PURDUE UNIVERSITY GRADUATE SCHOOL

Minutes of the Graduate Council Meeting November 19, 2015 1:30 p.m.

Fourth Meeting Room 310 STEW

- PRESENT: Mark J. T. Smith, chair; Council Members, Thomas W. Atkinson, Bedrich Benes, Richard E. Blanton, Barrett S. Caldwell, Natalie J. Carroll, David S. Cochran, Carlos M. Corvalan, Anne L. Fliotsos, Jessica E. Huber, Mark A. Lipton, Linda J. Mason, James L. Mohler, William Novshek, Kathryn M. Obenchain, Phillip E. Pope, Keith E. Schwingendorf, David G. Skalnik, Carol S. Sternberger, Jon A. Story, Joseph Thomas III, Candiss B. Vibbert (Provost's Representative), Jane A. Walker, Jeffrey L. Whitten, Jun Xie, Yan Ping Xin, Howard N. Zelaznik, Andrew K. Zeller
- APOLOGIES FOR ABSENCE RECEIVED FROM: Lesa K. Beals (Registrar Representative), Michael A. Jenkins, James L. Mullins, Wenbin Yu
- ABSENCES: Joy L. Colwell, Alejandro Cuza-Blanco, Lucy M. Flesch, Jonathan M. Harbor, C. Kenneth Holford, Eric P. Kvam, Suresh K. Mittal, Chong Xiang,
- GUESTS: Don Brier, Christine Czachowski, Ricardo Decca, Shawn Donkin, Debbie Fellure, Colleen Gabauer, Nicholas Grahame, Cyndi Lynch, Rick Mattes, Joseph Rosenblatt, Jessica Sturm, Mihran Tuceryan

I. <u>MINUTES</u>

The minutes of the October 15, 2015, Graduate Council meeting were approved as presented.

II. DEANS REMARKS AND REPORTS

- a) Dr. Mark Smith noted the upcoming national CGS (Council of Graduate Schools) will be held in Seattle December 2-5.
- b) Dr. James Mohler gave a report on pending proposals in various stages of review and approval.

III. PRESENTATION

Dr. Rick Mattes, Director of the Master of Public Health Program, in the College of Health and Human Sciences gave a presentation on the *Master of Public Health Program at Purdue University*.

Dr. Mattes explained the rationale for the Public Health Program:

- Formation of College of Health and Human Sciences
- Health Status of the population
- Indiana is ranked 41st out of 50 states in health rankings
- By 2020, the nation will face a shortage of public health workers.
- Over the next decade, public health programs must train three times the current number of graduates to meet projected needs.

Dr. Mattes noted the program structure:

- 42 Credits-Professional Masters
- Core Courses (18 credits) in:
 - Biostatistics
 - Epidemiology
 - Environmental
 - Health, Social/Behavioral Health
 - Healthcare Administration
 - Introduction to Public Health
- Concentration (15 credits) in:
 - Family and Community health
 - o Environmental Health
 - Health statistics
- Electives 6 credits
- Practicum (3 credits) 400 hours

Dr. Mattes noted at present there are approximately 50 faculty from 15 units across Campus. Biology, Communication, and Statistics have active participants in the Combined Degree option.

Dr. Mattes noted the three Concentrations:

- Family and Community Health
- Environmental Health
- Health Statistics

Dr. Mattes noted the program has been made accessible for the following students to enter the program:

- Combined Degree Undergraduates
- Stand Alone MPH Post-Baccalaureate
- Dual Degree Graduate Students

Lastly, Dr. Mattes noted how they will distinguish themselves:

- Scientific rigor
- Open campus model draw on strengths
- Individualized plans of study
- Signature
- External Advisory Team

IV. POSTHUMOUS DEGREE REQUEST

Graduate Council Document 15-I, Request to Award a Posthumous Degree, submitted by the School of Languages and Cultures in the College of Liberal Arts.

Dr. Tom Atkinson introduced Dr. Jessica L. Sturm, Associate Professor in the School of Languages and Cultures. Dr. Sturm gave a statement on behalf of the department regarding the posthumous degree for the late Mr. Arnaud Brice Couturieux. Dr. Atkinson stated that for the awarding of a posthumous degree, Purdue University requires that at least 85% of the credit hour requirements be met and that most of the requirements of the major be completed.

Dr. Atkinson presented Graduate Council Document 15-I, <u>Request to Award a Posthumous</u> <u>Degree</u>, which stated that the late Arnaud Brice Couturieux met the University's requirements for the conferral of a posthumous Master of Arts degree. During the review of Mr. Couturieux Records, the following were noted: 1) While Mr. Couturieux was a Ph.D. student a decision was made that he was not far enough along to be considered for a posthumous doctoral degree. 2) Mr. Couturieux had plenty of credits for a posthumous Master of Arts degree. Only 85% of the credits are needed and his plan of study shows that he has 36 credits complete which meets and exceeds the requirements for a master's degree.

Dr. Atkinson stated that based upon his review of applicable University policies, the late Mr. Couturieux met all of the requirements for conferral of a posthumous non-thesis Master of Arts degree. A motion was made and seconded to accept the recommendation and approve the request for a posthumous degree. The council unanimously approved the request. The request will be forwarded to the Office of the President for final approval.

V. <u>AREA COMMITTEE REPORTS</u> (Area Committee Chairs) *Graduate Council Document 15H*, Graduate Council Documents Recommended for Approval:

<u>Area Committee E, Life Sciences (Jane Walker, chair; walkerj@purduecal.edu):</u> Graduate Council Document 15-9c BIOL 54410 Invasion Biology (PFW)

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

DEGREE PROGRAMS:

Area Committee A, Behavioral Sciences (Jeffery L. Whitten, jwhitten@purdue.edu_):

Graduate Council Document 15-20a, Proposal for a Ph.D. in Addiction Neuroscience, from the School of Science (IUPUI)

Dr. Jeffery Whitten presented a proposal for a Ph.D. in Addiction Neuroscience, from the School of Science (IUPUI). He 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. Whitten.

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

Graduate Council Document 15-17a, **Proposal for a Ph.D. in Mathematical Sciences** from the Department of Mathematical Sciences, IUPUI

Dr. Barrett Caldwell presented a proposal for a Ph.D. in Mathematical Sciences, from the Department of Mathematical Sciences (IUPUI). He 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. Caldwell.

Graduate Council Document 15-18a, **Proposal for a Ph.D. in Physics** from the Department of Physics, IUPUI

Dr. Barrett Caldwell presented a proposal for a Ph.D. in Physics, from the Department of Physics (IUPUI). He 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. Caldwell.

Graduate Council Document 15-19a, **Proposal for a Ph.D. in Computer Science** from the Department of Computer and Information Science, IUPUI

Dr. Barrett Caldwell presented a proposal for a Ph.D. in Computer Science, from the Department of Computer and Information Science (IUPUI). He 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. Caldwell.

VI. TASK FORCE REPORT

On behalf of the Task Force, Dr. Shawn Donkin, Co-chair of the Task Force on Graduate Program Majors presented a report on the progress of the task force since the last Graduate Council meeting.

Dr. Donkin noted the Graduate Council Task Force was given the charge to consider creating a policy to allow multiple majors for a graduate degree program. Such a policy would permit

a single discipline degree program, both master's and Ph.D., to offer one or more majors. Such a policy would expand the academic program offerings of currently existing degrees and any new degrees.

Dr. Donkin also noted the task force was instructed to consider pros and cons including the development of a policy document for adapting majors at the graduate level at Purdue University. The Task Force convened for five meetings.

Dr. Donkin noted to guide its work; the Task Force first examined the value of graduate majors. Insight to the value of a change from current processes was provided in the following background rationale from Phil Pope, Senior Associate Dean for the Graduate School: 'Current model for graduate degree programs limits a graduate degree to a single major. The major is linked to a degree and is identified by the name of the department/school which in turn defines the name of the major.' For a department /school to offer an additional major, the academic unit is required to have an additional new degree approved by the university and the Indiana Commission for Higher Education (ICHE). The named new degree becomes the name of the new major.' Creating a new policy giving a graduate degree granting program the option to offer multiple majors to currently existing degrees, and any further degrees, would expand the recognized academic offerings in graduate education at the University.

In assessing the impact of adoption of graduate majors the task force examined the current Purdue structure for undergraduate majors at Purdue University. As an overarching guide to developing further rationale for the value of graduate majors the task force developed working definitions for the Graduate School at Purdue University. Dr. Donkin stated the Task Force used the following definitions of graduate program, graduate major, and graduate concentration to guide evaluation of the value of adoption of Graduate Program Majors by the Purdue University Graduate School.

Graduate Program – An academic program of study leading to a graduate degree, approved by the Purdue University Graduate Council, the Board of Trustees, and the Indiana Commission for Higher Education.

Graduate Major – An academic field of study within an approved graduate degree program, approved by the Graduate School of Purdue University.

Graduate Concentration - An academic area of study (requiring a minimum of 9 credit hours) within an approved graduate degree program, administratively approved by the Graduate School.

Dr. Donkin stated that it should be noted that a graduate program can have one or more graduate majors. Likewise more than one graduate concentration can exist under a graduate major.

Dr. Donkin stated that Graduate majors will have the following features:

- 1. Specialization in an academic field of study within a graduate degree program
- 2. For MS degree programs a major is defined by a minimum of 60% of the credit hours required for the degree (see Table 1 for examples).
- 3. For PhD programs a major is defined by a minimum of 18 credit hours of graded course credits required for the degree.

Table 1. Number of course credits that define a graduate major	
Minimum Credit Hours for the Master's Degree	Required Minimum Number of Graded Credit
Program	Hours Required for a Major
30-39	18
40-49	24
50+	30

Dr. Donkin noted that the task force is currently exploring an implementation for Graduate majors but it is not part of this report. Completion of this effort is pending the outcome of the action of the Graduate Council in response to the current document.

Dr. Donkin asked for a recommendation from the Task Force to:

- a. accept the definitions and features of graduate majors as outlined,
- b. accept, as a general principle, the option of offering graduate majors within current graduate programs at Purdue University and
- c. to require submission of an implementation plan from the task force on Graduate Program Majors and approval by the Purdue university Graduate Council before the option for graduate majors can be engaged within graduate programs.

Per Council policy, the task force report will be reviewed by the council members during November and December and will be presented to the Graduate Council at the January 21, 2016 Graduate Council meeting for consideration of approval.

VII. <u>PURDUE GRADUATE STUDENT GOVERNMENT – PRESIDENT'S REPORT</u>

Mr. Andrew Zeller, President of the Purdue Graduate Student Government (PGSG) provided information regarding:

- Updates on TA stipend discussion
- Successful kids Halloween party
- Host A Boiler Thanksgiving, Christmas; and spring host program
- 3 task forces underway with deadlines prior to next meeting

VIII. <u>NEW BUSINESS</u>

Dr. David Skalnik presented the Fall 2015 Enrollment Report from IUPUI (Purdue information). The complete report is posted on the Graduate School website. (http://www.purdue.edu/gradschool/faculty/enrollment.html)

IX. OLD BUSINESS

Tom Atkinson, Associate Dean of the Graduate School, presented *Graduate Council Document* 15-15a, Resolution to Update how the Graduate GPA is Calculated for the official Purdue University Transcript.

Dr. Atkinson reported the resolution being presented is to resolve that undergraduate courses (with

the exception of courses intended to be repeated for credit) taken by graduate students, shall no longer be excluded from counting as credit on their academic records.

The resolution is to resolve that 60000-level language courses, frequently used by some departments for graduate students to establish a reading knowledge of one or more languages other than English shall no longer be excluded from calculation into graduate students' GPAs. Be it further resolved that other current policies regarding the use of undergraduate course credits and certain 60000-level courses in languages (taken for the purpose of demonstrating proficiency in a language other than English) on graduate plans of study are affirmed and that the graduate plan of study shall continue to constitute the official record of coursework required for a graduate degree.

After a discussion on graduate-level reading and writing courses within the GPA, and credits that are counted on the transcript (but not necessarily on the plan of study) it was decided that the members were not ready to vote on the resolution at this time. There was concern among the members for allowing these courses to count. The dean suggested that a separate group meet to discuss this topic further and it will be brought before the council again in Spring 2016.

X. CLOSING REMARKS AND ADJOURNMENT

The council meeting was adjourned by Dr. Smith at 3:05 p.m.

Mark J. T. Smith, Chair

Tina L. Payne, Secretary

PENDING DOCUMENTS

(October 15, 2015)

BOLDED ITEMS ARE IN REVIEW WITH AN AREA COMMITTEE

Area Committee A, Behavioral Sciences (Jeffery L. Whitten, jwhitten@purdue.edu):

Graduate Council Document 15-23a, CIT 51600, Database Security (IUPUI) Graduate Council Document 15-23e, CIT 53200, Wireless Security and Technology (IUPUI) Graduate Council Document 15-23h, CIT 55510, Network Security (IUPUI) Graduate Council Document 15-23i, CIT 56200, Mobile and Network Forensics (IUPUI) Graduate Council Document 13-9c, ECET 55800 Mechatronics System Design, Modeling & Integration, (PUC) Pending; additional information

Graduate Council Document 13-16d, ITS 57000 Principles of Computer Networks and Communications (PUC); This course is being resubmitted with a new supporting document 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

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

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

Graduate Council Document 14-29a, EAPS 51800, Soil Biogeochemistry (PWL) *Graduate Council Document 14-29b*, EAPS 52700, Principles of Terrestrial Ecosystem Ecology (PWL)

Graduate Council Document 15-24a, ECE 50863, Computer Network Systems (PWL) *Graduate Council Document 14-17a*, FIS 50800 Forensic Science Laboratory Management (IUPUI

Graduate Council Document 15-25a, ME 52950, Theory of Plates and Shells (PUC)

<u>Area Committee E, Life Sciences (Jane Walker, chair; walkerj@purduecal.edu):</u> Graduate Council Document 15-9d, BIOL 55110, Proteins: Structure and Function (PFW) Graduate Council Document 15-9e, BIOL 57710, Emerging Infectious Diseases (PFW) Graduate Council Document 14-15j, BIOL 58610, Sensory Ecology (PWL)</u> Graduate Council Document 13-23a, HSCI 57100 Molecular Imaging (PWL)

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

Graduate Council Document 15-27a, MGMT 68200, Digital Business and Information Strategies (PWL)

Graduate Council Document 15-27b, MGMT 68700, Design for Instincts: Social Networks and Engagements (PWL)

Graduate Council Document 15-13b, OLS 53010 Mixed Methods Research (IUPUI) *Graduate Council Document 15-13c*, OLS 56100 Critical Thinking and Problem Solving (IUPUI)

NEW DOCUMENTS RECEIVED (After the November 19, 2015 Graduate Council Meeting)

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

Graduate Council Document 15-28a, **CGT 57200, Special Topics in Human-Centered Design and Development** (PWL) Sem. 1 and 2. SS. Recitation 1 time per week for 50 minutes. Laboratory 2 times per week for 50 – 200 minutes. Credit 3.

This course offers students the opportunity to explore current topics in human-centered design and development of systems with graphical user interfaces in-depth through readings, discussions, design projects and design critiques. Topics vary by semester. Possible offerings include: Critical Design, Design for Behavior Change, Participatory Design, Design for Social Good, Service Design, Social Interaction Design. Professors Vorvoreanu, Gray, and Parsons.

Graduate Council Document 15-29a, **TECH 53300**, **Design Theory and Technology** (PWL) Sem. 1 and 2. SS. Lecture 1 time per week for 150 minutes. Credit 3.

This course provides an overview of theories and approaches to the transdisciplinary concept of design, spanning multiple disciplines and types of design outputs with a focus on technology. Students will read the work of leading design scholars, and situate their personal approach to design practice and research based on historical and current trends in the literature. Student work will be focused on theoretical and practical outcomes, with two main learning goals: 1) building upon and critiquing theories, methods, and processes of design in their original research; and 2) generating an awareness and representation of their personal design philosophy. Professor Gray.

Graduate Council Document 15-30b, **TLI 52000**, **Foundations of Innovations Studies** (PWL) Sem. 1 and 2. SS. Lecture 1 time per week for 30 minutes. Recitation 1 time per week for 120 minutes. Laboratory 1 time per week for 30 minutes. Credit 3.

Introduction to Innovation Studies has been designed to provide a broad spectrum introduction to the field of innovation studies. Students will gain practical and theoretical knowledge of innovation at a variety of levels, including the individual, team, organizational, and ecosystem contexts. Students will examine innovation strategies and tensions within the innovation "triple helix" of industry, academia, and government through the use of case studies and individually selected research reports. Throughout the class, students will examine recent innovation efforts and present short innovation cases that align with the learning objectives of the class. Professors Johnson and Brunswicker.

Graduate Council Document 15-30b, **TLI 52600**, **Digital Innovation & Transformation** (PWL) Sem. 1 and 2. SS. Lecture 1 time per week for 90 minutes. Recitation 1 time per week for 60 minutes. Laboratory 1 time per week for 30 minutes. Credit 3.

Rapidly evolving digital technologies are fueling a stream of innovation opportunities. To remain relevant, incumbent firms need to innovate and transform their business models. Digital strategies and innovation, however, oftentimes conflict with traditional managerial thinking. For example, rapidly falling coordination costs and the rising relevance of data make diversification patterns profitable that contradict today's dominant view that focused product6-market positioning is best. This course explores the different effects the digital revolution has on the foundations of competitive advantage and thereby prepares its students to design, apply, and implement strategies and systems for digital innovation. Professor Brunswicker.

Graduate Council Document 15-30c, **TLI 52700**, **Behavioral Analytics** (PWL) Sem. 1 and 2. SS. Lecture 1 time per week for 90 minutes. Laboratory 1 time per week for 90 minutes. Credit 3.

Behavioral Analytics has been designed to provide a foundation of skills and tools that enable students to determine their own project topic, collect the data that they need, manipulate that data, and perform analysis consistent with their data. This is an experiential learning process that offers a great deal of flexibility with respect to the methods and tools used, and students are encouraged to create a final project in a manner consistent with publications within their discipline. Professor Johnson.

Graduate Council Document 15-30d, **TLI 62500**, **Research in Open Innovation I** (PWL) Sem. 1 and 2. SS. Lecture 1 time per week for 30 minutes. Presentation 1 time per week for 30 minutes. Lab Preparation 1 time per week for 60 minutes. Research 1 time per week for 60 minutes. Credit 3. Prerequisites: Basic statistics (at least STAT 30100 or equivalent, STAT 50100 or higher is recommended); foundational knowledge in scientific research (TECH 64600 or SOC 58000, or equivalent). Recommended classes prior to this class: TLI 52000 (or other innovation class offered at Purdue); TLI 52700. This class is open for students from all colleges on campus.

This is a research-oriented course designed for graduate students who aim to develop and implement a scientific research project in the field of open innovation. They will critically discuss and evaluate scientific writings relevant to the new research area of "open innovation" from the fields and disciplines of innovation studies, information systems, and other social sciences. Through synthesis of theories and frameworks used in academic articles, the students will develop a theoretically and practically motivated research question. They will also implement a pilot study to examine their hypotheses. The Research Center for Open Digital Innovation (RCODI) in the Discovery Park at Purdue will offer opportunities to plan and implement individual questions, if students have not identified their own data source. In addition, the students will participate in an action-oriented research project in open innovation performed by the class as a group project to gain experience in experimental innovation research and practice. Professor Brunswicker.

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

Graduate Council Document 15-31a, **CS 50010**, **Foundational Principles of Information Security** (PWL) Sem. SS. Lecture 5 times per week for 60 minutes for 8 weeks. Credit 3.

This course covers foundational principles relevant to information security including data structures, algorithm design, computational complexity, probability theory, number theory, and basics of cryptography. This course is restricted to CS graduate students. This course is required for students in the Master of Science in Computer Science Concentration in Information Security for Professionals Program. The course may not be used on the Plan of Study for any CS graduate students other than those in the Concentration in Information Security for Programming experience and computer science knowledge equivalent to that of a minor in CS. Incoming students are expected to have programming skills in at least one procedural programming languages, e.g., C, C++, Java, or Python. Professors Hambrusch, Hoffmann, Wagstaff and Atalah.

Graduate Council Document 15-31b, **CS 50011, Introduction to Systems for Information Security** (PWL) Sem. SS. Lecture 4 times per week for 60 minutes for 8 weeks. Laboratory 1 time per week for 120 minutes for 8 weeks. Credit 3.

The course covers computer systems principles relevant to information security and it serves as a prerequisite for the later courses in the MSinIS program. The material includes features in the C/C++ programming languages for understanding security-critical software vulnerabilities, basic knowledge in computer architecture and assembly languages, knowledge of the compiling process, operating systems, networking, databases, and web applications relevant to information security. The course is restricted to CS graduate students. This course is required for students in the Master of Science in Computer Science Concentration in Information Security for Professionals Program. The course may not be used on the Plan of Study for any CS graduate students other than those in the Concentration in Information Security for Professionals program. Programming experience and computer science knowledge equivalent to that of a minor in CS. Incoming students are expected to have programming skills in at least one procedural programming languages, e.g., C, C++, Java, or Python.Professors Park, Li, and Rodriguez-Rivera.

Graduate Council Document 15-31c, **CS 52700, Software Security** (PWL) Sem. 2. Lecture 2 times per week for 50 minutes. Laboratory 1 time per week for 100 minutes. Credit 3. Prerequisites: CS 52600 (grade of at least C).

This course focuses on software security fundamentals, secure coding guidelines and principles, and advanced software security concepts. Students will learn to assess and understand threats, learn how t design and implement secure software systems, and get hands-on experience with common security pitfalls. Restricted to CS MS and CS PHD students. Significant programming experience and skills are required to complete the labs and projects. Professors Payer, Zhang, and Xu.

Graduate Council Document 15-31d, **CS 52800**, **Network Security** (PWL) Sem. 2. Lecture 2 times per week for 75 minutes. Practice/Study/Observation 1 time per week for 120 minutes. Credit 3. Prerequisites: Prerequisites: CS 52600 (grade of at least C).

The course focuses on the principles and foundations of building secure network systems and on security and privacy challenges in existing and emerging networks. The course compares and analyzes network architectures and network protocols from the physical layer to the access control, network, transport and application layer from an adversarial standpoint to understand how to build more secure protocols that can withstand attacks. Restricted to CS MS and CS PHD students. Significant programming experience and skills are required to complete the projects. Professors Fahmy, Xu, and Kate.

Graduate Council Document 15-24b, ECE 60614, Reliability Physics of Nanoelectronic

Transistors (PWL) Sem. 2. Lecture 3 times per week for 50 minutes. Credit 3.

Prerequisites: ECE 60600 required; ECE 61200 and ECE 55800 are recommended.

This course will focus on the physics of reliability of small semiconductor devices. In traditional courses on device physics, the students learn how to compute current through a device in response to applied voltage. However, as transistors are turned on and off trillions of times during the years of operation, gradually defects accumulate within the device so that at some point the transistor does not work anymore. The course will explore the physics and mathematics regarding how and when things break-a topic of great interest to semiconductor device engineers. Professor Alam.

Graduate Council Document 15-24c, **ECE 69200**, **Introduction to Graduate Research** (PWL) Sem. 1 and 2. SS. Research 100%. Variable Credit 1 to 3.

Research-related activities supervised by an ECE faculty member to introduce newly admitted ECE graduate students to the methods and culture of doing research. Possible activities might include, but are not limited to, participation in group research meetings, association with an advanced graduate student, and individualized reading or project work. A description of the activity, approved by the faculty supervisor, must be filed with the ECE Graduate Office. Graduate standing and Consent of Instructor. Instructor will vary.

Area Committee D, Humanities and Social Sciences (Richard Blanton, chair; blantonr@purdue.edu):

Graduate Council Document 15-32a, **ENGL 69200**, **Scholarly Writing and Publishing** (PWL) Sem. 1 and 2. SS. Lecture 3 times per week for 50 minutes. Credit 3. Prerequisites: ENGL 50100 or instructor permission. Students must have an essay draft in hand that they wish to work on revising.

Guides graduate students through preparing an essay for journal publication. Activities include selecting appropriate venues, daily revision, outlining, workshopping, and hearing guest speakers. At the end of the course, students will formally submit their essay publication. Professor Powell.

Graduate Council Document 15-11b, **HIST 50900**, **Reading Seminar in Colonial America: 17th and 18th Century American History** (PNC) Distance. Credit 3. Prerequisites: Graduate standing, or senior standing with consent of instructor.

Waiting for Course Description.

Area Committee E, Life Sciences (Jane Walker, chair; walkerj@purduecal.edu)

Graduate Council Document 15-9e, **BIOL 57810**, **Biology of Plant and Animal Disease Vectors** (PFW) Sem. 1. Lecture 1 time per week for 165 minutes for 16 weeks. Presentation 1 time per week for 60 minutes for 10 weeks Credit 3. Prerequisites: BIOL 11900 and BIOL 21800; or Instructor permission.

In this course, students will learn about the biology of plant and animal disease vectors with respect to their interactions with the pathogens and hosts, epidemiology of diseases, disease control strategies. Professor Nachappa.

Graduate Council Document 15-1n, **NUR 66300**, **Assessment and Measurement in Nursing Education** (PUC) Sem. 1 and 2. SS. Distance. Credit 3. Pre or Co-requisites: NUR 66100 and NUR 66000. Prerequisite: NUR 51000 or NUR 52300.

This course prepares students to understand nursing program standards related to admission, progression and graduation. Students explore current evidence in assessment and evaluation practices in the context of varying levels of nursing programs. Students develop evidence- based assessment and evaluation strategies in cognitive, psychomotor and affective domains in a variety of nursing educational settings and programs. Students analyze assessment and evaluation data to revise and close the feedback loop to improve learning. Professor Vottero and Rittenmeyer.

Graduate Council Document 15-10, **NUR 67600, Knowledge Translation for Transforming Healthcare** (PUC) Sem. 1 and 2. SS. Distance. Credit 3. Prerequisites: NUR 62400 and NUR 64200 and NUR 65600 and NUR 67800.

This course advances students' knowledge of implementation and knowledge translation science as it relates to contemporary healthcare policy and delivery. Students examine evidence implementation models and science to design and lead or facilitate efforts to transform nursing practices and healthcare in a variety of contexts. Students develop skills to identify critical issues through diagnostic methods, context assessment and stakeholder analysis and engagement. Based on these analyses, they search, appraise and interpret the best available evidence relevant to the measurement of effectiveness, meaning and impact implementation strategies. They examine strategies for both de-implementation when strategies fail, and for sustainability when strategies work to advance contemporary healthcare and patient outcomes. Professors Hopp, Walker, Vottero, Moore, and Gerard.

Graduate Council Document 15-33a, **NUTR 62600**, **Advanced Presentation Skills** (PWL) Sem. 2. Lecture 1 time per week for 50 minutes. Credit 1. Prerequisites: Graduate standing past the first year. NUTR 69400 or equivalent course (determined by instructor review). For PhD students; INP Scientific Writing Course NUTR 62700. For MS students; a statement from the research mentor that the student has a clear thesis topic, that the student has completed the majority of work on the thesis, and that the student has conducted background reading on the thesis topic.

This course will teach graduate students how to synthesize information from multiple scientific studies and then communicate that information effectively to others in the form of a 40 minute long scientific seminar. The course is designed to provide students with clear guidelines for effective long-form oral communication of scientific information and then give students an opportunity to put those guidelines into practice. Thus the educational goals for the course are: (I) To enhance critical thinking skills; (2)To teach students how to organize information from multiple primary research studies into a coherent oral presentation; (3)To develop and enhance students oral communication skills for presenting research findings to working scientists. Professor Fleet.

Graduate Council Document 15-33b, **NUTR 62700**, **Scientific Writing** (PWL) Sem. 1. Lecture 1 time per week for 50 minutes. Credit 1. Prerequisites: Graduate standing past the first year. NUTR 60500 and NUTR 60600 and NUTR 60700. Other students can be approved for entry by permission of the instructor.

The goal of this course is to teach students how to develop a critical and analytical review of a specific research topic. This is a fundamental skill for a successful career in nutrition research. To do this students must be able to understand and synthesize multiple sources of information and then present that information in an organized and interesting way. This course is designed to provide students with clear guidelines for effectively preparing a review that highlights critical scientific support and emerging science on a particular topic in nutrition. Professors Fleet, Buhman, and Jiang.