PURDUE UNIVERSITY
GRADUATE SCHOOL

Minutes of the Graduate Council Meeting
October 23, 2014
1:30 p.m.

Second Meeting
Room 310
Stewart Center

PRESENT: Mark J. T. Smith, chair; Council Members, Thomas W. Atkinson, Bedrich Benes, Frank Blalark, Barrett S. Caldwell, David S. Cochran, Joy L. Colwell, Lucy M. Flesch, Frederick S. Gimble, Inez Hua, Michael A. Jenkins, Christopher F. Kulesza, Eric P. Kvam, Linda J. Mason, James L. Mullins, Kathryn M. Obenchain, Glenn R. Parker, Phillip E. Pope, Mary A. Sadowski, John H. Schild, David G. Skalnik, Carol S. Sternberger, Jon A. Story J., Jill Suitor, Joseph Thomas III, Candiss B. Vibbert (Provost's Representative), Jane A. Walker, Holly Wang, Jeffrey L. Whitten, Yan Ping Xin, Wenbin Yu, Howard N. Zelaznik

APOLOGIES FOR ABSENCE RECEIVED FROM: Subramanian Balachander, John M. Barron, Jessica E. Huber, Mark A. Lipton, Cynthia S. Roberts, Keith E. Schwingendorf,

ABSENCES: Bill V. Mullen, Suresh K. Mittal

GUESTS: Lesa Beals, Evelyn Blackwood, Debbie Fellure, Laura Holladay, Cyndi Lynch

I. MINUTES

The minutes of the September 18, 2014, Graduate Council meeting were approved as distributed.

II. DEANS REMARKS AND REPORTS

a) Dr. Mark Smith mentioned that he is serving on the Graduate Record Examination (GRE) board. Dr. Smith attended a meeting recently and received information regarding the PPI (Personalized Potential Index). The PPI is an alternative for the letters of recommendation. Recommenders are asked to rate students in six categories: 1) knowledge, 2) creativity, 3) communication skills, 4) team work, 5) resilience in ethics & integrity, and 6) planning & organization. The conclusion found that most schools are not using the PPI. The research says that it is a good resource. The Educational Testing Service (ETS) may phase this out, so they are asking for feedback. Dr. Smith noted not to plan on this next year.

b) Dr. Smith noted that the language on the Graduate School Form 32, Thesis/Dissertation Agreement, Publication Delay, and Research Integrity & Copyright Disclaimer, has been modified and reposted on the Graduate School website (http://www.purdue.edu/gradschool/).

c) Dr. Phil Pope noted that the Doctor of Nursing Practice (DNP) was approved by the Indiana Commission of Higher Education in May of 2014 and has gone to the Higher Learning Commission (HLC). Dr. Pope asked Dr. Jane Walker to update the Graduate Council on the DNP.

Dr. Walker reported that the HLC visited both Calumet and Fort Wayne campuses this past summer to meet with potential students, leaders in the health care community, former graduates, and faculty. A positive report was received two weeks ago, so they will be recommending approval. The Higher Learning Commission will be meeting at the end of November so they should receive the letter after that meeting. There is one more step in communicating the change to the accreditors. Each campus will submit a change report independently since they are accredited independently. It is requested that these reports are received four months in advance after the letter is received. Dr. Pope stated that there is a chance to launch the program in Fall 2015.

d) Dr. Pope gave a report on pending graduate program proposals in various stages of review/approval.

III. AREA COMMITTEE REPORTS (Area Committee Chairs)
Graduate Council Document 14-E, Graduate Council Documents Recommended for Approval

Area Committee C, Engineering, Chemistry, and Physical Sciences (Barrett Caldwell, chair; bscaldwell@purdue.edu):
Graduate Council Document 14-18a, **ECE 53301 Wireless and Multimedia Computing** (IUPUI)
Graduate Council Document 14-18b, **ECE 56401 Computer Security** (IUPUI)
Graduate Council Document 14-14a, **ME 60101 Computational Modeling of Turbulence** (IUPUI)

Dr. Barrett Caldwell presented three courses for consideration. The courses were approved as a block by the council, upon a motion by Dr. Caldwell.

Area Committee D, Humanities and Social Sciences (Glenn Parker, chair; parker6@purdue.edu):
Graduate Council Document 14-19a, **POL 60800 Qualitative Methods in Political Science** (PWL)

Dr. Glenn Parker presented one course for consideration. The course was approved by the council, upon a motion by Dr. Parker.

Area Committee E, Life Sciences (Frederick Gimble, chair; fgimble@purdu.edu):
Graduate Council Document 14-15d, **BIOL 51801 Biology Ethical Frontiers** (PUC)
Graduate Council Document 14-15e, **BIOL 54401 Epigenetics** (PUC)
Graduate Council Document 14-15a, **BIOL 57850 Epigenetics** (IUPUI)
Graduate Council Document 14-2c, **NUR 53100 Theoretical and Ethical Reasoning in Advanced Practice Nursing** (PUC)

Dr. Frederick Gimble presented four courses for consideration. The courses were approved as a block by the council, upon a motion by Dr. Gimble.

Area Committee F, Management Sciences (John Barron, chair: barron@purdue.edu):
Graduate Council Document 14-11a, **HTM 59001 Graduate Industry Practicum** (PWL)
Graduate Council Document 14-11b, **HTM 59002 Graduate Industry Research Practicum** (PWL)
Graduate Council Document 14-20a **MGMT 59010 MS INTERNSHIP** (PWL)

Dr. Phil Pope presented three courses for consideration. The courses were approved as a block by the council, upon a motion by Dr. Pope.

IV. PURDUE GRADUATE STUDENT GOVERNMENT -- PRESIDENT'S REPORT

Mr. Christopher Kulesza, President of the Purdue Graduate Student Government (PGSG), provided information regarding activities of the PGSG since the last council meeting.

V. NEW BUSINESS

a) Dr. Tom Atkinson presented the West Lafayette Fall 2014 Enrollment Report. The complete report is posted on the Graduate School website (http://www.purdue.edu/gradschool/faculty/enrollment.cfm).

b) Dr. Joy Colwell presented the Purdue University Calumet Fall 2014 Enrollment Report. The complete report is posted on the Graduate School website (http://www.purdue.edu/gradschool/faculty/enrollment.cfm).

c) Dr. David Skalnik presented the Purdue University Indianapolis Fall 2014 Enrollment Report. The complete report is posted on the Graduate School website (http://www.purdue.edu/gradschool/faculty/enrollment.cfm).

VI. CLOSING REMARKS AND ADJOURNMENT

Dr. Smith noted that the next council meeting will be on November 20, 2014, at 1:30 p.m. in The Purdue Memorial Union, West Faculty Lounge, Room 250. The council meeting was adjourned by Dr. Smith at 2:23 p.m.

Mark J. T. Smith, Chair

Tina L. Payne, Secretary

APPENDIX A

PENDING DOCUMENTS

(November 20, 2014)

Area Committee A, Behavioral Sciences (Jeffery L. Whitten, jwhitten@purdue.edu):
Graduate Council Document 13-9c, **ECET 55800 Mechatronics System Design, Modeling & Integration,** (PUC) Pending; additional information
Graduate Council Document 13-5a, **EDCI 53800 Human Issues in Instructional Technology** (PUC)
*Graduate Council Document 14-3b***, EDCI 63800 Curriculum and Instruction Doctoral Seminar II** (PWL)
Graduate Council Document 13-6b, **EDFA 53900 School Administration: The Effective School Executive** (PUC)
Graduate Council Document 13-6a, **EDFA 61700 Legal Aspects in American Education II** (PUC)
Graduate Council Document 13-4m, **EDPS 52600 Integrating Students with Special Needs: A Civil Rights Movement** (PUC)
Graduate Council Document 13-4n, **EDPS 52800 Research in Counseling** (PUC)
Graduate Council Document 13-4o, **EDPS 54600 Addictions Practicum** (PUC)
Graduate Council Document 13-16b, **ITS 52000 Web Applications,** (PUC) This course was resubmitted with a new supporting document, course description, and course learning outcomes by request of Area Committee Chair on 4/18/2014.
Graduate Council Document 13-16c, **ITS 55100 Principles of Information Assurance,** (PUC) Pending; additional information

Area Committee C, Engineering, Chemistry, and Physical Sciences (Barrett S. Caldwell, chair; bscaldwell@purdue.edu):
Graduate Council Document 14-13a, **CE 51600 Advanced Selected Topics in Civil Engineering** (PFW)
Graduate Council Document 14-13b, **CE 51700 Advanced Water Treatment Processes** (PFW)
Graduate Council Document 14-13d, **CE 51900 Advanced Soil Mechanics** (PFW)
Graduate Council Document 13-26a, **CHE 55100 Principles of Pharmaceutical Engineering** (PWL) Pending; additional information.
Graduate Council Document 13-26b, **CHE 55300 Pharmaceutical Process, Development and Design** (PWL) Pending; additional information.
Graduate Council Document 14-10a, **SE 55000 Advanced Manufacturing Systems and Processes, (**PFW)
Graduate Council Document 14-17a, **FIS 50800 Forensic Science Laboratory Management** (IUPUI)
Graduate Council Document 14-17b, **FIS 53000 Population Genetics** (IUPUI)
Graduate Council Document 14-14b, **ME 65100 Advanced Finite Element Method for Solids** (IUPUI)
Graduate Council Document 14-16a, **NUCL 58001 Essential Communication Skills for Nuclear Engineers** (PWL)

Area Committee D, Humanities & Social Sciences (Glenn R.Parker, chair: parker6@purdue.edu):
Graduate Council Document 12-2a, **Graduate Certificate in Professional Selling and Customer Relationship Management,** Dept. of CSR, PWL

Area Committee E: Life Sciences (Frederick S. Gimble, chair; edwardsn@purdue.edu):
Graduate Council Document 14-15b, **BIOL 51601 Food Microbiology** (PUC)
Graduate Council Document 14-15c, **BIOL 51605 Environmental Microbiology** (PUC)
Graduate Council Document 14-12a, **CPB 63000 Advanced Veterinary Avian Pathology** (PWL)
Graduate Council Document 14-12b, **CPB 63100 Avian Immunology** (PWL)
Graduate Council Document 14-12c, **CPB 63200 Avian Medicine** (PWL)
Graduate Council Document 14-12d, **CPB 63300 Preventive Avian Medicine Practice** (PWL)
Graduate Council Document 13-23a, **HSCI 57100 Molecular Imaging** (PWL)

APPENDIX B

NEW DOCUMENTS RECEIVED
(After the October 23, 2014 Graduate Council Meeting)

Area Committee A, Behavioral Sciences (Jeffrey Whitten, chair; jwhitten@purdue.edu):

Graduate Council Document 14-21a, **MET 55000, Mechanical System Design and Integration for Mechatronics** (PUC) Sem. 1 and 2. SS. Lecture 2 times per week for 80 minutes. Credit 3. Prerequisites: Master's student standing, or senior status with instructor approval. Undergraduate students must have senior standing and must have proficiency in the area of power, power system, electric machine, electronics, and calculus.

Introduction to contemporary mechanical sub system components used in Mechatronic systems including classification schemes for use in categorizing sub system components. Categories for classifying components will include linear, rotary and/or combinational motion categories. The course will develop the fundamental principles required for the selection of the sub system components of which a mechatronic system is composed. Power transmission components used in each category will be investigated. Relationships between the physical aspects of various components and dynamic performance of the components will be modeled. Relative assessments of the performance capabilities of the components existing in the various categories will be performed to establish a basis necessary for performing trade studies so a preferred embodiment can be identified for various applications. Professor Engle.

Area Committee C, Engineering, Chemistry, and Physical Sciences (Barrett Caldwell, chair; bscaldwell@purdue.edu):

Graduate Council Document 14-23a, **AAE 52300, Introduction to Remote Sensing** (PWL) Sem. 2. Lecture 3 times per week for 50 minutes. Credit 3. Prerequisites: AAE 20300, AAE 30100 or ECE 30100 or equivalent or graduate standing.

Fundamentals of satellite and airborne remote sensing. Basic physical principles of electromagnetic wave propagation will be introduced. From this foundation, the phenomenologies enabling properties of the atmosphere, ocean and land surface to be measured at a distance will be developed. These principles will be applied to the design of instruments and satellite missions for Earth observation. Microwave instruments will be emphasized, although there will also be discussion of optical systems. Most of the material would also be applicable to remote sensing of other planets. Intended for students in engineering or the sciences. Professor Garrison.

Graduate Council Document 14-23b, **AAE 67500, Advanced Signals and Systems for Satellite Navigation** (PWL) Sem. 2. Lecture 3 times per week for 50 minutes. Credit 3. Prerequisites: AAE 56700, ECE 60000 or equivalent.

Fundamental theory of ranging signal design. Generation of pseudorandom noise. Methods for detecting, tracing, and estimating delay using ranging signals. Probability of detection, probability of false alarm, and tracking threshold derived from a stochastic signal model. Models for multiple access, quantization, clock and multipath errors. Examples drawn from present-day Global Navigation Satellite Systems (GNSS). Professor Garrison

Graduate Council Document 14-14c, **ME 58400 System Identification** (PWL) Sem. 2. Lecture 3 times per week for 50 minutes. Credit 3. Prerequisites: ME 47500 or consent of instructor.

Theory and application of System Identification methods. Connecting the world of mathematical models to experimental data – least squares methods and difference equation models. Background in probability and analysis: algebra of random variables, law of large numbers, central limit theorem. The ARMA family of models; mapping physics models to generalized ARMAX forms (linear and nonlinear); mapping the parameter estimation problem to the least squares problem (batch and recursive), and numerical solution techniques. Model (in)validation, optimal identification criteria, experiment design and data preprocessing considerations. Issues of signal to noise ratio, persistency of excitation, sampling frequency, data accuracy and data sizes.

Graduate Council Document 14-24a, **Proposal for an Interdisciplinary M.S. and Ph.D. in Environmental Ecological Engineering, from the College of Engineering** (PWL)

Graduate Council Document 14-25a, **Proposal for an M.S. and Ph.D. in Construction and Engineering Management, from the College of Engineering** (PWL)

Area Committee E, Life Sciences (Frederick Gimble, chair; fgimble@purdu.edu):

Graduate Council Document 14-15f, **BIOL 54410, Sensory Systems** (IUPUI) Sem. 1. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: BIOL 32400.

The goal of Sensory Systems is to gain an understanding of the mechanisms that underlie sensory perception at the molecular, cellular, and systems level. This will be accomplished by examining how various forms of energy are transduced into the electrochemical messages of the nervous system, what pathways the information travels within the nervous system, and how this information is processed and perceived. Professor Belecky-Adams.

Graduate Council Document 14-15g, **BIOL 57310, Stem Cell Biology** (IUPUI) Sem. 2. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: BIOL 32400.

In this course, students will develop a clear understanding of stem cells' defining features, activities and potential utility. Stem cell research is pursued in nearly all areas of medicine. This course focuses on important definitions and characteristics of stem cells and develops a general overview of stem cell biology. The course builds on this overview of stem cell biology by examining specific examples of developmental biology, methodology and the potential applications of stem cell therapy. Professor Marrs.

Graduate Council Document 14-15h, **BIOL 57410, Molecular and Cellular Bone Biology** (IUPUI) Sem. 1. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: BIOL 10100, BIOL 10300 and BIOL 32400.

Molecular & Cellular Bone Biology is a 3-credit 500-level course for senior undergraduate and graduate students. This course concentrates on the basic cellular and molecular concepts of bone and cartilage, and applications to engineering concepts. The topics include bone development and growth, cartilage and chondrocyte, signal transduction (intra- and inter-cellular signaling) in bone cells, stem cells and skeletal regeneration, tissue engineering (bone grafting), gene therapy and cancer bone mestastasis. Professor Li.

Graduate Council Document 14-15i, **BIOL 62500, Immune System Disorders** (IUPUI) Sem. 1. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: BIOL 33800.

The aim of this course is to understand the underlying mechanisms that contribute to the immune system dysfunction. We will discuss the genetic defects in the immune system, immune complex

diseases, immune mediated hypersensitivity reactions and autoimmune diseases. This course covers fundamentals as well as current topics in the field of immunology. Professor Chang.

Graduate Council Document 14-26a, **Proposal for a Ph.D. in Nursing, from the School of Nursing** (PWL)

Graduate Council Document 14-28a, **Proposal for a Professional M.S. in Biology** (PNC)

Area Committee F, Management Sciences (John Barron, chair: barron@purdue.edu):

Graduate Council Document 14-22a, **OLS 54700, Conflict Management** (PNC) Sem. 1 and 2. SS. Lecture 1 time per week for 240 minutes for 10 weeks. Credit 3. Prerequisites: Graduate standing or permission of the College of Business.

This course provides opportunities for students to develop and enhance techniques and skills in conflict management. Students will investigate and practice models of conflict resolution, methods, and skills to manage interpersonal disputes between/among parties. It emphasizes building partnerships and long-term positive relationships in the business world and in one's personal life and improving communication techniques and verbal skills in problem solving. Professor Roper.

Graduate Council Document 14-22b, **OLS 58900, Leadership Ethics** (PNC) Sem. 1 and 2. SS. Lecture 1 time per week for 240 minutes for 10 weeks. Credit 3. Prerequisites: Graduate standing or permission of the College of Business.

One of the key characteristics of effective leaders is their ability to act with honesty and integrity. This course will explore ethics from multiple perspectives, the moral obligations of leaders and followers, ethical implications for power and the ways that leaders can shape the moral environment of the organization. Students will apply ethical philosophies to various problems and case studies. Professor Christo-Baker.

Graduate Council Document 14-22c, **OLS 59500, Research Methods for Leadership Studies** (PNC) Sem. 1 and 2. SS. Lecture 1 time per week for 240 minutes for 10 weeks. Credit 3. Prerequisites: Graduate standing or permission of the College of Business.

This introductory research course introduces students to research methods and quantitative research using descriptive statistics and qualitative research using content analysis and ethnography. It is intended to prepare students to conduct studies and write reports and presentations in the business world rather than for academic research purposes.

Graduate Council Document 14-22d, **OLS 59700, Conflict Management** (PNC) Sem. 1 and 2. SS. Lecture 1 time per week for 240 minutes for 10 weeks. Credit 3. Prerequisites: Graduate standing or permission of the College of Business.

This course is the culminating experience designed to provide students with an opportunity to demonstrate mastery in the field Leadership. The MS project will be based on rigorous independent and group research and reflect the integration of theory and practice. Professor Roper.

Graduate Council Document 14-27a, **Proposal for an M.S. in Leadership, from the College of Business** (PNC)