

**PURDUE UNIVERSITY
GRADUATE SCHOOL**

Minutes of the Graduate Council Meeting
September 15, 2016
1:30 p.m.

Second Meeting
Room 214CD
STEW

PRESENT: Mark J. T. Smith, chair; Council Members, Thomas W. Atkinson, Bedrich Benes, Richard E. Blanton, Natalie J. Carroll, David S. Cochran, Joy L. Colwell, Michael J. Connolly, Carlos M. Corvalan, Marius D. Dadarlat, (Vincent) Jo Davisson, Lucy M. Flesch, Anne L. Fliotics, Melissa M. Franks, Takashi Hibiki, Mary E. Johnson, David B. Klenosky, Susan M. Mendrysa, James L. Mohler, Melanie Morgan, Kathryn M. Obenchain, Jerry P. Ross, Paul Salama, David G. Skalnik, Carol S. Sternberger, Jen Tang, Candiss B. Vibbert (Provost's Representative), Henry E. Williams, Jun Xie, Yan Ping Xin, Howard N. Zelaznik, Andrew K. Zeller

APOLOGIES FOR ABSENCE RECEIVED FROM: Jonathan M. Harbor, Linda J. Mason, James L. Mullins

ABSENCES: Michael A. Jenkins, Steven Son, Vikas Tomar, Chong Xiang

GUESTS: Debbie Fellure, Devona Gangwer, Lee Gordan, Cyndi Lynch, Manushag Powell, Brittany Wright,

I. MINUTES

The minutes of the August 24, 2016, Graduate Council meeting were approved as presented.

II. DEANS REMARKS AND REPORTS

- a) Dr. Mark Smith noted that a new report was released recently by the Council of Graduate Schools on national enrollment numbers. Dr. Smith noted that the number of applications to graduate programs in the United States is continuing to grow.
 - Domestic first time students increased by 3.8%, which is up from 1.3%
 - Graduate enrollment at public institutions has grown by 4.9%
 - Minorities are faring well in that growth, as are women.

- b) Dr. James Mohler gave a report on pending degree program proposals in various stages of review and approval.

- c) Dr. James Mohler gave a report on pending course proposals in review with the Graduate Council area committees, proposals awaiting additional information from proposers, course proposals requested by departments for removal, and new course proposals received since the previous Graduate Council meeting.

III. PRESENTATION

Dr. Tomás Díaz de la Rubia, Executive Director of Discovery Park presented an overview of Discovery Park at a Glance. Discussion followed by the council members.

IV. AREA COMMITTEE REPORTS (Area Committee Chairs)

Graduate Council Document 16-F, Graduate Council Documents Recommended for Approval:

Area Committee A, Behavioral Sciences (Yan Ping Xin, yxin@purdue.edu):

Graduate Council Document 16-14c, PSY 60601, ANOVA for the Behavioral Sciences (PWL)

Graduate Council Document 16-14f, PSY 68800, Research Methods in Social Psychology (PWL)

Dr. Yan Ping Xin presented two courses for consideration. The courses were approved by the council, upon a motion by Dr. Xin.

Area Committee E: Life Sciences, Natalie J. Carroll, chair; ncarroll@purdue.edu):

Graduate Council Document 16-25a, FNR 52800, Wildlife and Environmental Forensics (PWL)

Graduate Council Document 16-22a, HSCI 67200, MRI Quality Assurance Internship – Part 1 (PWL)

Graduate Council Document 16-22b, HSCI 67300, MRI Quality Assurance Internship – Part 2 (PWL)

Graduate Council Document 15-33a, NUTR 62600, Advanced Presentation Skills (PWL)

Graduate Council Document 15-33b, NUTR 62700, Scientific Writing (PWL)

Dr. Natalie Carroll presented five courses for consideration. The courses were approved by the council, upon a motion by Dr. Carroll.

GRADUATE CERTIFICATE PROPOSAL:

Area Committee E: Life Sciences, Natalie J. Carroll, chair; ncarroll@purdue.edu):

Graduate Council Document 15-21a, Proposal for a Graduate Certificate in Biochemistry and Molecular Biology, PWL

Dr. Natalie Carroll presented a Graduate Certificate in Biochemistry and Molecular Biology, submitted by the Department of Biochemistry, PWL. She stated that the area committee had reviewed the document and it appeared to be sound and ready for council consideration. The proposal was approved by the council, upon a motion by Dr. Carroll.

V. NEW BUSINESS

Dr. Tom Atkinson presented the West Lafayette Fall 2016 Enrollment Report. The complete report is posted on the Graduate School website.

(<http://www.purdue.edu/gradschool/faculty/enrollment.html>)

Dr. Carol Sternberger presented the Fort Wayne Fall 2016 Enrollment Report. The complete report is posted on the Graduate School website.

(<http://www.purdue.edu/gradschool/faculty/enrollment.html>)

Dr. Mark Smith talked about the Council of Graduate Schools (CGS) and the international discussion that is occurring on the dissertation. Dr. Smith noted that traditionally students who graduated from Ph.D. programs have gone into faculty positions. We are now seeing more Ph.D. students going into industry or government positions which may vary from area to area. There is also more growth in doctoral degrees which are not research based and are generally more course oriented. Discussion followed by the council members.

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

Mr. Andrew Zeller, President of the Purdue Graduate Student Government (PGSG) provided information regarding activities of the PGSC since the last council meeting, including: Progress of the Life, the Fall picnic, the first Senate meeting, and team nights.

VIII. CLOSING REMARKS AND ADJOURNMENT

The council meeting was adjourned by Dr. Smith at 2:14 p.m.

Mark J. T. Smith, Chair

Tina L. Payne, Secretary

PENDING DOCUMENTS

(September 15, 2016)

BOLDED ITEMS ARE IN REVIEW WITH AN AREA COMMITTEE

Area Committee A, Behavioral Sciences (Yan Ping Xin, chair; yxin@purdue.edu):

Graduate Council Document 13-9c, ECET 55800 Mechatronics System Design, Modeling & Integration, (PUC)

Graduate Council Document 14-21a, MET 55000, Mechanical System Design and Integration for Mechatronics (PUC)

***Graduate Council Document 16-14a*, PSY 50600, Professional Issues and Trends in Social Psychology (PWL)**

***Graduate Council Document 16-14b*, PSY 50700, Current Readings in Social Psychology (PWL)**

***Graduate Council Document 16-14c*, PSY 60601, ANOVA for the Behavioral Sciences (PWL)**

***Graduate Council Document 16-14f*, PSY 68800, Research Methods in Social Psychology (PWL)**

***Graduate Council Document 16-20a*, TLI 56200 Foundation of Integrated STEM (PWL)**

Area Committee D, Humanities and Social Sciences (Anne Fliotsos, chair; fliotsos@purdue.edu):

***Graduate Council Document 16-11d*, CSR 56100, Human Rights and Social Justice (PWL), Pending review with the College of Health and Human Sciences, pending**

***Graduate Council Document 16-11e*, CSR 60100, Introduction to Health Disparities (PWL), Pending review with the College of Health and Human Sciences, pending**

***Graduate Council Document 16-11f*, CSR 66100, Theorizing Social Political and Economic Determinants of Health Disparities (PWL), Pending review with the College of Health and Human Sciences, pending**

Area Committee E, Life Sciences (Natalie Carroll, chair; ncarroll@purdue.edu):

***Graduate Council Document 16-25a*, FNR 52800, Wildlife and Environmental Forensics (PWL)**

***Graduate Council Document 16-22a*, HSCI 67200, MRI Quality Assurance Internship – Part 1 (PWL)**

***Graduate Council Document 16-22b*, HSCI 67300, MRI Quality Assurance Internship – Part 2 (PWL)**

***Graduate Council Document 15-33a*, NUTR 62600, Advanced Presentation Skills (PWL),**

***Graduate Council Document 15-33b*, NUTR 62700, Scientific Writing (PWL)**

Area Committee F, Management Sciences (Jun Xie, chair; junxie@purdue.edu):

***Graduate Council Document 16-16a*, HTM 50300, Business Statistics and Quantitative Analysis in Hospitality (PWL)**

***Graduate Council Document 16-16b*, HTM 51100, Hospitality Business Law and Risk Management (PWL)**

***Graduate Council Document 16-16c*, HTM 51200, Leadership in Hospitality and Tourism (PWL)**

***Graduate Council Document 16-16d*, HTM 53600, Advanced Service Management for Hospitality and Tourism (PWL)**

***Graduate Council Document 16-16e*, HTM 54200, Strategic Revenue Management in the**

Hospitality Industry (PWL)

Graduate Council Document 16-16f, HTM 59500, Applied Management Project (PWL)

NEW DOCUMENTS RECEIVED

(After the September 15, 2016 Graduate Council Meeting)

Area Committee C, Engineering, Chemistry, and Physical Sciences (Lucy Flesch, chair:
lmflesch@purdue.edu

Graduate Council Document, 16-10f, ECE 52700, Advanced Power Electronics Converters, (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: ECE 20200 and ECE 42700. Permission of instructor.

The course introduces students to advanced power electronics converters dealing with ac voltage. The power electronics topologies considered in this course are sorted into two groups: multilevel configurations and back-to-back converters. The multilevel configurations presented are: a) neutral-point-clamped, b) cascade, c) flying capacitor, and d) non-conventional multilevel configurations. The back-to-back converters presented are: a) three-phase to three-phase, b) single-phase to three-phase, c) single-phase to single-phase ac-dc-ac converters. A new methodology will be employed to present comprehensively multilevel and back-to-back converters topologies. The main applications of those converters are in renewable energy systems, active power filters, energy efficiency devices and motor drive systems. Professor dos Santos.

Graduate Council Document, 16-10g, ECE 53801, Discrete Event Dynamic Systems, (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: Graduate standing only.

This course introduces discrete event dynamic systems with their applications in system modeling, analysis, and control. Models such as automata, Petri nets, Markov chain, and queueing systems are introduced, along with analysis of their dynamics. Discrete event simulation methods are included. Examples from various engineering applications are given. Professor Li.

Graduate Council Document, 16-10h, ECE 53900, Foundations of Advanced Engineering I, (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: ECE 27000 and ECE 30200. Permission of instructor.

Several mathematical tools applied in the engineering discipline are discussed. Statistical methods, including construction of confidence interval and hypothesis testing, as well as regression and regression analysis, are discussed. Discrete tools are discussed; these include logic and mathematical reasoning, combinatorics, groups and finite fields. Applications of some of these tools in engineering problems are introduced. Decision Theory including Bayes Theorem and applying Bayes Theorem to form decision problems. Professor King.

Graduate Council Document, 16-10i, ECE 54800, Introduction to 2D & 3D Digital Image Processing (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: ECE 30100 or consent of instructor.

An introduction to 2D and 3D image processing. Lecture and projects covering a wide range of topics including 2D and 3D image analysis, image segmentation; color image processing, image sharpening, linear and filtering, image restoration, and image registration. Graduate standing. Professors Salama and Christopher.

Graduate Council Document, 16-10j, ECE 55801, Advanced Systems on a Chip (SoC) Designs for Image Processing using FPGAs (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: ECE 42100 and ECE 30100.

This class covers advanced concepts in using Field Programmable Gate Arrays (FPGAs) designed with and HDL (VHDL for example: Very High Speed IC Hardware Description Language). The students will learn complex interface design, advanced hardware and embedded system design and parallel processing. Projects and lessons will focus on application in Digital Imaging Systems. Lecture and projects covering topics including: VHDL mapped to FPGA for state machine design, hardware and software VGA control, image filtering, data transfer to bus, and embedded controller integration. Graduate standing or consent of instructor. Professor Christopher.

Graduate Council Document, 16-10k, ECE 56601, Real-time Operating Systems and Application (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: ECE 36500 and permission of instructor.

This course introduces students to the principles of modern operation systems focusing on real-time operation systems and embedded operation systems and their applications. Graduate standing. Professor Kim.

Graduate Council Document, 16-10l, ECE 57101, System Modeling and Design for Smart Devices (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: Graduate standing or consent of instructor.

Introduction to the mobile computing and the principles to design and implement application system for a smart device, including mobile computing architecture, mobile and pervasive computing environments, applications and services, context-aware computing, and human-computer interaction. Professor Kim.

Graduate Council Document, 16-10m, ECE 63901, Error Correction Coding and Secret Sharing (IUPUI) Sem. 1 and 2. SS. Lecture 2 times per week for 75 minutes. Distance. Credit 3. Prerequisites: Graduate standing.

The theory and practice of error control coding is examined The study includes the arithmetic of Galois fields as well as linear block, cyclic, and convolution codes. Some applications of codes in digital communication systems and in computer systems are presented. The dual of error coding, secret sharing is also discussed. Several secret sharing schemes will be presented. Applications of secret sharing are discussed. Professor King.

Graduate Council Document, 16-27a, IPPH 68000, Pharmacokinetics and Biopharmaceutics (PWL) Sem. 2. Lecture 1 time per week for 50 minutes. Presentation 1 time per week for 100 minutes. Credit 3. Prerequisites: Admission to the IPPH graduate program and at least one course in pharmacology and one course in mammalian or human physiology.

Pharmacokinetics (PK) is the study of the time course of the absorption, distribution, metabolism and excretion (ADME) of a drug, compound or new chemical entity (NCE) after its administration to the body. Biopharmaceutics examines the relationship between the physical/chemical nature of a drug, the dosage form and the route of administration on the rate and extent of systemic drug absorption. Knowledge of the pharmacokinetic and biopharmaceutic properties of an NCE are

critical to its selection as a lead candidate in a drug discovery program, its use as a functional research tool, and its use as a therapeutic agent. This course will be an overview of the development of pharmacokinetic principles, including guidelines for conducting clinical studies, and equations required to characterize the disposition of drugs and their metabolite(s). Students will develop the ability to probe the mechanisms and physiological processes responsible for ADME. Pharmacodynamics, the relationship between drug concentration and effect, and the issues surrounding stereospecific PK will be presented. Professor Galinsky.

Area Committee E: Life Sciences, Natalie J. Carroll, chair; ncarroll@purdue.edu):

Graduate Council Document, 16-28a, BIOL 60900, Scientific Research Bootcamp (IUPUI) Sem.

1. Lecture 1 time per week for 35-100 minutes. Presentation 1 time per week for 15-50 minutes.

Variable Credit: 1 to 3. Prerequisites: Enrolled in an MS Thesis or Ph.D. program in the school of science.

This course introduces graduate students (Thesis Master's and Ph.D.) to research approaches and analysis programs, research presentation skills, and the proper conduct of research. This bootcamp course fulfills the requirement for Responsible Conduct in Research training that is required for students with certain funding and paid off of NIH/NSF grants. Moreover, this course introduces students to programs such as Adobe Illustrator, Adobe Photoshop, GraphPad Prism, SPSS, and Image J. Some or all of which they will use during their graduate careers and beyond. Professors Baucum, Marrs, Meyer.