excellence are one mechanism the university has selected to contribute to these mission objectives. The Center for Reproductive Biology as discussed above will enhance both teaching in regard to the education goals and research. The Center will promote interactions and collaborations between investigators throughout WSU to promote research activities. One significant outcome anticipated is an increase in extramural funding. The collaborative interactions are anticipated to increase the training of faculty and quality of research. Therefore, the Center will act as an Organized Research Unit to directly address both the teaching and research missions of WSU and UI.
The Center for Reproductive Biology will also act as a catalyst to promote interactions between investigators in a large number of departments throughout WSU and UI. This is in contrast to generating a centralized unit or institute. The promotion of interaction and collaboration between colleges and Departments is also anticipated to indirectly coordinate and enhance both teaching and research activities.

Reproductive Biology research affects a number of directed areas of interest for WSU including agriculture, health science and veterinary medicine. The creation of a nationally and internationally recognized Center for Reproductive Biology will enhance these areas and opportunities. For example, plant reproduction and domestic animal reproduction and fertility is a significant area of interest for WSU that the Center will directly address. Reproductive health and fertility are also major areas in human and veterinary medicine. These are also areas the Center directly addresses. Therefore, the research and activities of the proposed Center for Reproductive Biology are directly relevant to the mission and goals of WSU.

10) CONTRIBUTION TO ELEMENTS OUTSIDE WSU

Integrated into the Center is a strong interaction between Washington State University and the University of Idaho. This provides a significant opportunity to promote interactions and collaborations between WSU and UI to enhance research and teaching between the two universities. The support of UI is documented by the participating faculty. It is anticipated that the Center will promote a much stronger interaction between the universities involving collaborations, joint funding, shared resources and joint teaching.

Two other branch WSU campuses are also involved in the Center, WSU Spokane and WSU Vancouver. The mission of WSU-Spokane is in the health sciences and it is anticipated that the Center will assist in the development of this program due to the relevance of reproductive biology to the health sciences.

Strong interactions are anticipated with the private sector in both plant and domestic animal reproduction due to the current strengths of WSU. Therefore, it is anticipated that the Center for Reproductive Science will be a resource for the University and the institutions, units and entities which WSU serves.

11) APPENDIX

Appendix #1 -- Draft Center Booklet
Participating Faculty Description
Teaching Program
Environment
Appendix #2 -- Dr. Michael K. Skinner's Curriculum Vitae
Appendix #3 -- Supporting letters

Michael K. Skinner, Professor
Department of Genetics and Cell Biology
Washington State University
Pullman WA 99164-4234
Dear Dr. Skinner:

This is a letter of support for the proposed Center for Reproductive Biology at Washington State University. The topic of reproductive biology in plants, animals, and humans is relevant to the interests and activities of the College of Sciences. This organized research unit will act as an inter-departmental and inter-college program to support a number of investigators in the College of Sciences. This Center is anticipated to enhance research activities and extramural funding, as well as promote teaching activities. Therefore, the Center supports the goals and mission of the University. As evidence of our support, the College has provided over one-quarter of a million dollars to help the Center commence activity. I wish you luck with your proposal and expect great results.

Sincerely yours,
Leon J. Radziemski, Dean
College of Sciences
October 23, 1996

Dr. Michael K. Skinner, Professor
Department of Genetics
Washington State University
Pullman, WA 90164

Dear Dr. Skinner:

This is a letter of support for the proposed Center for Reproductive Biology at Washington State University. I recognize this is an organized research unit that acts as an interdepartmental and intercollege program to support a number of investigators-

This center is anticipated to enhance research activities and extramural funding as well as promote teaching activities. Therefore, the center supports the goals and mission of the university. The topic of reproductive biology is also relevant to the interests and activities of the College of Vet Medicine. I wish you luck with your proposal and feel the Center for Reproductive Biology will be an asset to WSU.

Sincerely,
Borje K- Gustafsson, DVM, PhD.
Dean and Professor
October 22, 1996

Michael K. Skinner, Professor
Department of Genetics and Cell Biology
Washington State University
Pullman, WA 99164

Dear Dr. Skinner:
This is a letter of support for the proposed Center for Reproductive Biology at Washington State University. I recognize this is an organized research unit that acts as an inter-departmental and inter-college program to support a number of investigators at the Washington State University Spokane campus.

This center is anticipated to enhance research activities and extramural funding, as well as promote teaching activities. Therefore, the Center supports the goals and mission of this campus as well as the broader University. The topic of reproductive biology is also relevant to the interests and activities of the Health Research and Education Center at WSU Spokane.

I wish you luck with your proposal and feel the Center for Reproductive Biology will be an asset to WSU.

Sincerely,
William H. Gray
Campus Dean

c: C. Harold Mielke, MD
    Joanne Ellington, DVM, Ph.D.

University of Idaho
College of Letters and Science
Moscow, Idaho 83844-3154
208-885-6426

October 25, 1996

Professor Michael K. Skinner
Department of Genetics and Cell Biology
Washington State University
Pullman, Washington 99164

Dear Dr. Skinner:

This is a letter of support for the proposed Center for Reproductive Biology at Washington State University. I recognize this is an organized research unit that acts as an inter-departmental and inter-college program to support a number of investigators in the College of Letters and Science. This Center is anticipated to enhance research activities and extramural funding, as well as promote teaching activities. Therefore, the Center supports the goals and mission of the University. The topic of reproductive biology is also relevant to the interests and activities of the College of Letters and Science. I wish you luck with your proposal and feel the Center for Reproductive Biology will be an asset to WSU.

Sincerely,
Kurt Olsson
Dean

October 28, 1996

Professor Michael K. Skinner, Ph.D,
Department of Genetics and Cell Biology
Washington State University
Pullman, WA 99164-4234

Dear Dr. Skinner:

This is a letter of support for the proposed Center for Reproductive Biology at Washington State University. I am pleased that you and your colleagues have created this organized research unit. I endorse wholeheartedly such an interdepartmental and intercollege program and the support it will provide the participating investigators in the College of Agriculture and Home Economics. The Center will enhance research activities and extramural funding, as well as promote teaching activities and contribute to the goals and mission of the University. The topic of reproductive biology is most relevant to the interests and activities of the College of Agriculture and Home Economics. The Center for Reproductive Biology will be an asset to WSU and through the College’s Agricultural Research Center, we expect to support and benefit from this initiative.

Sincerely,

James Zuiches, Dean
cc: H.B. Burelow JR Carlson LG James CA Pinch

*****

Motion carried.

8. Recommendation from Graduate Studies Committee for Conditions for Program Residency for Doctor of Philosophy Degrees Exhibit K from 4/3/97 is as follows:

MEMORANDUM

TO: Faculty Senate
FROM: Lynda Carey (for Graduate Studies Committee)

SUBJECT: Conditions of Program Residency for Doctor of Philosophy (PhD) Degrees

On February 25, 1997 the Graduate Studies Committee recommended approval of conditions of program residency for PhD degrees as follows:

Conditions of Program Residency for Doctor of Philosophy (PhD) Degrees

Purpose: (adapted from GSC document entitled, A Policy Statement, The Doctor of Philosophy): To allow students to concentrate primarily on coursework or research, to acquire those habits, altitudes, skills and insights necessary for attaining the doctoral degree, and to find opportunities to work closely with professors and other graduate students.

Benefits include the following: fluency in language and vocabulary of specialization (frequent and close contact with other doctoral students), competence in the field (familiarity with
University's libraries), valuable experience gained through seminars and colloquia with visiting scholars, and research facilitated by consultation with faculty advisor.

**Residency Requirement:** Residency requirements for doctoral degrees shall be at least three years beyond the baccalaureate degree. For students without a masters degree, at least two of these three years shall be in residence at Washington State University (enrolled full time and on a campus where a given program has received approval to grant residency). For students with a masters degree, at least one of these three years shall be in residence at Washington State University (enrolled full time and present on a campus where a given program has received approval to grant residency).

**Conditions:** The conditions specified below are the criteria which must be met in order for doctoral students to satisfy residency requirements. The criteria apply to doctoral degrees offered by Washington State University and are not directed toward a specific campus. These criteria are considered the minimum necessary to offer doctoral program residency and apply to doctoral programs at WSU Pullman initially (the currently approved location for doctoral degrees) and, as appropriate, may be extended to other campuses (approved alternative sites). Satisfying residency requirements is subject to approval by the degree-granting unit, the Graduate Studies Committee and the Graduate School.

1. **Critical mass of graduate faculty engaged in research and scholarly productivity.** Critical mass \([n=3]\) in a single or related programs at a campus, minimum of 5 Graduate Faculty systemwide, availability of additional graduate faculty [including adjunct] in related disciplines. The critical mass \([n=3]\) refers to three full time Graduate Faculty members.

2. **Graduate Research Library:** (Access to discipline-specific research collection in library facilities on campus as well as access to library facilities at other institutions; additional access through electronic access and remote lending services but not as the primary source for library matter.)

3. **Critical Mass of students pursuing PhD degrees:** (Average of 3 doctoral students/per year enrolled full time at one campus in the same program.) Regular contact with other doctoral students (in other programs and other locations).

4. **Sufficient laboratories and research facilities, including computer facilities.** (Combination of WSU facilities and access to other facilities as necessary.)*

5. **Availability of financial support for full time study** (e.g., TA’s/RA’s). (Implies student's primary commitment is to graduate study.)

6. **Opportunity for doctoral students to teach and conduct research with Graduate Faculty.**

7. **Access to and interaction with chair and members of doctoral committee on regular basis; contact with other graduate faculty.**

8. **Access to all required core courses and doctoral level course work.** (e.g., face to face instruction through WHETS [WHENS].)
9. **Access to and participation in both formal and informal seminars and colloquia** (WSU and non-WSU sponsored activities).

10. **Adequate support services** including a Graduate Coordinator, a Graduate Secretary, admissions, advising, etc., at the location of residency.

*Formalized written agreements to ensure access and availability

This document was referred to and considered by the Faculty Senate at its meetings on December 7, 15, 1996. Because of concerns expressed about the library capabilities at the branch and the possible drain of funding for the Pullman campus libraries, the motion to approve was denied.

Since that time, it has been determined through responses from the branch campus deans, that enhancement of library services and collections at the branch campus libraries is receiving high priority in branch campus budgets. The level of support currently for libraries at the branches is equal to or greater than the recommended five per cent of new program funding, which is the proportion of funding invested in libraries at the Pullman campus. Further, the Director of Libraries conveyed her support of the document by stating that students can satisfy residency requirements at the branch campuses provided they recognize that many items would need to be delivered from Pullman or elsewhere. No research library including the WSU Pullman Libraries, can provide everything in house needed by its graduate students and researchers.

It is noted that the proposal does not extend the granting of doctoral degrees to branch campuses, but WSU to function more like a multicampus university. Extension of degrees requires a separate review and approval process specified by the HECB. Specifically, the change would:

*allow faculty at branch locations to work with doctoral students;

*allow systemwide programs/departments with autonomy to make decisions regarding residency; and

*align practice and policy with the philosophy of a multicampus university system.

**MEMORANDUM**

TO: Wes Leid
FROM: Jim Cochran, Hal Dengerink, and Bill Gray
Date: January 28, 1997
Subject: Budget Projections for WSU Branch Campus Libraries

Enhancement of library services and collections at the WSU Branch Campuses continues to receive high priority in branch budgets. Currently, the level of support for libraries at the branches is equal to or greater than the recommended five percent of new program funding, which is the proportion of funding invested in libraries at Pullman. Based on past allocations and future program development, we offer the following budget projections for the WSU Branch Campus Libraries for the next five years (see Table I on next page). As requested, the allocated dollars have been broken down by academic area for each fiscal year. The percentages indicate the portion of the estimated budget expended by each branch campus to provide library collections and services for books, periodicals, on-line subscriptions, full-text databases, electronic document delivery, interlibrary loan, new programs, etc., for each academic area.
TO: Wes Leid
Chair, Graduate Studies Committee

FROM: Leslie Wykoff
Campus Librarian, Director of Information Services, WSU Vancouver

DATE: October 31, 1996

SUBJECT: Branch Campus Library Services for Graduate Students

This memo presents an argument in regard to library services for permitting graduate student residency to be met at the WSU branch campuses.

Continuing to "own" centralized, very high quality, research-level library collections has become impossibly expensive for universities everywhere. Libraries have canceled subscriptions while debating the "access vs ownership" question for almost a decade now. Developing alternative methods for securing “access” to research materials rather than "owning" them is librarianship's highest priority.

Extended campus and distance education library programs have been useful situations in which to test cost-effective information delivery systems. Technologies now exist which facilitate rapid electronic finding and transfer of information. There is strong interest in developing "scholars' workstations' to which information can be delivered without the scholars ever having to go to the library, even at universities with substantial library collections on campus.

Responding to the demand for access to materials not "owned" locally, libraries have been building consortia which allow us to 1) cooperatively pay for database licensing, 2) arrange borrowing and lending which emphasizes turnaround time requirements, and 3) organize collection development collaboratively. These consortial agreements are not extraordinary but are now common library practice on fact that in order to serve the needs of our academic communities we need to combine our forces and share our resources.

I think it time to accept that access to electronic citations combined with efficient document delivery (some of which are electronic fulltext systems) is a workable method of conducting literature reviews. The activities of this alternative process parallel the manual library research method to a great extent, requiring only an adjustment in pace and timing. At the WSU branch campuses this library research methodology is already the norm. WSU branch campus libraries are leading in the development of national standards for electronic library research and document delivery to distant sites in the Extended Campus Library Services Section (ECLSS) of the Association of College and Research Libraries (ACRL).

The WSU branch campus libraries have been developing increased electronic access to references, in collaboration with the WSU Libraries, and through our own local library consortia, to the point where the branches now have the same and sometimes more access in some subject areas. For example the Vancouver Library has dial-in online Clinical, Life and Agricultural Current Content through our library consortia called PORTALS (Portland Area Library System). This access is not yet available to scholars in Pullman.

Branch campus library budgets are continuing to increase as the academic programs develop. The branches employ a staff in Pullman which provides us with a rapid monographic and journal article delivery service. We use internet technologies to facilitate rush delivery of information from non-WSU libraries via interlibrary loan. At WSU Vancouver we do not charge for ILL services. Our local library consortia agreement provides us with a twenty-four hour turnaround
time on requested journal articles. We recently initiated a program here for our faculty which permits them to store their research interest profiles with an information service which forwards them via electronic mail those references which match their profiles.

The WSU branch libraries also arrange for borrowing privileges for our faculty and students at local colleges and universities. At WSU Vancouver, for example, because our PORTALS consortial agreement, we can walk in and check out material from Oregon Health Sciences University, Portland State University, Reed College, Lewis and Clark State College, the University of Portland, Linfield College, Pacific University, the Oregon Graduate Institute, Clark College, several community colleges, and a public library system.

WSU telecommunication capability, through WHETS, telephone conferencing, facsimile transmission, and the new desktop videoconferencing which is just being implemented, can put scholars who are at distant sites in touch with their colleagues. It isn’t as great as being there in person, but it is very useful for now. The more these technologies are used at the branches the more comfortable we become with them.

I think that graduate students can do library research at the WSU branch campuses. The pace and timing of the work is slightly different than traditional library research, but the process works. The systems are in place to respond to patron demands at the doctoral level. This method of doing library research is how it will be done in the future as libraries move increasingly toward the access model rather than the ownership model of library service. I hope you’ll give the WSU branch campus libraries the opportunity to demonstrate how an access model of service can work in support of doctoral research.

MEMORANDUM
TO: Wes Leid Chair, Graduate Studies Committee
FROM: Nancy L. Baker, Director of Libraries, 5610 (335-4558)
DATE: October 29, 1996
SUBJECT: GRADUATE RESIDENCY REQUIREMENT AT BRANCH CAMPUSES

This memo is intended to convey my opinion regarding the feasibility of permitting graduate student residency requirements to be met at the branch campuses with respect to the provision of library services.

When the branch campus libraries were established, it was understood that these libraries would never be archival libraries with extensive research-level collections. Even though we recognized that some collections must be available on site, it has always been assumed that these campuses would depend heavily on document delivery services both from the libraries on the Pullman campus as well as from other consortial partners. In fact, the branch campuses subsidize this document delivery service.

Since the creation of the branch campuses, automation has given us many additional ways to speed up the delivery of articles from one campus to another. Technology has provided a means by which photocopies can be taxed or sent in digital form between the campuses. In addition, more and more of our bibliographic resources and full-text publications are available and will continue to be available in electronic format directly to all our WSU students and faculty, regardless of his/her location.
In addition, each of the branch campuses have regional consortial arrangements with neighboring public and college/university libraries that offer additional library resources for students and faculty at the branch campuses. WSU Vancouver's membership in PORTALS, a consortium of Portland area libraries, is a good example of these regional arrangements. The co-location and sharing between WSU Tri-Cities and the Hanford Technical Library is another excellent case in point. All academic libraries have become dependent on the shared resources of their consortia partners. No research library, the WSU Pullman Libraries, can provide everything in house needed by its graduate students and researchers.

With all of this in mind, I believe students can satisfy residency requirements at the branch provided they recognized that the library resources needed for their coursework and research may not be satisfied entirely by the library on their campuses. They would need to recognize and accept the reality that many items would need to be delivered from Pullman or elsewhere and that time must be allowed for this delivery. Depending on the academic disciplines, it might be necessary for a student to visit other libraries if he/she needed to consult non-circulating special collections materials. Graduate students in Pullman sometimes need to visit other research libraries to consult the special collections of these libraries pertinent to their research.

In my dealings with the branch campuses during the last five and half years, I have observed that students at the branch campuses do recognize that their library needs cannot be entirely satisfied by the local campus library. Furthermore, they have been quite accepting of electronic delivery of information.

Please do not hesitate to contact me if you need any additional information.

MEMORANDUM

TO: Wes Leid
From: Jim Cochran, Hal Dengerink and Bill Gray
Date: November 4, 1996
Subject: Extending the Approved Location for Residency

Quality, responsiveness, cost effectiveness, and adaptability are the defining characteristics guiding development of the Washington State University multicampus system. Since inception in the late 1980's, adherence to these characteristics has provided a solid basis for maintaining the academic on and integrity of the University. The process for obtaining approval to introduce residency, programs, or degrees at a campus entails significant discussion, investigation, and agreement of many participants representing a multitude of institutions. The planning activities and governance model require no small effort, but ensure a course for offering responsive, quality education. Thus, the founding general principles and vision for the University remain and sustain the system's organizing purpose of one University, geographically dispersed.

We support the Graduate School's efforts at aligning practice and policy with the "one University" philosophy. Specifically, the program criteria outlined in "Conditions of Program Residency for Doctor of Philosophy Degrees" (1/15/96 revision) for satisfying residency requirements at WSU are clear, specific, and reasonable. Approval to grant residency for a program is subject to review by the degree-granting unit, the Graduate Studies Committee, and the Graduate School. The extension of the approved location for residency neither grants residency nor permits the offering of degrees without the aforementioned planning, review, and approval processes. These processes enable deliberation and reason, rather than opinion, to guide academic decision-making.
For example, it has been brought to our attention that there is a notion that library support at the branch campuses is insufficient for meeting the academic needs of faculty and students involved in research. We believe that evidence suggests otherwise. Librarians at the branches, as well as branch campus administrators, have been actively involved in acquiring and providing resources to enlarge library collections in specific fields of study and uphold consortial agreements with other libraries. Currently, branch support of libraries is equal to or greater than the recommended five percent of new program funding, which is the proportion of funding invested in libraries at Pullman. The operating budget requests for new enrollment funding provide another measure of support. If funded, the total of the enrollment packages for the branches include $1,462,700 in 1988, and $1,728,500 in 1999 for libraries. These levels of financial support are such that Nancy Baker, Director of Libraries, acknowledges that proposals for new programs at the branches regularly contain a generous allotment for adding to library holdings. Furthermore, these funds are used by the branch campuses to subsidize the document delivery program which is utilized throughout the library system.

It should be recognized that WSU Libraries are a thoroughly integrated library system. Through phone, FAX, electronic catalogue, library loans, document delivery, etc., the holdings of one library requested, and received from any other library quickly and easily. In addition, WSU Libraries at the branch campuses have joined with other major regional and technical-research libraries to form library consortia and councils. Membership in these cooperatives permits WSU students and faculty quick and easy access to library collections located at the following institutions:

Clark College  
Eastern Washington University, Spokane Center  
Gonzaga University  
Inland Northwest Health Science Libraries  
Spokane County Medical Society Library  
Oregon Graduate Institute  
Pacific University  
Portland State University  
University of Portland  
Community Mental Health Center  
George Fox College  
Hanford Technical Library  
Linfield College  
Spokane County Law Library  
Oregon Health Sciences University  
Portland Community College  
Reed College  
Whitworth

Whether the collections of these institutions are physically merged with WSU Libraries, as is occurring in the case of the Hanford Technical Library or are electronically merged via online, catalog consortia members are cooperatively developing library collections and services to promote. Moreover, many of these libraries are within close proximity to a WSU branch campus. Thus, students and faculty at the branches can commute from one library to another, just as students and faculty at the Pullman campus can go from the Holland Library to the Owen Science and Engineering Library.

In conclusion, WSU Libraries at the branches have grown into specialized, electronic, interconnected, multi-million dollar information centers. Given the level of library development at the branches in specific fields of study, integration of the WSU Libraries, and cooperation with other major libraries, we support the position of granting residency based on a proposal, review, and approval process. The ten criteria articulated in the "Conditions for Program Residency" provide a comprehensive list of requirements necessary for determining the merits of a programmatic decision to seek residency at a specific site in the University system. Extending the approved location for residency throughout the University will allow programs to meet the educational needs of students by capitalizing on the opportunities that follow from becoming a multicampus system.
For more specific information about the development and philosophy of library services at Washington State University, please see the attached memoranda from Nancy Baker and Leslie Wykoff.

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Motion carried.

The following item was not discussed at the last meeting due to the lack of a quorum.

9. Recommendation from Graduate Studies Committee for a Master in Nursing at WSU Vancouver

Exhibit L from 4/3/97 agenda is as follows:

A. Proposal to Establish

| Institution: | Washington State University Vancouver |
| Degree Granting Unit: | Intercollegiate Center Nursing Education |
| Degree: | Master |
| of (Type) | Nursing |
| in (Major) | Community Health or Psychiatric/Mental Health |

Proposed Start Date: August 16, 1997

Academic Department Representative:

| Name | Thelma Cleveland |
| Title | Dean, Intercollegiate Center for Nursing Education |
| Address | W. 2917 Fort Wright George Drive |
| | Spokane, WA 99204-5295 |
| Telephone | 509-324-7333 |

PROGRAM PROPOSAL MASTER OF NURSING AT WSUV

1. Program Need

The Intercollegiate Center for Nursing Education (ICNE) supports the mission and goals of its consortium members: Eastern Washington University, Washington State University, and Whitworth College. The ICNE is committed to achieving excellence in education, scholarship and service through support and recognition of faculty, staff, and student strengths and diversities.

The mission of the ICNE is to:

Prepare graduate and undergraduate students in multiple locations throughout the region for compassionate, competent practice in a complex health care environment by providing high quality, innovative programs that incorporate contemporary and traditional technologies and emphasize critical thinking.

Engage in scholarly work which contributes to the knowledge-base of the discipline and enhances theory-based practice through processes of discovery, dissemination and utilization of new knowledge.
Serve the community to improve nursing education, health policy and professional nursing practice through advocacy, consultation, interdisciplinary partnerships, collaboration, continuing education and exemplary nursing practice.

The purpose of this document is to provide a rationale for the offering of graduate nursing education—the Master of Nursing degree—(currently available at the Intercollegiate Center for Nursing Education in Spokane) at Washington State University Vancouver. The ICNE-based Master of Nursing Program offers students a choice of four different clinical areas of concentration: Acute Care Nursing, Psychiatric/Mental Health Nursing, Community Health Nursing, and Family Nurse Practitioner. The Master of Nursing Program was established in 1983 at the ICNE and has been accredited by the National League for Nursing (NLN) since 1986.

A. Relationship to Institutional Role and Mission

The proposed Master of Nursing Program at WSU Vancouver will complement the University's mission by offering placebound students access to training and career development in all sectors of healthcare unavailable at any other college or university in southern, central, or southwestern Washington (Design for the 21st Century[HECB, 1990]). Graduates are prepared to function independently and collaboratively in multiple health care settings as primary care providers, advanced practice nurses, consultants, community college faculty, university faculty, and beginning researchers.

Washington State University Vancouver has a specific mission to support and enhance the wellbeing of residents of southwest Washington. Graduates of the MN Program will continue to support the mission of the university by using what they have learned to provide quality health care, by networking and working cooperatively with healthcare providers in the state, and by applying the findings of research carried out by the faculty.

The Master of Nursing Program supports and enhances the Intercollegiate Center for Nursing Education's Mission of educating students and professional nurses, supporting scholarly activities, and providing direct assistance to the residents and communities of Washington. Through these activities, attention would be given to attaining a high level of quality of service in the most cost-effective manner, for the purpose of maintaining and improving the health of the citizens of Washington.

This program is responsive to the ICNE goal of providing educational programs focused on population-based practice in order to influence and respond to the healthcare needs of people. Furthermore, the ICNE goal of fostering approaches aimed at interdisciplinary professional education and improved healthcare is a cardinal underpinning of this program.

The Master of Nursing Program's faculty will offer research and advisory services to clientele (mainly healthcare providers) outside the university community. Faculty research will focus on issues of immediate and practical interest to healthcare agencies and providers in the WSU Vancouver regional service area of Clark, Cowlitz, Klickitat, and Skamania counties. Faculty research will be carried out in cooperation with these healthcare agencies, healthcare providers, and other community groups.
B. Documentation of Need for Program

Clark county and the surrounding area is experiencing rapid growth. The Washington Office of Financial Management (July, 1996) has projected the population of Clark County to increase by 21 percent in the period 1990 to 2000 (238,053 to 290,066) and to increase by 19 percent in the period from 2000 to 2010 (290,066 to 346,509). The population at present (1995) is already at 296,000 and the current growth rate is approximately 4% per year. Concomitant with this population growth will be the expansion of health care agencies and health services in the area. The Washington Health Services Act of 1993 requires that all state residents have access to, at a minimum, preventive and primary health services.

The WSU Vancouver regional service area of Clark, Cowlitz, Klickitat, and Skamania counties is experiencing a severe shortage of primary care providers including advanced registered nurse practitioners (Washington State Department of Health, July, 1994). In addition the surrounding counties of Lewis, Pacific, Wahkiakum, and Grays Harbor are all state designated shortage areas for general care providers with rural areas especially low (Staffing the New Health System, Washington State Department of Health, 1994, pgs. 39 &40).

1. Student Interest/Demand

The primary mission of the branch campuses is to provide instruction in degree-granting programs at the upper division and master's levels. Placebound individuals in the area surrounding each branch campus will be the primary participants (HECB, 1995). Interest from placebound individuals in the Master of Nursing Program has already been established and documented at WSU Vancouver. Over 175 potential students have participated in informational and recruiting activities. The demand for information has continued to grow as interested students received news that selected courses could be available by fall semester 1996 in Vancouver. Now inquiries are a daily occurrence from BSN-prepared nurses wanting to get started on their Masters degree.

Requests for a Masters in Nursing Program at WSU Vancouver have come primarily from WSU Vancouver BSN alumni, BSN alumnus from other schools of nursing with non-nursing Masters degrees, and current regional community college (Clark and Lower Columbia) nursing students who wish to articulate directly to the WSU Vancouver BSN program and eventually obtain their MN degree. In addition non-degree seeking BSN-prepared nurses who wish advanced courses in clinical assessment have expressed interest in having such courses available here in Vancouver.

WSU Vancouver admits 20-30 undergraduate nursing students every year. More than 80% of these students plan to get their Masters degree within the next five years. Results from a survey of WSU Vancouver nursing alumni conducted in February, 1996 found that 83.4% (n=59) who had not already attained a Masters degree planned to do so within the next three years if such a program were available here in Vancouver. Furthermore, WSU Vancouver alumni were interested in all four clinical specialties currently offered at the ICNE with Family Nurse Practitioner the most sought after.

There are four other university schools of nursing with BSN Programs in the Portland, Oregon area; all would require Washington residents to pay out-of-state tuition. Oregon Health Sciences University, University of Portland, Linfield College-Good Samaritan, and Walla
Walla College (main campus Walla Walla, WA; clinical nursing studies can be done in Portland, OR) are located in Portland, OR and produce collectively over 200 BSN graduates annually. Enrollment in these schools continues to be at maximum levels. Only two of these schools, Oregon Health Sciences University and University of Portland, have Master of Nursing Programs. Even if a Washington resident could financially afford to consider paying out of state tuition at one of these programs, their annual enrollment is very limited. At OHSU (Portland campus), 152 students applied to the Masters in Nursing Program and 62 were admitted for fall term 1996. The University of Portland program is even smaller; in 1996, a total of 38 students applied and only 16 were admitted to the University of Portland.

More than a third (36.9%) of master's degree students in nursing schools nationwide were pursuing study as nurse practitioners in fall 1994, mostly in a family practice specialty (American Association of Colleges of Nursing, December, 1995). Close to half of our inquiries and requests for program information come from potential family nurse practitioner students. The largest program in the geographical area at OHSU in Portland, Oregon had 49 applications for fall 1996 and admitted 11 students. These numbers reflect a large and ever growing pool of potential applicants to a Master in Nursing Program at WSU Vancouver.

Appropriate clientele for the WSUV MN Program include (but may not be limited to) the following:

*Individuals with a Bachelor of Science in Nursing (BSN) degree from an NLN accredited school of nursing who:*

- wish continued professional development or seek new employment opportunities as primary care providers, nurse practitioners, clinical specialists in public health, acute care, or psychiatric mental health nursing, faculty in community college schools of nursing, case managers, administrators, and agency educators.
- Current two year community college nursing students whose career goal is a position that requires a Master in Nursing degree (such as those listed in la above) could move directly from their ADN degree to the WSUV RN/BSN program to the WSUV MN Program.
- Individuals with a Master in Nursing degree who wish to add additional credentials such as nurse practitioner to a previous Masters degree in Medical-Surgical Nursing or to change their clinical focus such as hospital-based care to community population-based care.
- Individuals with a BSN and a Master degree in a non-nursing field such as education, psychology, social work, or business.

2. **Workforce needs of local industry**

The most critical shortage in nursing today is that of master's degree prepared nurses in all specialties (American Nurses Association, 1996). The Health Personnel Resource Plan (HPRP) recommended that Washington should increase the number of "advanced registered nurse practitioners" (p.62, Department of Health, 1992). As per Chapter 18.88 of the Revised Code of Washington, family nurse practitioners must show evidence of a master's degree in nursing and have successfully passed the American Nurses' Association certification exam for family nurse practitioners. Nursing faculty in colleges and universities in the state of Washington must, by law, possess a Master of Nursing degree.
Overall the employment picture for registered nurses is complex and fluid. Current healthcare reform legislation and economic changes in health care arenas make it very difficult to estimate the exact number of clinical specialists, population-base providers, or family nurse practitioners that may be needed in the future. Managed care and capitated health care systems procedures for reimbursement cannot change the trend of an increasing demand for healthcare services in response to a) population growth, b) the aging of the population, c) growth in the number of uninsured workers and unemployed persons, and d) legislative mandate. Such changes in the health care system have impacted the profession of nursing. Continued employment and career advancement for registered nurses would be enhanced by earning a Master degree in nursing and qualifying for licensure as a nurse practitioner, gaining management or policy development expertise, and/or acquiring research expertise in order to develop effective health care programs. Nurses will likely find employment opportunities in community settings (rather than hospitals), providing primary care in rural settings, and health promotion/prevention (Health Services Resources Plan, 1995-1997).

Employment in agencies, institutions, and programs serving individuals, families, and communities in southwest Washington is currently secure and growing. To obtain specific information on the educational and professional preparation needs of individuals in the nursing profession in southwest Washington, a survey of area employers and professionals was conducted in March, 1996. A questionnaire was randomly distributed to a convenience sample of nurse executives, agency administrators, and health care professionals throughout southwestern Washington. Respondents (N=37; 57% return rate) were asked how many MN prepared nurses were currently employed, and how many and in what specialty MN prepared nurses were expected to be employed with in the next five years. Results of this survey are presented in Appendix A and will be used to further refine the Masters in Nursing Program to respond to the immediate as well as future health care needs of the communities in southwest Washington.

3. Service to community

The Master in Nursing Program that Washington State University Vancouver proposes will foster and further develop the abilities of present and future nursing professionals in southwest Washington to meet the healthcare challenges of individuals and communities in the twenty-first century. The MN in Nursing is designed to encourage personal growth and assist nursing students in pursuit of scholarship and mastery in their chosen area(s) of specialization. The climate of the MN program fosters creativity, collaboration, and commitment. There is both strong community and student interest in developing and offering graduate nursing education in southwest Washington.

It is expected that faculty from the Nursing Department at Washington State University Vancouver will have direct contact and involvement with the community. This process has already begun with the current faculty teaching in the undergraduate nursing program for registered nurse students returning for their BSN degree. Doctorally and Mastered prepared faculty have provided direct patient care, offered consultation, taught classes and continuing education offerings, and served on committees and boards for a wide variety of healthcare and public service agencies in southwestern Washington. Outreach and community involvement will expand as the faculty grows into each graduate level specialty; current clinical sites for practicum experiences and internship placements will expand as well. Appendix B is a listing of all the current practicum placements; internships and more extensive practicum requirements of graduate specialization will encourage direct involvement of students and faculty in community projects.
The Intercollegiate Center for Nursing Education has a specified mission for service and outreach; faculty will thus be expected to extend their expertise through the offering of training, consultation, and service to requesting agencies and institutions. As stated previously, this process has already been documented with the undergraduate nursing program faculty.

C. Relationship to Other Institutions

1. Duplication

The Master of Nursing degree is not offered currently outside of the Puget Sound/Tacoma/Olympia corridor except at Gonzaga University and the Intercollegiate Center for Nursing Education in Spokane. Therefore there will be no duplication or conflict with any other Washington college or university in the service area by offering the MN Program in Vancouver, Washington. Other post-secondary institutions, however, will be important contributors to the development of a strong program at WSU Vancouver and the department of Nursing will continue to seek out and cooperate with the public and private institutions that complement the department's goals and objectives.

The majority of students interested in securing a degree from WSU Vancouver are placebound. Options for further training and graduate nursing education are not available outside of Spokane or northwestern Washington. Articulation is in place for the MN degree program for BSN graduates from any NLN-accredited school of nursing.

Institutions with similar programs of study in Washington may be found at the ICNE and Gonzaga University in Spokane, the University of Washington campuses in Seattle, Tacoma, & Bothell, Seattle University, Pacific Lutheran University in Tacoma, St. Martin's College in Olympia and Seattle Pacific University in Seattle. These programs are geographically unavailable to students in southwestern Washington. In Portland, Oregon which is geographically close but financially burdensome to Washington residents, the two programs previously discussed (OHSU and University of Portland) do not have enough slots for their own students, let alone southwest Washington students. Reciprocity with Oregon is no longer a viable option for Washington students. Having the Master in Nursing degree at WSU Vancouver would greatly assist placebound students who either currently pursue that degree by attending out-of-state public and private universities in Portland, Oregon or abandon hope of attaining further education.

2. Uniqueness of program

This program will be unique in southwest Washington. This will be the only Master of Nursing program available locally to residents of WSU Vancouver's regional service area of Clark, Cowlitz, Klickitat, and Skamania counties.

Currently the ICNE and its outreach programs on the branch campuses at WSU Vancouver and WSU Tri-Cities (includes extension site in Wenatchee) are the highest WSU user of the Washington Higher Education Telecommunications System (WHETS). Every undergraduate nursing class at WSU Vancouver is taught in the electronic classroom. The undergraduate program has seven years of experience teaching over this interactive and economical education delivery system. WSU Vancouver faculty have published their experiences in using this interactive distance education system as well as presenting at local and national professional meetings and conferences.
Expanding course offerings to the graduate program over WHETS will bring a wide range of faculty expertise from the Spokane, Vancouver, Tri-Cities, and Wenatchee campuses to the Master of Nursing program. This combination of breadth and depth of faculty expertise and use of the WHETS for course delivery will contribute to the uniqueness of the Master of Nursing program at WSU Vancouver.

Program Description

A. Goals and Objectives

The graduate program for which approval is being requested is the same program as that which currently exists at the ICNE located in Spokane. ICNE offers one Master of Nursing degree. Each student selects an area of concentration to prepare for an advanced practice role. Programs of study include core courses taken by all students, clinical specialty area courses, and support courses. The areas of concentration to be initiated in Vancouver include: Community Health Nursing, Family Nurse Practitioner, and Psychiatric/Mental Health Nursing. The Philosophy of the Graduate Program, Characteristics of the Master of Nursing Graduate, and Characteristics of Graduates for each clinical area to be offered in Vancouver follow.

Philosophy of the Graduate Program

Nursing integrates the art of caring and the scientific foundations of knowledge into a practice and research-oriented profession. The profession utilizes a holistic approach to the care of individuals, families, groups, and communities with health concerns. The bachelor's degree in nursing serves as the entry to professional practice and provides the basis upon which the master's program is developed. Master's education provides beginning competence in research, preparation for advanced nursing practice, and leadership development.

Graduate education encourages personal growth and assists students in pursuit of scholarship and mastery in an area of specialization. In the quest for excellence, the climate of the graduate program fosters intellectual stimulation, creativity, systematic inquiry, freedom to challenge ideas, curiosity, scholarly dialogue, collaboration, interdependent learning, and a sense of personal integrity. Flexibility in the graduate program allows individualized, self-directed learning within the framework of degree requirements. Graduate faculty provide guidance and instruction through personal interaction with students.

Graduate students in nursing are expected to be capable of rigorous academic pursuits, participate in activities which influence health care and its delivery, and committed to professional values. Master's prepared nurses assume positions which positively impact both the profession and society for current and future generations.

Characteristics of the Master of Nursing Graduate

The graduates of the Master of Nursing degree program will:

1. Integrate knowledge from nursing science, humanities, and other related disciplines.
2. Provide leadership in planning, implementing, coordinating, and evaluating health care delivery and policy formulation appropriate to a diverse and multicultural society.
3. Demonstrate competencies in advanced nursing practice.
4. Collaborate with nursing colleagues and other disciplines to positively impact the overall plan of care for clients.
5. Participate in the formulation of health care policy.
6. Assume responsibility and accountability for the provision of high quality care within the scope of legal, professional, and ethical standards of advanced nursing practice.
7. Conduct and/or participate in nursing research.

Psychiatric/Mental Health:

1. Demonstrate competence in the use of theoretical approaches in individual and group theory.
2. Assess family psychodynamics and coping skills for the purposes of treatment.
3. Differentiate mental health problems from psychiatric illness.
4. Practice within the scope of legal, professional, and ethical standards of advanced psychiatric/mental health nursing.

Community Health:

1. Develop, market, manage, and evaluate programs to promote the health of communities and at-risk populations.
2. Utilize a collaborative interdisciplinary approach to address community needs.
3. Implement intervention strategies at the policy, environment, community, and aggregate levels as well as the individual and family levels of community health practice.
4. Perform community analyses to provide information for planning community health programs.
5. Assume a variety of roles in community/public health settings; advanced clinical practitioner, researcher, manager/leader, consultant, educator, and change agent.

Family Nurse Practitioner:

1. Evaluate nursing knowledge through scientific inquiry.
2. Collaborate with other disciplines to develop primary care services.
3. Formulate clients' health care management plans, including coordination of care.
4. Assume responsibility and accountability for the provision of quality primary care in a cost-effective manner.
5. Analyze health care policy in relation to provision of primary health care services.

Conceptual Framework

The philosophy of the graduate program is operationalized through the development of and interaction among three major components: a) Nursing as a Scholarly Discipline, b) Nursing as a Practice Discipline, and c) Nursing Leadership Role Development. The major emphasis for the Masters in Nursing program at the ICNE is role development for nursing leadership positions in advanced nursing practice. Advanced study in clinical decision-making and beginning research competencies are considered foundational to role development for all nursing positions.
The curriculum design provides for the intended continuity and sequencing essential for progressive acquisition, integration and synthesis of teaming and advanced nursing practice. Flexibility is provided through use of variable credit options, independent study, support courses within and outside of the nursing department, special topics courses, and practicum contracts.

**Component I: Nursing as a Scholarly Discipline**

Nursing practice and leadership role enactment require a scientific base. In a dynamic health care environment, critical thinking, investigation, and production of new ideas are essential to advancement of nursing as a profession. The research component emphasizes inquiry and the use of theoretical or conceptual approaches to investigating nursing practice and/or problems. Therefore, the faculty is committed to providing a strong climate of inquiry, which includes a requirement of a thesis or clinical project for graduation. (The Family Nurse Practitioner student's program of study will include the clinical project option.)

**Component II: Nursing as a Practice Discipline**

Nursing as a Practice Discipline is operationalized through theory application and advanced study of the clinical decision-making process and patient care delivery systems. Practice-oriented courses are offered in specialization's directed toward meeting the future needs of potential consumers of nursing, especially as relevant for Southwestern Washington.

Nursing as a Practice Discipline includes differentiating needs and requirements of clients along the wellness-illness continuum. A holistic approach in the care of individuals and groups of clients is emphasized. Graduate and undergraduate clinical study differ in relation to the level of reasoning and critical evaluation of innovations, models, and theories for practice application. Advanced nursing studies result in a higher level of critical thinking, use of theoretical and empirical knowledge and scientific rationale for clinical and managerial decision making.

**Component III: Nursing Leadership Role Development**

The Nursing Leadership Role Development component focuses on the development of knowledge and skills essential to positions in advanced nursing practice. Knowledge of historical perspectives and of social and cultural influences on health care and health care delivery in a diverse and multicultural society is central to leadership development. Students deliberate together concerning trends and issues related to the nursing profession and emerging health care delivery problems. Acquisition of the leadership and consultation skills as well as other aspects of practitioner role enactment are incorporated into each of the areas of specialization.

**Areas of Concentration**

Each area of concentration builds on the Nursing as a Practice Discipline component, emphasizing specialty content, and provides focused clinical opportunities to integrate and apply specialized theoretical knowledge. Graduates are prepared to function independently in multiple health care settings, analyzing nursing care situations form a sound theoretical base, provide specialized consultation, perform clinical research and work interdependently with other health care professionals.
Students develop a model of professional practice which is based on empirical knowledge and demonstrated by cognitive, affective, and psychomotor behaviors. The clinical areas of study focus on the knowledge and skills required to function as an advance practice nurse within selected nursing specialties. The role of nurse specialist includes planning and providing specialized nursing care, coordinating and consulting with other health care providers, analyzing and influencing complex systems within which nursing care is provided, defining standards of care for selected client populations, evaluating nursing care outcomes, and conducting clinical research. Each clinical specialty is composed of both a broad base and selected subspecialties.

II. B. Curriculum

1. Course of Study

The following sample plans for part-time study in the three areas of concentration are consistent with the projected arrangements for program delivery in Vancouver. For the Community Health and Psychiatric/Mental Health Nursing areas of concentration, the program requires 39 semester hours for graduation; the Family Nurse Practitioner program requires 46 semester hours due to the national requirements for additional internship practice hours. Course descriptions for the graduate nursing classes are presented in Appendix C.

Sample Part-Time Program of Study

**COMMUNITY HEALTH**

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<td>N551 Community Health</td>
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<td>Nursing Concepts</td>
<td>N507 Professional Issues</td>
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<td>N552 Family Nursing</td>
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<td>N564 Health Promotion</td>
<td>N556 Practicum in Community</td>
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<td>Health Nursing</td>
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<tr>
<td>Program Planning</td>
<td>N600/700 Thesis</td>
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<th>Semester 6</th>
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<tr>
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<td>N600/700 Thesis</td>
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<td>N503 Theoretical Perspectives in Nursing</td>
<td>Support Course</td>
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**PSYCHIATRIC/MENTAL HEALTH**

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<td>N543 Psych/Mental Health Nursing: Groups &amp; Families</td>
<td>N600/700 Thesis</td>
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<td>Support Course</td>
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Semester 3
N503 Theoretical Perspectives in Nursing 3sh
N504 Methods of Nursing Research 4sh

Semester 4
N507 Professional Issues 2sh
N546 Practicum in Psych/Mental Health Nsg 4-5sh

Total Required Semester Hours 39 sh

FAMILY NURSE PRACTITIONER

Semester 1
N563 Adv Pharmacology 3sh
N581 Adv Physiology & Pathophysiology 1 4sh

Semester 2
N562 Adv Health Assessment & Differential Diagnosis 4sh
N582 Adv Physiology & Pathophysiology 3sh

Semester 3
N537 Role Analysis: Clinical Nurse Specialist/Nurse Practitioners 2sh
N565 Information Management for Nursing Practice 3sh

Semester 4
N504 Methods of Nursing Research 4sh
N567 Primary Care: Adults & Elders 4sh

Semester 5
N595 Internship Var. 1-5 sh*
N568 Primary Care: Infants Children & Adolescents 3 sh

Semester 6
N507 Prof. Issues in Nursing 2 sh
N564 Health Promotional Nursing Practice 2 sh

Semester 7
N595 Internship Var. 1-5 sh
N701 Clinical Project 1 sh

Semester 8
N569 Practicum in Fam. Care 4 sh
N701 Clinical Project 2 sh

*Total of 5 sh of N595 Internship required

Total hours required for program completion: 46 sh

II. B. 2. Admission Requirements and Procedures

The following are the current admission requirements and procedures in place for the MN program in Spokane and will be the same for the graduate program in Vancouver. Graduate students are admitted by the ICNE Graduate Program Committee which has been delegated this responsibility by the ICNE graduate faculty.

Students are admitted to the Graduate School of Washington State University as well as by the graduate program of the ICNE. Criteria for admission include:

1. A bachelor's degree in nursing from an NLN-accredited program.
2. A minimum 3.00 grade point average in undergraduate work (exceptions may be made based on substantial evidence of extra scholastic qualifications).
3. Satisfactory scores on the general Graduate Record Examination.
4. Recent history taking and physical assessment skills.
5. Successful completion of a basic statistics course.
6. Favorable recommendations regarding practice and potential for graduate work in nursing.
7. Eligibility for licensure to practice nursing in Washington.
8. Written goal statement congruent with program's philosophy and focus.
9. For the FNP applicants, a written interview

The ICNE is now requiring that persons admitted to the graduate programs will have been immunized for Hepatitis B prior to registration in any course including a practicum and have current CPR certification.

While not an admission criteria, word processing computer skills have been found advantageous to entering students. Due to heavy writing assignments that are required to be computer generated and use of the Internet and the World Wide Web, the acquisition of computer skills before entering the program is strongly advised.

Admission Procedures:

1. Prospective students must obtain and complete an application form from the WSU Graduate School office in Pullman. These forms are available at WSU Vancouver Admissions Office.
2. The application to the ICNE Master of Nursing program must be completed and returned to the Graduate Program Office at the TCNE. These forms are available at WSU Vancouver Admissions Office.
3. Transcripts of all baccalaureate and post-baccalaureate course work must be sent to both the Graduate Program Office of the ICNE, and the WSU Graduate School.
4. The student must request Graduate Record Examination scores be sent to WSU.
5. Recommendation forms must be completed by three persons who are familiar with the student's potential for nursing leadership and academic success.
6. Washington State Patrol Clearance forms must be completed.
7. Current CPR certification must be submitted for the ICNE application file.
8. Copy of HEP-B vaccination must be submitted for the ICNE file.

II. C. Faculty

The Master of Nursing program will draw primarily from new and existing faculty positions at WSU Vancouver and the Intercollegiate Center for Nursing Education in Spokane. The core courses for the Community Health and the Family Nurse Practitioner areas of specialization will be available for part-time study beginning fall 1997. During this first projected year of offering the Master of Nursing program at WSUV, current tenured and tenure track graduate faculty at the ICNE would deliver instruction to WSUV via WHETS, teleconferences, Internet and e-mail. Appendix C contains the names, qualifications, and profiles of graduate nursing faculty.

Only one new faculty will be required for the first year of operations as current tenured graduate nursing faculty at WSUV can do the required local advising. This Family Nurse Practitioner faculty will be 50% effort to the program in 1997-8, then 100% to the graduate program beginning in 1998. This will allow adequate planning for the practicums and internships required in the FNP program. In 1998, four new full-time faculty will be required; one each in the Community Health Nursing(.50% in 1998-99, then 100% effort to program), Psychiatric/Mental Health (.50% 1998-2000, then 100% to program), and Family Nurse
Practitioner (100%) tracks. In year four two more full-time faculty will be required, one for Community Health (70% effort) and one for Psychiatric/Mental Health (80% effort). After year four the program requirements for faculty stabilize. Program coordination will be assumed locally by the WSU Vancouver nursing program coordinator. See Table one for program faculty.

TABLE I
Program Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Status</th>
<th>% of Effort in Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNP 1997-98</td>
<td>Asso. Professor</td>
<td>FT</td>
<td>100</td>
</tr>
<tr>
<td>FNP 1998-99</td>
<td>Asst. Professor</td>
<td>FT</td>
<td>100</td>
</tr>
<tr>
<td>FNP 1998-99</td>
<td>Practicum Preceptor</td>
<td>FT</td>
<td>100</td>
</tr>
<tr>
<td>CHN 1998-99</td>
<td>Asso. Professor</td>
<td>FT</td>
<td>100</td>
</tr>
<tr>
<td>CHN 2000-01</td>
<td>Asst. Professor</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>PSY 1998-99</td>
<td>Asso. Professor</td>
<td>FT</td>
<td>.50</td>
</tr>
<tr>
<td>PSY 2000-01</td>
<td>Asst. Professor</td>
<td>FT</td>
<td>.80</td>
</tr>
</tbody>
</table>

TOTAL FTE FACULTY DEVOTED TO PROGRAM - 6.0
FNP = Family Nurse Practitioner
CHN = Community Health Nursing
Psy = Psychiatric/Mental Health

Each of the program tracks will continue to utilize existing faculty resources by offering MN courses which originate at the ICNE-Spokane, ICNE Yakima and WSU-Vancouver. Courses which are scheduled for all three sites will originate from one and be transmitted via WHETS to the other two, maximizing faculty resources and containing costs.

II. D. Students

1. Projected Enrollment:

A 1988 needs assessment survey showed that 35 percent of households have at least one adult who would be likely to enroll at WSU Vancouver. Over 70 percent of the survey respondents are either employed full-time or part-time, making them placebound by employment. Based on current enrollment patterns of undergraduate nursing students at WSU Vancouver and contacts from potential graduate students, it is likely that students in the Vancouver Master of Nursing program will initially be part-time students. They will be admitted under the same criteria as Master of Nursing students on the ICNE campus.

Based upon 1995-96 needs assessments of student and employer demand for the MN program, the initial projection is for approximately 12 FTE students in the first year of operations. The FNP track and the Community Health track will be the first two programs offered as they were the most requested by potential students and area employers. It is expected that the number of students will gradually increase by year N (year 4) to 45-55 FTE students. Psychiatric/mental health course of study will begin in 1998. A fourth area of clinical concentration, acute care, was the least requested and is currently undergoing substantive curriculum review at the ICNE. It may be offered in the future. See Table 2 for projected program FTE (size of program).
2. Expected Time for Program Completion

All of the initial students admitted to the Master of Nursing program will be part-time students with more full-time students to follow as the program expands. The program is designed to allow part-time students (most of which are full-time workers) to complete the program in three years. Students will be advised by resident faculty at Vancouver. Scheduling of classes will be arranged by year N to facilitate both full and part time programs of study. Table 3 illustrates projected course rotation sequence for the MN program at WSU Vancouver.

TABLE3
Course Rotation Sequence MN Program

<table>
<thead>
<tr>
<th>Fall 1997</th>
<th>Course Title</th>
<th>Hours</th>
<th>Course</th>
<th>Core</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNP Track</td>
<td>3</td>
<td>N563</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>N504</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHN Track</td>
<td>3</td>
<td>N551</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>N554</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring 1998</td>
<td>Course Title</td>
<td>Hours</td>
<td>Course</td>
<td>Core</td>
<td>Elective</td>
</tr>
<tr>
<td>FNP Track</td>
<td>3</td>
<td>N582</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>N565</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHN</td>
<td>3</td>
<td>N503</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-3</td>
<td>N564</td>
<td>x</td>
<td></td>
<td></td>
</tr>
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Fall 1998
Course Title | Hours | Course # | Elective |
FNP Track | 4 | N562 |
| 2 | N537 |
| v | N701 |
### Spring 1999

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
<th>Course</th>
<th>Elective</th>
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<tr>
<td>FNP Track</td>
<td>4</td>
<td>N567</td>
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</tr>
<tr>
<td></td>
<td>v</td>
<td>N595</td>
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<td></td>
<td>v</td>
<td>N701</td>
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<tr>
<td></td>
<td>4</td>
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</tr>
<tr>
<td></td>
<td>2</td>
<td>N507</td>
<td></td>
</tr>
<tr>
<td>CHN Track</td>
<td>4</td>
<td>N566</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>N700</td>
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<td>3</td>
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<td></td>
<td>3</td>
<td>N564</td>
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<td>Psych Track</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>N543</td>
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### Fall 1999

<table>
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<th>Course Title</th>
<th>Hours</th>
<th>Course</th>
<th>Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNP Track</td>
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<td>N568</td>
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</tr>
<tr>
<td></td>
<td>2</td>
<td>N564</td>
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</tr>
<tr>
<td></td>
<td>2</td>
<td>N595</td>
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</tr>
<tr>
<td></td>
<td>3</td>
<td>N565</td>
<td></td>
</tr>
<tr>
<td>CHN Track</td>
<td>2</td>
<td>N 508</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>N700</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>N504</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
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<td>2</td>
<td>N554</td>
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</tr>
<tr>
<td>Support Course</td>
<td>3</td>
<td>xxx</td>
<td></td>
</tr>
<tr>
<td>Psych Track</td>
<td>4</td>
<td>N504</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>N541</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pharm P 525</td>
<td></td>
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<tr>
<td>Support Course</td>
<td>3</td>
<td>xxx</td>
<td></td>
</tr>
<tr>
<td>CHN</td>
<td>3</td>
<td>N503</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-3</td>
<td>N564</td>
<td></td>
</tr>
</tbody>
</table>
Spring 2000
Course Title Hours Course Core Elective

FNP Track
4 N569 x
2 N595 x
v N701 x

CHN Track
4 N566 x
2 N700 x
3 N503 x

Psych Track
v
3 N503 x
4 N543 x

Support Course
3 xxx

First Cohort Graduates, May 2000

II. Program Description

D. Students

3. Diversity

Increasing diversity is an institutional commitment shared by all campus locations of Washington State University, and faculty from the Nursing Program will assist in efforts to pursue these goals:

a. Provide an academic environment that recognizes and appreciates the value of diversity and supports the well-being and success of all participants in a multicultural community
   1) WSU Vancouver has completed an Americans with Disabilities Act audit of facilities and programs and is implementing action in identified areas of need.
   2) Nursing Department faculty have participated and future faculty will participate in Diversity Workshops, Disabilities Act Workshops, and Sexual Harassment Workshops. These training workshops are an ongoing effort to provide an institutional climate for diversity.
   3) Cultural awareness days will receive institutional support and publicity.

b. Provide an administrative structure led by a senior-level administrator that promotes, coordinates, and monitors programs to achieve ethnic and racial diversity in an effective and timely manner. WSU Vancouver has appointed a student specialist to serve as a liaison to the Disabled Students Services Office. The student support specialist has formed a disabilities support group for people with disabilities and has also appointed a multicultural study group to make accommodations for minority climate, recruitment and retention.

c. Increase minority students enrollments and graduation rates to equal or exceed levels of appropriate subgroup populations.
1) WSU Vancouver has designated 25 percent of its unrestricted scholarship funds for minority students.
2) WSU Vancouver will organize career fairs to increase networking with local healthcare agencies and service organizations such as the Urban League. WSU Vancouver's local newsletter also will be utilized to target potential minority students.
3) The Master in Nursing Program will be advertised in local publications oriented to ethnic readers.
4) Marketing also will be targeted toward minority and disabled students graduating from local campuses.

d. Increase minority, men, disabled faculty and staff representation in all instructional and administrative units to levels commensurate with affirmative action goals

II. E. Administration

The Master of Nursing program will be supervised locally by a tenured graduate faculty in nursing at WSU Vancouver with direct linkage to the Graduate Program Committee at the ICNE. All appropriate academic aspects of the program will be coordinated with the ICNE in Spokane with day-to-day operation coordinated at WSU Vancouver.

The Master of Nursing program will be administered by WSU Vancouver with local support for courses provided by support staff on site. Clerical support and academic advising for the program will be provided initially by the 1.5 FTE currently available at WSU Vancouver for the nursing program. As the program grows, additional staff will be added. The Office of Extended Academic Programs in Pullman will provide support for courses via WHETS. Student advising will be provided by the tenured and tenure track faculty involved in program instruction. Students will be encouraged to consult with those faculty most familiar with their chosen area of concentration.

II. F. Library Support

1. The adequacy of existing library collections, services, etc.

The WSU Vancouver branch campus library moved into its new facilities in June 1996. With this move comes much needed additional shelving and seating for collections and users. The collection has doubled its holdings in the last eighteen months, now with more than 6000 monographs, 450 periodical subscriptions, and access to over fifty full text and bibliographic databases, including CANAL (Cumulative Index to Nursing and Allied Health Literature), MEDLINE, Health Planning & Administration, Psych Info, and Social Science Citation Index.

The WSU Vancouver Library participates, along with ICNE and CALS in Spokane, WSU Tri-Cities and the WSU Libraries in Pullman in WSU's Extended Campus Library Service, which provides for hands-on access to materials owned by all libraries in the WSU system. WSU Vancouver Library is also a charter member of the Portland Area Library System (PORTALS), a consortium of 15 higher education and public libraries in the Vancouver/Portland area. This consortium, which includes three institutions with schools of nursing (Linfield, University of Portland, and Oregon Health Sciences University) and academic medical center (OHSU) which grants Ph.D.'s in nursing, extends direct borrowing privileges to students and faculty of WSU.
Vancouver, and all PORTALS members. Both of these arrangement ECLS and PORTALS provides for very rapid access to journal articles and books from the participating libraries. Providing this access to one of the primary missions of both services.

The WSU Vancouver Library currently has a collection of more than 1500 nursing, gerontology, and psychology monographs and more than 100 current journal subscriptions in the fields of nursing, psychology, human development. Access the bibliographic indexes via electronic means is equivalent to any school of nursing. The book and journal collection at WSU Vancouver will need to be increased.

2. The need for new library collections:

   a. Serials (journals of indexes in print, electronic form, microfilm, etc.):

   A list of the WSU Vancouver Journals Applicable to Graduate Studies in Nursing is appended to this report (Appendix E). Listed below are journals which will be added to the collection in support of the MN in Nursing. These funds will be continuing. None of our current subscriptions will be canceled in order to add the following subscriptions to the collection.

<table>
<thead>
<tr>
<th>Title</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archives Of Psychiatric Nursing</td>
<td>$61</td>
</tr>
<tr>
<td>Clinical Nurse Specialist</td>
<td>$90</td>
</tr>
<tr>
<td>Community Mental Health Journal</td>
<td>$215</td>
</tr>
<tr>
<td>Computers in Nursing</td>
<td>$98</td>
</tr>
<tr>
<td>Evaluation and the Health Professions</td>
<td>$144</td>
</tr>
<tr>
<td>Family and Community Health</td>
<td>$99</td>
</tr>
<tr>
<td>Geriatric Nursing</td>
<td>$30</td>
</tr>
<tr>
<td>Gerontologist</td>
<td>$89</td>
</tr>
<tr>
<td>Hastings Center Report</td>
<td>$65</td>
</tr>
<tr>
<td>Journal of Adolescent Health</td>
<td>$260</td>
</tr>
<tr>
<td>Journal of Health Politics, Policy, &amp; Law</td>
<td>$88</td>
</tr>
<tr>
<td>Patient Care</td>
<td>$79</td>
</tr>
<tr>
<td>Postgraduate Medicine</td>
<td>$54</td>
</tr>
<tr>
<td>Public Health Nursing</td>
<td>$125</td>
</tr>
</tbody>
</table>
   | **TOTAL**                            | **$1,562**

   A list of WSU Vancouver Indexes/Databases Applicable to Graduate Studies in Nursing is appended (Appendix F). The WSU Vancouver Library is prepared to provide more than adequate access to the critical bibliographic indexes and databases necessary for a MN in Nursing program.

   b. Monographs

   The WSU Vancouver Library has a local collection of more than 1500 titles in the fields of nursing, psychology, and gerontology. The WSU Libraries share a union catalog of our holdings. The ICNE's Betty M. Anderson Library's holdings are being added to the catalog this year. Students at all of the WSU campuses may use materials from any of the many WSU libraries through the ECLS program. This document delivery service rarely takes longer than three days from request to delivery. Also, the WSU Vancouver Library participates in a rapid document delivery program through PORTALS (Portland Area Library System.)
Vancouver nursing students may borrow books from the Oregon Health Sciences University's BICC (Biomedical Information Communication Center,) and from Linfield College, University of Portland, and Portland State University, and others higher education libraries in the Portland Vancouver area. There is substantial access to nursing monographs within the PORTALS and ECLS programs, however, the WSU Vancouver Library will increase its acquisition of core nursing monographs by an added $6500 per year.

Many new monographs come with software. The WSU Vancouver Library received new computers in our capital building budget for the new library facility. The computers all have CD-ROM drives, graphics and sound cards. They are capable of running additional software programs.

c. Media

The WSU Vancouver Library maintains video and laser disk materials for the nursing program at Vancouver. The library has both laser and video disk players. The branch campus has video and laser disk players available for instructors' in-classroom use. Funds are available for additional media materials.

The WSU Vancouver Instructional Computing student computer labs are available sixty-eight hours a week. The computer labs offer students access to word-processing, spreadsheet, database, email, web browser, statistical software (SPSS. Jenny, Systat) as well as the ability to run specialized nursing software on demand.

3. The need for new library personnel:

There will not be a need to hire additional faculty librarian. One of the WSU Vancouver librarians is a trained health sciences librarian with substantial experience in the academic health sciences environment, specifically with services to a doctoral level School of Nursing. No additional classified staff will be necessary to support this program.

4. The need for additional library services:

There will be an increase in requests for articles from the medical literature from graduate level nursing students. The WSU Vancouver Library has a reciprocal borrowing arrangement with the Southwest Washington Medical Center Library which holds nearly 300 medical and nursing journals. Additionally, the Library's PORTALS (Portland Area Library System) membership provides for rapid delivery of articles and books from the Oregon Health Sciences University's Biomedical Information Communication Center. Under the present PORTALS arrangements WSU Vancouver does not pay for document delivery from PORTALS member libraries. There will not be any need for additional funds for this increase in service demand.

5. For Branch Campuses/Extended University Proposals:

a. To what extent will collections and services be provided from Pullman?

Because of the principles behind development of branch campuses stressed that services and support would be provided to the branches, the WSU branch campus libraries have developed collections which try not to duplicate the holdings in Pullman. Branch campus libraries are,
however, building strong core collections in their curriculum areas and borrowing from Pullman for supplementary materials. In the area of nursing, the WSU Vancouver Library will borrow primarily from the ICNE collection in Spokane and from the OHSU collection in Portland. Materials in the fields of psychology and gerontology will be borrowed from WSU Pullman, OHSU, and Portland State University (PSU.) As the MN in Nursing program grows borrowing from all of these institutions will decrease.

b. To what extent will collections and services be provided from the branch campus?

The WSU Vancouver Library has an outstanding collection of indexes and databases. This access coupled with outstanding library instruction opportunities available to professors by the WSU Vancouver librarians prepares students to be competent library researchers. The journal and monographic collections meet the immediate needs of the students, while the electronic resource sharing arrangements the library provides teaches adult students the realities of the distributed information/distance education age.

c. Are there other local libraries (non-WSU) that will be serving these needs?

Local libraries which will help WSU Vancouver meet the needs of this program are the libraries participating in PORTALS: Oregon Health Sciences University, Portland State University, University of Portland, Linfield College, Lewis and Clark College, Reed College, Portland Community College, Clark College, George Fox College, Pacific University, Multnomah County Library, and the Oregon Historical Society. Libraries in the Oregon Health Sciences Libraries Association (OHSLA), principally the Southwest Washington Medical Center Library, the Legacy Health Systems Libraries, the Kaiser-Permanente Libraries at Sunnyside Medical Center and Bess Kaiser Medical Center and the Center for Health Research, and Providence/St. Vincent Medical Center Libraries.

d. What arrangements have been made with these local libraries?

The WSU Vancouver Library is a charter member of PORTALS, the Portland Area Library System. Membership fees support a reciprocal borrowing programs as well as contribute to the support of several important health sciences databases, PsycInfo, CINAHL, Health, and MEDLINE. The Library also belongs to OHSLA, the Oregon Health Sciences Libraries Association. Because of the proximity to the large number of health sciences libraries in the Portland, Oregon area, the WSU Vancouver Library joined OHSLA in order to participate in its various union catalogs and resource sharing programs.

6. List any other library resource considerations:

WSU Vancouver is building a biological sciences program and is developing a clinical psychology program. Work has started on a degree in human development. Each of these developing programs is supported by the WSU Library. Certainly, in many cases, the library resources needed for each of these programs will be useful to the MN in Nursing students.

III Program Assessment

Assessment of the effectiveness of the program will be carried out with attention given to evidence of utilization of assessment findings in making revisions to the program's structure.
and or processes. The ratio of entering students to those who graduate will be monitored, along with length of time in program of those who graduate. Entering cumulative GPAS, references (scores are possible on the currently used forms completed by three references), and score on the general Graduate Record Examination will be used in establishing correlation's with outcome (cumulative GPA in the program, success on the first attempt at a national level advance practice certification examination, and perceptions of employer and/or professional colleagues). Information will be used in considering changes in admission requirements, and program content and structure.

Within the program, faculty members will use the course evaluation format used throughout the college of nursing, which allows students to respond anonymously at the end of each semester, without the faculty member being present during the process. These responses are compiled for each item and for an overall score, along with the qualitative comments, and made available to the faculty member after grading of the course has been completed. These evaluation summaries are then used in faculty members' teaching portfolios, and are available for use in helpful counsel from unit chairs or other faculty mentors focusing on continuous improvement of instruction. Annual reviews of faculty will also provide pertinent information on the overall faculty achievement in teaching, research, and service, with an emphasis on how advanced nursing practice is used in achieving each of these university missions.

Alumni will be surveyed regarding the relevance of their course work, their satisfaction with the program of study and the quality of instruction, the type of position acquired after completion of the program, achievement and continuation of advanced practice certification, and recommendations for improvement of the program of study. Alumni will be invited to give their employer and/or professional colleagues companion surveys to be sent directly back to the program coordinator regarding the quality of performance demonstrated by the alumni of the program, and recommendations for improvement of the program.

Since the requested program change is taking an already nationally accredited (National league for Nursing) program to an additional site, accreditation will be a continuing evidence of excellence. The maintenance of standards at the extended site will be monitored jointly by the ICNE in Spokane and the campus Dean and Nursing Program Coordinator in Vancouver.

IV. Finances

Summary of Program Costs is shown on Table 4. Total MN Program costs are outlined for year one and year N (year 4). After Year N, Goods and Services costs stabilize at $18,500 per year and equipment costs stabilize at $6,000 per year.

Memorandum

To: Wes Leid, Graduate Affairs Committee
CC: Senate Office
From: J.R.Powers, Senate Library Committee
Date: February 4, 1997
Re: Master of Nursing - Vancouver

The Senate Library Committee met Wednesday January 29, 1997 to evaluate the proposed Master of Nursing at WSU-Vancouver. The Committee voted to approve the proposal. However, note that in the narrative concerning the adequacy of library collection for the
program an annual purchase of monographs ($6,500) is mentioned. We find no corresponding figure in the budget included with the proposal. Clarification on this item should be made prior to the proposal moving forward.

TO: Faculty Senate  
FROM: Lynda Carey (for Graduate Studies Committee)  
SUBJECT: Master of Nursing Degree at WSU Vancouver

On March 11, 1997 the Graduate Studies Committee recommended approval of the request to extend the Master of Nursing graduate degree program to WSU Vancouver, contingent upon revision of the following:

(p.4 - last paragraph of Section A. Relationship to Institutional Role and Mission): The Master of Nursing Program's faculty will offer research and advisory services to clientele, mainly healthcare providers, outside the university community when appropriate. Faculty research will be done cooperatively with healthcare agencies and providers in the WSU Vancouver region.

*****

Motion carried.

10. Election of Faculty Senate Officers for 1997-98 Exhibit D is as follows:

CHAIR  
Stock, David, Professor, mechanical and Materials Engineering, Faculty, IRS, Graduate Faculty. WSU 24 years.

Relevant Experience and Qualification: All University Writing Committee, Chair, Graduate Studies Committee, Chair. Committee Experience Current: Vice Chair, Faculty Senate, Steering Committee, Committee on Committees; Search Committee for Vice Provost for Learning and Technology. Past: Search Committee for Director of Writing Program; Graduate Studies Committee; Steering Committee for Libraries.

VICE CHAIR  
Greenberg, Robert, Associate Professor, Accounting and Business law, Faculty, RIS, Graduate Faculty, WSU 13 years.

Relevant Experience and Qualifications: As Chair of the Senate Budget Committee served on the Faculty Senate Steering Committee. Committee Experience Current: Faculty Senate; Service and Activity Fee Committee. Past: Budget Committee; ACPA Personnel Testing Task Force (Level I and II)

LEGISLATIVE REPRESENTATIVE  
Clark, Carolyn, Associate Professor, Economics, Faculty, RIS, Graduate Faculty. WSU 24 years.

Relevant Experience and Qualifications: Faculty Senate 1991=93; Chair 1993-94, Vice Chair 1992-93; Burlington Northern Faculty Achievement Award, 1991; Graduate Director of Economics 1981-85, 1989-90; Todd Renovation Building Committee; Presidential Recognition
“Outstanding Service to WSU” Spokane Leaders Lunch 1987; Honors Program All University Invited Address 1986. Have lived in Olympia during the last 3 sessions of the Legislature representing WSU. Have established a good working relationship with legislators and their assistants. Work closely with the other 4 year institutions in Washington in lobbying on behalf of higher education. Committee Experience: Current: Legislative Affairs Subcommittee. Past: Committee on Committees; Faculty Status Committee; Graduate Studies Committee; Provost’s Steering Committee; Investigator of Academic Irregularities in Basketball Program; Academic Affairs Committee.

Each candidate gave a brief statement before elections. Voting resulted as follows: Chair, David Stock 1997-98; Vice Chair, Robert Greenberg, 1997-98 and Legislative Representative, Carolyn Clark, 1997-99.

Agenda Items (Discussion Items).

1. Recommendation from Research and Arts Committee for the Center for Teaching and Learning (Exhibit E).-F. McSweeney

McSweeney pointed out that extensive discussion was held on this proposal because of confusion on two issues: one issue was the relationship between VP WSU and the Center for Teaching and Learning. There is no relationship between these two issues. The Center for Teaching and Learning will help anyone who is giving an electronic course just as they would help anyone for any other course. The second issue was the misconception that this issue was driven by the central administration when in fact this was a grassroots faculty issue promoted by faculty. The center's name was questioned because of the confusion over presumed association with the department of Teaching and Learning. Eventually this center will be named after a distinguished faculty member. Questions were asked about some of the functions of the center. Mary Wack, Senior Fellow in the Center stated that the center has worked with faculty this year in helping them put together grant proposals, have helped faculty in developing online courses for their department and worked with younger faculty in putting together teaching portfolios.

2. Recommendation from Organization and Structure Committee for Steering Committee Summer Authority (Exhibit F).-J. Pomerenk

There was no discussion of this item.

3. Recommendation from the Steering Committee for the Proposed Faculty Senate Calendar for 1997-98 (Exhibit G).-V. Limburg

There was no discussion of this item.

4. Recommendation from Graduate Studies Committee for Graduate Major Change Bulletin #1 (Exhibit H).-W. Leid

There was no discussion of this item.

5. Recommendation from Graduate Studies Committee for Master in Nursing at Yakima (Exhibit I).-W. Leid
Someone asked where the signature page was. The page will be ready for the next meeting. All of the signatures are in the Provost's office. R. Speth raised concern about the departure from procedure in this case.

6. Recommendation from Academic Affairs Committee for Undergraduate and Professional Major Change Bulletin #1 and Addendum (Exhibit J).-G. Hower

There was no discussion of this item.

7. Recommendation from Academic Affairs Committee for New Rule 23 Requirements for Make-up Hours for University Holidays (Exhibit K).-G. Hower

It was moved to delete the sentence that specifically names each holiday and say one day holidays. The rule as edited will be reissued with the next agenda.

8. Recommendation from Faculty Affairs Committee for a change in the Faculty Manual page 31 Merit Rating (Exhibit L).-K. Duft

Duft stated that the exhibit does not read correctly. The intent of the Committee was to address the problem in the format of the merit rating document which contains space on the front page for both merit rating of the department chair and the dean is solicited. Each faculty member is asked to sign the document, as a signature of acknowledgment. The department chair renders a merit rating, the document is passed on to the faculty member for his or her signature. That signature precedes the time when the dean adds his or her merit rating and the end result is that if the dean's rating is different than that of the chair the faculty member never sees that rating in advance of his or her signature. The intent of the committee is that in the event the dean's merit rating is different from that provided by the department chair, the document is to be returned to the faculty member for a second signature as evidence of the faculty member acknowledging the change.


It was pointed out that studying the advantages and disadvantages was a good idea however in the absence of state enabling legislation one would be investigating an action that is currently not legal. It was also suggested that they pursue the vehicle through which one could enact enabling legislation. It was pointed out that this has been studied in great detail in the past. It was suggested that what should be studied is how the Senate can use its power and influence to enable more shared governance rather than look for outsiders to come in. Concern was expressed about the makeup of the committee appointed to look into this issue. The committee needs to be objective and have a plan on how to go about this investigation. It was suggested the Chair of the Senate appoint the committee. The committee does not have to be made up of just senators. There may be people on campus who have expertise in this area who could contribute to this committee.
Constituents' Concerns.

Senator Holloway suggested the salary formula (30-40-30) has used up its usefulness. She questioned if there a way to expedite some action on the part of the Senate so the Senate could vote on whether or not to keep the current salary distribution formula? Senator Vyhnaneck suggested the 3% be distributed across the board and the additional 1% and 2% extra be distributed on a merit base.

Senator Kardong requested someone look into the vehicle traffic on the walkways and footpaths. At noon physical plant vans are parked in the middle of walkways which makes it hard for pedestrian traffic to get around. People have been driving vehicles through the Glen Terrell Mail as a shortcut to buildings. He requested that Parking Services start ticketing these people.

R. Speth raised concern that committee approvals are being bypassed and issues are being taken directly to the Senate. He suggested no new program should be approved without additional funding for the libraries to meet the added demands.

Concern was raised about recent introduction of economic concerns into research findings as in the Jacklin Seed issue and hopes the Senate would be kept informed of the all the issues associated with this. Could we have some form of a resolution on this at the next Senate meeting stating we see concerns, dangers, and issues that need to be resolved. The resolution could state the Faculty Senate is very concerned about the possibilities of such intervention by outsiders to interfere with scholarly and research activity of the University.

Adjournment.

The meeting adjourned at 6:00 p.m.

Richard W. Crain Jr.
Executive Secretary