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Graduate Council
Appalachian State University
Minutes of the Meeting Held January 23, 2006
Approved

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Voting Members Present: Nancy Schneelock-Bingham, Al Harris, Jeff Hirst, Marie Hoepfl, Mike Kernodle, Nancy Mamlin, Jeff McBride, Frank Monterisi, William Pollard, Rahman Tashakkori, Ray Williams, Philip Witmer

Ex-officio Members Present: Tim Burwell, Charles Duke, Mark Estepp, Randy Edwards, Bill Harbinson, Richard Henson, Holly Hirst, Edelma Huntley, Bob Johnson, Bob Lyman, Dick Parrott, Alan Utter, Jenny Ware

Absent: Alecia Jackson, George Olson (excused)

Guests: Edwin Arnold, Lee Baruth, Tony Calamai, Sid Connor, Tim Forsyth, Denise Martz-Ludwig, James Wilkes

1. Dr. Huntley welcomed new members. Nancy Schneelock-Bingham replaces Douglas James as the School of Music representative. Frank Monterisi represents the Graduate Student Association.

2. It was moved (Mamlin) and seconded (Tashakkori) that the minutes of the November 28, 2005 meeting be approved. Motion carried with no opposition. Graduate Studies and Research will begin posting the Graduate Council minutes on the Web site.

3. Reports/Announcements

   A. Graduate Studies – Holly Hirst
      1) Recruitment will begin for two new Master's programs. The MSW in Social Work was approved in January by UNC-General Administration goes live as quickly as possible. Due to accreditation, however, it will phase in over the next few years. The MS in Criminal Justice/Criminology plans to admit students in Fall. Program codes for these two programs have not yet been assigned and should be left blank for admission purposes.
      2) The Graduate Education Task Force is proceeding. Meetings are frequent in order to get to a point of sharing information. Ideas will be narrowed and recommendations made then taken to a public forum. Details will follow.
      3) January is report time in Graduate Studies and Research. Many reports are due at the end of the month: NSF, Binghamton Survey, US News & World Report, Council of Graduate Schools, etc.
      4) Dr. Hirst plans to hold information sessions with all graduate programs to
         • readdress admissions criteria due to changes in the GRE, MAT, and GMAT;

- discuss thesis preparation, e.g., format, timeline for submission, and electronic submission. Frequently students graduate prior to thesis submission. [Note: Drs. Huntley and Hirst are thesis readers. Please inform the Graduate School if you know someone who can serve as a professional reader.];
- discuss recruitment activities during Family Day; and
- discuss secondary graduate education. Dr. Duke requested the College of Education be a part of these discussions.

B. Research and Sponsored Programs – Bob Johnson
1) The University Research Council competitive grants deadline for proposals is February 16. Spring awards will be $70,000 with a $5,000 maximum per award. Please read the announcement carefully as there are small changes.
2) There is a new internal processing form which addresses matching in-kind contributions and requires the signature of the Chair and Dean.
3) Distributed: Award Recipients for December 2005. Awards reported are based on the award letter.
4) Figures are 28% ahead for July through December of this year and 22% ahead from previous years at this point in time. The report also gives data by academic units on campus.

C. Graduate Studies and Research will celebrate Mardi Gras on February 28 from 11:00-2:00. Invited are members of Graduate Council, Graduate Faculty, administrators and staff from the dean's office and departments with graduate programs, and other units who support Graduate Studies and Research.

D. The Council of Graduate Schools: Advocacy, Research, and Innovation weekly update from the CGS Office of Government Relations and Public Affairs is received by Dr. Huntley. If interested in receiving this weekly update, please notify Holly Hirst who will create a distribution list.

E. Senator Lieberman proposed the National Innovation Act authorizing funding for Professional Science Master's programs. Master's students can apply for research fellowships.

F. Graduate Studies and Research plans to include articles in the newsletter to highlight 1) students whose Master's theses have resulted in publications and 2) students who conducted capstone research within their disciplines.

4. New Business

A. **Proposals: Appalachian Studies** (presented by Chip Arnold)
- AS 4-12-05 <u>Add AS 5030. Bluegrass Traditions/(3).F. (Alternate years)</u>.
The genesis of bluegrass music from its beginnings to its major redefinition in the mid-1970s. Lecture 3 hours. Dual listed with AS 4030.
- AS 5-12-05 <u>Add a new graduate concentration with Appalachian Studies Master of Arts: Appalachian Music: Roots and Influences</u>
- AS 6-12-05 <u>Add AS 5015. Old Time Music Traditions/(3).F. (Alternate years)</u>
A multicultural study of old time music and its roots, with interdisciplinary approaches from the humanities and social sciences. Lecture three hours. Dual listed with AS 4015.

1) **Motion** (Hirst) and second (Mamlin) that the proposals be considered as a package.
   Vote: Motion unanimously approved.
2) Discussion
   a. Two changes in proposal AS 5-12-05: Item 3-C should read "proposed code 204D" and under Regional Courses BIO 5532 Selected Topics was changed to BIO 5549 Selected Topics.
   b. Concern was expressed whether the offerings of selected topics would hinder students from completing coursework in a timely manner. The department does believe this will be a problem.
   c. It was suggested the syllabus reflect a distinction in requirements between the undergraduates and graduates levels.
3) **Motion** (Hoepfl) and second (Tashakkori) that the proposals be approved.
   Vote: Motion carried (9 approved; 3 opposed).

B. **Proposals: Computer Science** (presented by James Wilkes)
   - CS1. Change CS 5999. Thesis/(4-6).F;S. to CS 5999. Thesis/(6).F;S.
   - CS2. Add CS 5800. Project/(3).On Demand.
     Students work on an approved project under the guidance of a faculty advisor and/or the course instructor. Students prepare a written document and make an oral presentation about the project. Prerequisite: department approval. Graded on an S/U basis only.
   - CS2. Add CS 5710. Data Mining and Knowledge Discovery in Scientific Data/(3).On Demand.
     Large quantities of data are collected in different studies and/or experiments in science, engineering, business, and medicine. The data contains significant amounts of useful information or knowledge that is often hard to discover without computational tools and techniques. This course focuses on techniques used in data mining. We study data mining tasks such as classification, association rule mining, clustering, and numerical prediction. We utilize visualization, statistics, and neural networks in our approach. The goal is to study data mining as a means to achieve knowledge discovery in databases. Prerequisite: CS 1440 or equivalent and Statistics.
   - CS4. Add CS 5720. Scientific Computing with Visualization/(3).On Demand.
     Visualization plays a major role in understanding difficult concepts in different fields of science, engineering, medicine, and education. This course provides an opportunity to students from different disciplines to learn visualization techniques. Students apply visualization to solve problems from various fields of study. This project-oriented course uses several computational tools with visualization ability to solve problems and explore data. Emphasis will be on visualizing data, on using available tools to build and understand computational models, and on understanding and visualizing the solutions. Prerequisite: CS 1440 or equivalent and Statistics.
   - CS5. Add CS 5740. Digital Image Processing/(3).On Demand.
     This course provides an opportunity for students to learn digital image processing techniques. Students apply these techniques to images from different fields of science, engineering, and medicine. We cover image acquisition and display, properties of the human visual system, sampling and quantization, color image

representations, image enhancement, image transformations, image compression, and image restoration. Prerequisite: CS 1440 or equivalent and MATH 2240. (Dual listed with CS 4740).

- CS6. <u>Delete CS 4630. Programming Language Translation/(4).F. – makes CS 5630 a graduate only course</u>.
Techniques for the translation of programming languages into machine or assembly language. Each student will participate in the writing of a compiler. Lecture t here hours, laboratory three hours. Prerequisites: CS 3482 and 3490. (COMPUTER) (Dual-listed with CS 5630.)

- CS7. <u>Delete CS 4730 and CS 5730 Object-oriented Design and Programming/(3).S.Even-numbered years.</u>
A study of the factors involved in creating object-oriented programs, including object structure, behavior, and implementation. Comparison of contemporary object-oriented programming languages. Prerequisite: CS 3460. (Dual-listed with CS 5730.)

- CS8. <u>Revise the course description for CS 5540. Computer Networking/(3).S.Even numbered years</u>.
<u>Current</u>: Computer network architectures and protocols. The OSI model. Specification, modeling, analysis, and implementation of protocols. Prerequisite: CS 4450.
<u>Proposed</u>: Computer network architectures. The Internet protocol suite including TCP, UDP, ICMP, and IP. Routing and congestion control. Network monitoring and management. Specification, modeling, analysis, and implementation of network protocols. Creation of a socket-based client/server distributed application. Prerequisite: CS 4450.

- CS9. <u>Remove a statistic prerequisite and revise the course description for CS 4520 and CS 5520. Operating Systems/(4).S.</u>
<u>Current</u>: Student in depth of the various parts of operating systems including schedulers, memory management, interrupt handling and time sharing. Lecture three hours, laboratory three hours. Prerequisite: CS 3482, STT 2810 or STT 4250. (Dual-listed with CS 4520.)
<u>Proposed</u>: An in-depth study of the design and implementation of operating systems including device drivers, process management, memory management, and security issues. Lecture three hours, laboratory three hours. Prerequisite: CS 3482. (Dual-listed with CS 4520.)

- CS10. <u>Revise the course description for CS 4620 and CS 5620. Real-time Systems/(4).S.Odd-numbered years.</u>
<u>Current</u>: Real-time hardware and software. Data acquisition and data reduction. Real-time algorithms and data structures. Advanced programming topics including buffering, input-output, and interrupts. Lecture three hours, laboratory three hours. Prerequisite: CS 3482. (Dual-listed with CS 4620.)
<u>Proposed</u>: Real-time hardware and software. Analog and digital data acquisition and data reduction. Real-time algorithms and data structures. Advanced programming concepts including double buffering, interrupts, signal handlers, processes and threads, inter-process communication, synchronization, and the operating system

kernel. Lecture three hours, laboratory three hours. Prerequisite: CS 3482. (Dual-listed with CS 4620.)

- CS 11. <u>Change the program description and requirements for the M.S. in Computer Science to include a project track in addition to the existing thesis track</u>.

1. Dr. Wilkes requested CS 11 be discussed first. **Motion** (Pollard) and second (Hoepfl) that CS 11 be approved.
2. Discussion
   a) The non-thesis option will include a project and electives. Dr. Wilkes noted there are sufficient electives from which students can choose.
   b) A project course will be taught with the project approved by the instructor.
3. Question was called. **Vote:** Motion carried to approve CS 11.
4. **Motion** (Pollard) and second (Monterisi) that CS 1-10 be approved.
5. Discussion
   a) CS5 to Add CS 5740 is dual listed as CS 4740. Dr. Tashakkori gave the Chair a copy of the undergraduate syllabus to illustrate the distinction between the undergraduate and graduate levels.
   b) The syllabus shows strong mathematics. The department has revised the syllabus to reflect a review nature of mathematics.
   c) The title of CS2, Project, was discussed. The title was not listed as "research" as the department does not feel that producing software falls into the "research" description.
   d) Members discussed the general term of "statistics" as a prerequisite, however, it was noted that the advisor would assist the student in selecting an appropriate course.
   e) Concern was expressed whether the courses offered on demand would be offered in a timely manner or if students would be hindered from completing their program. The department will gauge demand.
   f) Question was called. **Vote:** Motion carried unanimously.

C. **Proposals: Physics & Astronomy** (presented by Tony Calamai)
- <u>PHY AST05-06. Add PHY 5730. Analog Systems(3)/F</u>.
  The theory and operation of DC and AC circuits with discrete passive and active components. Included are resistors, capacitors, inductors, diodes, bipolar transistors, field effect transistors, and operational amplifiers. An in-depth analysis of circuit theorems, phasors, differential equations, and simulations predicting the behavior of systems of analog devices will be explored in lecture and laboratory. The limitations and use of common electronics instrumentation such as multimeters, oscilloscopes, function generators, modulators/demodulators, lock-in amplifiers, and phase detection will also be explored. Lecture two hours, laboratory three hours. (Dual listed with PHY 4730)
- PHY AST 05-08. <u>Add PHY 5000. Computational Methods in Physics and Engineering/(3).F</u>.
  A course designed to introduce the student to modern techniques and algorithms in computational physics, involving solutions of real physical systems using techniques from interpolation, optimization, non-linear least squares, the numerical integration of

ordinary and partial differential equations, Monte Carlo methods, Fourier analysis and stability analysis. Applications of these techniques will be selected from the areas of mechanics, optics, modern physics, astrophysics, engineering, signal processing, and electromagnetism. Students will, in addition to the lab, carry out a major computational project which will address an important or relevant problem in physics, astrophysics or engineering. Programming will be carried out in a computer language such as "C" or Fortran. Lecture two hours, laboratory two hours.

1) **Motion** (Hirst) and second (McBride) that these two proposals be approved.
2) Discussion
   a) PHY AST 05-06 to Add PHY 5730 is dual listed as PHY 4730 but does not have a syllabus to demonstrate the distinction between the undergraduate and graduate levels. Dr. Calamai indicated the undergraduates meet for fewer class meetings, and graduate students are required to do an independent project in analog electronics or computational methods. Dr. Hirst asked for a copy of the revised syllabus.
   b) The course number of proposal PHY AST05-08 has been changed from PHY 5000 to PHY 5020.
   c) Question was called. **Vote:** Motion carried unanimously.

D. **Proposals: Psychology** (presented by Denise Martz-Ludwig)
   - PSY 1. Delete the Master of Arts in Health Psychology Program (Major Code: 296A/51.2310).
   - PSY 2: Change the name and program description of the "Master of Arts in Clinical Psychology" to "Master of Arts in Clinical Health Psychology"
   - PSY 3: Change the name and course description of PSY 5552. Advanced Abnormal Psychology to PSY 5552. Diagnosis and Psychopathology
     Current: PSY 5552. Advanced Abnormal Psychology/(3).S.
     A critical examination of major theories and data concerning persons with emotional disabilities. Emphasis placed on recent findings and experimental research. Alternative ways of viewing "abnormal" behaviors may be presented. Prerequisites: PSY 2400, 2401.
     Proposed: PSY 5552. Diagnosis and Psychopathology/(3).S.
     Consideration of diagnostic practices of common psychological disorders, including symptom criteria, epidemiological data, with an emphasis on the acquisition of applied diagnostic skills. Content will often include a study of the origin, development, and manifestations of psychological and causal models with empirical support. Prerequisite: Abnormal psychology or permission of instructor.
   - PSY 4. Change course title and description of PSY 6900 Internship from Clinical to Clinical Health and make credit variable.
     Current: PSY 6900 Internship/(6).F;S.
     Internships are required for students in the Clinical, School, and Health programs and are an option for students in the Industrial-Organizational Psychology and Human Resource Management (I/O-HRM) program. It is anticipated that students will spend a minimum of 75 contact hours in the field for each earned hour of credit. The requirements are listed below. Graded on an S/U basis.

Clinical/(6).F;S.

Six months full-time placement in a mental health setting under professional supervision; to include experience with psychological evaluation, individual and group psychotherapy and behavior change, work with interdisciplinary team, consultation with community agencies and schools, and work in institutional settings. Prerequisite: Approval of the director of the clinical or rehabilitation program. Graded on an S/U basis.

Health/(6).F;S.

The Health Psychology internship is a full semester 600 hour internship. It may be done in a hospital setting, physician's office, clinic or other appropriate setting. Students will develop skills in life style changes, pain control, situational counseling, management of eating disorders, and other interventions related to health problems. Graded on an S/U basis.

Proposed: PSY 6900 Internship/(1-6).F;S.

Internships are required for students in the Clinical Health and School programs and are an option for students in the Industrial-Organizational Psychology and Human Resource Management (I/O-HRM) program. It is anticipated that students will spend a minimum of 75 contact hours in the field for each earned hour of credit. The requirements are listed below. Graded on an S/U basis.

Clinical Health/(1-6).F;S.

Six months full-time placement in a mental health setting under professional supervision; to include experience with psychological evaluation, individual or group psychotherapy and behavior change, and consultation with relevant community agencies. Prerequisite: Approval of the Internship instructor or director of the Clinical Health program. Graded on an S/U basis. May be repeated up to a total of 6 credit hours.

- PSY 5. Change course title and description of PSY 5901. Practicum I.
  Current: PSY 5901. Practicum I/(3).On Demand.
  Practicum experiences are available in the following areas:

  Clinical

  A group process oriented experience in which students focus on the development of such interpersonal skills as communication of self to others, feedback, self-disclosure, and constructive confrontation of others. Graded on an S/U basis.

  Proposed: PSY 5901. Practicum I/(3).On Demand.
  Practicum experiences are available in the following areas:

  Clinical Health

  Students will train in a professional mental health or medical setting for the equivalent of one day per week. Supervision is provided on site by staff psychologists or other professionals. Weekly class meetings supplement the on-site training to provide additional group supervision as well as coverage of professional issues. Graded on a S/U basis.

- PSY 6. Change course title and description of PSY 5902 Clinical Practicum II.
  Current: PSY 5902. Practicum II/(3).On Demand.
  Practicum experiences are available in the following areas:

Clinical
Students are introduced to clinical practice by working in a local mental health facility. Clinical experience appropriate for their level of training is provided. Supervision is provided by staff psychologists and other area professionals in settings such as The Counseling and Psychological Services Center, area mental health centers, hospitals, and Developmental Evaluation Clinics. Graded on a S/U basis.

Proposed: PSY 5902. Practicum II/(3).On Demand.
Practicum experiences are available in the following areas:
Clinical Health
Students will train in a professional mental health or medical setting for the equivalent of one day per week. Supervision is provided on site by staff psychologists or other professionals. Clinical experience is arranged as appropriate for the student's level of training. Weekly class meetings supplement on-site training to provide additional group supervision as well as coverage of professional issues. Graded on a S/U basis.

- PSY 7. Delete PSY 5580. Foundations and Ethics of Health Psychology/(3).F. and the "Health Psychology" internship option (one of the four PSY 6900 options) from the catalog.

1) Corrections to be made include the omission of a major code on PSY 2, Page 4 as the code will be assigned when approved.
2) **Motion** (Hoepfl) and second (Mamlin) to consider PSY 1 and 2 as a package. Motion carried unanimously.
3) **Motion** (Pollard) and second (Monterisi) to approve proposals PSY 1-2.
4) **Vote**: Motion unanimously approved.
5) **Motion** (Mamlin) and second (McBride) to consider proposals PSY 3-7 as a package.
6) **Vote**: Motion unanimously approved.
7) **Motion** (Mamlin) and second (Tashakkori) to approve proposals PSY 3-7.
8) Discussion included the additional of the course number for Abnormal Psychology (PSY 2401) as a prerequisite in the proposed course description on proposal PSY 3. This will be corrected.
9) **Vote**: Motion unanimously approved.

E. **Proposal: Accounting** (presented by Bill Pollard)
- ACC 1.0506. Add ACC 5340. Accounting in the Business Environment/(3).F;S., a required course for all students seeking the M.S. in Accounting degree (302B, 302C, 302D).
Various accounting topics will be explored in an international context with a focus on ethical implications of the role of accountants as business persons. Topics will be explored in a seminar environment with a strong emphasis on research and communication through written work and presentations. Prerequisite: Admission to the MS in Accounting program.

1) **Motion** (Tashakkori) and second (Mamlin) that the proposal be approved.
2) **Vote**: Motion unanimously approved.

F. **Proposal: Human Development and Psychological Counseling** (presented by Charles Duke and Lee Baruth)
- HPC 1. Change the course description for HPC 6900 Internship in Marriage and Family Therapy in the graduate bulletin for Master of Arts in Marriage and Family Therapy (Major Code: 468A and CIP: 511505).
  Current: HPC 6900. Internship/(1-18).F;S.
  Advanced students in counselor education will have supervised experiences in specific functions of the counselor education field in a public school system, post-secondary institution, or other appropriate agency. In addition to those listed below, other specific experiences will be developed and approved by the student and the student's Advisory Committee. May be taken up to a total of eighteen semester hours with permission of the departmental chair. Graded on an S/U basis only.
  Prerequisites: prior approval of the department chairperson.
  Internship in Marriage and Family Therapy
  Supervised practice in the application of skills used in counseling couples and families. Open only to marriage and family therapy majors. Grade on S/U basis only. Prior approval of department chairperson.
  Proposed: HPC 6900. Internship/(1-18).F;S.
  Advanced students in counselor education will have supervised experiences in specific functions of the counselor education field in a public school system, post-secondary institution, or other appropriate agency. In addition to those listed below, other specific experiences will be developed and approved by the student and the student's Advisory Committee. May be taken up to a total of eighteen semester hours with permission of the departmental chair. Prerequisites: prior approval of the department chairperson.
  Internship in Marriage and Family Therapy/(3+3+6).F;S;SS.
  Supervised practice in the application of skills used in systemic individual, couple, and family therapy. Open only to marriage and family therapy majors. Prior approval of department chairperson.
  1) **Motion** (Mamlin) and second (Tashakkori) to approve HPC 1.
  2) **Vote**: Motion unanimously approved.

G. **Proposal: Technology** (presented by Mark Estepp and Sid Connor)
- In the undergraduate and graduate catalogs, change the prefix, title, semester offered and add prerequisite
  Current: TEC 4557/5557. Manufacturing Production Techniques/(3).S.
  Proposed: ID 4557/5557. Design for Manufacture/(3).F. (add a prerequisite of ID 3701 or permission of instructor)
  1) **Motion** (McBride) and second (Monterisi) to approve the Technology proposal.
  2) **Vote**: Motion unanimously approved.

5. Dr. Henson announced the Microscopy facility will have a director on board June 1. This facility is available to anyone on campus.

6. The meeting was adjourned.