PURDUE UNIVERSITY
GRADUATE SCHOOL

Minutes of the Graduate Council Meeting
March 22, 2018
1:30 p.m.

Sixth Meeting
Room 218AB
STEW

PRESENT: Linda J. Mason, interim chair; Council Members, Thomas W. Atkinson, Natalie J. Carroll, David S. Cochran, William (Bart) Collins, Joy L. Colwell, Michael J. Connolly, Marius D. Dadarlat (Vincent) Jo Davisson, Brian R. Dineen, Melissa M. Franks, Jonathan M. Harbor, Singe E. Kastberg, David B. Klenosky, Maricel A. Lawrence, Michael C. Loui, Marcela Martinez, Susan M. Mendrysa, Samuel P. Midkiff, James L. Mohler, Melanie Morgan, Nancy Pelaez, Jerry P. Ross, Paul Salama, David G. Skalnik, Carol S. Sternberger Candiss B. Vibbert (Provost's Representative), Jun Xie, Yan Ping Xin

APOLOGIES FOR ABSENCE RECEIVED FROM: Carlos M. Corvalan, Lucy M. Flesch, Kuan-Chou Chen, Takashi Hibiki, Mary E. Johnson, Rhonda G. Phillips, Manushag (Nush) Powell, Chong Xiang,

ABSENCES: Christopher R. Agnew, Janice S. Blum, Ryan A. Cabot, Steven F. Son, Mohammad Zahraee

GUESTS: Jacob Askeroth Janet Beagle, Scott Brandt, Rita Burrell, Jonathan Day, Debbie Fellure, Cyndi Lynch, Mark Lundstrom, Chris Martin, Kathy Newton, Mark Schuver, Mitch Springer, Brittany Wright

I. MINUTES

The minutes of the February 15, 2018, Graduate Council meeting were approved as presented.

II. DEANS REMARKS AND REPORTS

a) Dr. Linda Mason noted the workshop for Strategies To Attract And Support URM Graduate Students will be held on Thursday, April 19, 2018 in Stewart Center. Dr. Mason noted that effective recruitment and mentoring strategies for underrepresented minority (URM) graduate students are crucial for student success and for creating a more diverse and inclusive university. Participants will learn about effective strategies from national experts, about the experiences of URM alumni, and about resources available to graduate students and mentors at Purdue.

b) Dr. Melanie Morgan noted that the new Graduate Mentoring award has seven nominations and the Post-doctoral Mentoring award has received 40 applications.

c) Dr. Tom Atkinson noted that the Outstanding Graduate Faculty Mentor award will be held on May 7, 2018. They will recognize a number of graduate students for their accomplishments as well.

d) Dr. Linda Mason introduced Dr. Peter Dunn, Research Integrity Officer and Professor of Entomology. Dr. Dunn was recognized for his many years of dedication to graduate education. Dr. Dunn is the key person who brought Responsible Conduct of Research (RCR) to the Graduate School through the class GRAD 612. This program is to inculcate, promote and sustain an environment of research integrity in all graduate students, staff and faculty at Purdue University.

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

f) 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. AREA COMMITTEE REPORTS (Area Committee Chairs)
Graduate Council Document 18D, Graduate Council Documents Recommended for Approval:

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

Graduate Council Document 17-33b, CGT 67000, Applications in Visual Analytics (PWL)

Dr. Yan Ping Xin presented one course for consideration. The course was approved by the council, upon a motion by Dr. Xin.

Area Committee B, Special Committee for Area Committee A Excess (Mary Johnson, chair: mejohnson@purdue.edu):

Graduate Council Document 17-47a, AT 50700**,** Quantitative Research Methodologies in Transportation (PWL)
Graduate Council Document 17-47b, AT 53300, Aviation Graduate Professional Practice Internship (PWL)
Graduate Council Document 17-47c, AT 54000 (Upgrade to 64000), Aviation and Aerospace Sustainability (PWL)
Graduate Council Document 17-47e, AT 57500 (Upgrade to 67500), Aviation Safety Program Development (PWL)
Graduate Council Document 17-47d, AT 65900, Airport and Transportation Sustainability (PWL)

Graduate Council Document 17-45a, BCM 57200, Construction Research Fundamentals (PWL)
Graduate Council Document 17-49a, CNIT 53000, Information Technology Business Analysis (PWL)
Graduate Council Document 17-49b, CNIT 53100, IT Requirements Analysis & Modeling (PWL)

Due to the absence of Chair, Dr. Mary Johnson, Dr. Yan Ping Xin presented eight 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 18-8a, ANSC 55200, Advanced Meat Science (PWL)
Graduate Council Document 18-11a, NUR 52200, Psychopharmacology Across the Life Span (PWL)
Graduate Council Document 18-11b, NUR 53800, Psychiatric Mental Health Nurse Practitioner Roles and Psychotherapeutic Frameworks and Modalities (PWL)
Graduate Council Document 18-11c, NUR 53900, Psychiatric Mental Health Nurse Practitioner Roles and Therapeutic Modalities Preceptorship (PWL)
Graduate Council Document 18-11d, NUR 54400, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan I (PWL)
Graduate Council Document 18-11e, NUR 54500, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan I Preceptorship (PWL)
Graduate Council Document 18-11f, NUR 57600, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan II (PWL)
Graduate Council Document 18-11g, NUR 57700, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan II Preceptorship (PWL)
Graduate Council Document 18-11h, NUR 69200, Applied Statistics in Healthcare Research (PWL)

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

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)

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

GRADUATE CERTIFICATE(S):
Area Committee B, Special Committee for Area Committee A Excess (Mary Johnson, chair: mejohnson@purdue.edu):

Graduate Council Document 17-36a, **Graduate Certificate in Executive Construction Management Technology,** Submitted by the Department of Construction Management Technology in the Polytechnic Institute, PWL

Graduate Council Document 17-44a, **Graduate Certificate in Applied Data Analytics in Technology,** Submitted by the Department of Computer and Information Technology in the Polytechnic Institute, PWL

Graduate Council Document 18-2a, **Graduate Certificate in Aviation Safety Management,** Submitted by the School of Aviation and Transportation Technology, in the Polytechnic Institute, PWL

Due to the absence of Chair, Dr. Mary Johnson, Dr. Yan Ping Xin presented three certificates for consideration. The certificate was approved by the council, upon a motion by Dr. Xin.

DOCTORAL DEGREE:

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

GCdoc17-19a, **Doctor of Technology** proposal submitted by the Purdue Polytechnic Institute, PWL

Dr. Yan Ping Xin presented one doctoral degree for consideration. The doctoral degree was approved by the council, upon a motion by Dr. Xin.

IV. PRESENTATION

Dr. Jon Harbor, Director of Digital Education; Associate Vice Provost for Teaching and Learning; and Professor in the Department of Earth, Atmospheric, and Planetary Sciences gave a presentation on "*Non-credit to Credit Pathways*". Dr. Harbor noted that at the beginning of the year Tom Atkinson presented data on graduate programs and noted that one fifth of Purdue's graduate students are in online and hybrid programs. With this data, we see that things are changing at Purdue. With the continuing news this past year at the University with graduate efforts for online education is taking a higher profile than it has in the past.

Dr. Harbor noted that there are discussions in the news about stackable credentials and Micro Masters and other types of credentials. In terms of stackable credentials, the narrative may start with the idea that many institutions are now offering a range of open type courses: 1) that are not degrees 2) that are not traditional credit bearing offerings 3) that are open courses of some type that learners can decide to enroll in. Dr. Harbor noted that students can go through a learning experience and they can receive some type of non-credit certification. Agricultural Extension has been doing non-degree, non-credit type of activities for years. This is not unusual and is becoming more common online especially with the Massive Open Online Courses (MOOCs) that has been a major plan in the online of the open course environment for non-credit offerings.

Dr. Harbor noted that learners will participate in a series of open courses and go through an assessment that creates the qualification for some type of additional credential. One that has been in the news recently is the MicroMasters credential from MIT. Students will: 1) take a series of open courses (MOOCs) 2) they will be a verified user 3) they will go through some assessments 4) they will go through a comprehensive examination that is graded by MIT faculty and teaching assistants 5) they are awarded a MicroMasters credential. Dr. Harbor noted that these students have not been admitted to graduate school as they have signed up as a learner, they

go through this experience, they have demonstrated their competency and get a MicroMasters credential. In some cases, those learners then apply for admission to a graduate program and if admitted, that MicroMasters credential is then counted as part of their graduate degree. In lieu of taking a series of credit bearing courses, they have this micro credential that is then stacked into either a certificate or a degree program. There is a pathway here for a learner to go from non-credit open offerings to an assessment into a credit bearing program credential in a way that they enter at a very low risk.

Dr. Harbor noted that traditionally our students take a GRE exam, submit a transcript, and demonstrate that they are able to succeed in a program before being admitted. This is an alternative pathway to that of demonstrating competence by doing some of these courses and doing the assessment and once they show that level of capability, then going through the admission to a graduate program.

Dr. Harbor introduced Jonathan Day, Associate Professor of Hospitality and Tourism Management and Mark Lundstrom, Don and Carol Scifres Distinguished Professor of Electrical and Computer Engineering who are pushing towards the direction of the non-credit to credit pathways.

Dr. Jonathan Day noted that the Master of Science in Hospitality and Tourism Management has been approved for distance/online and has recently been launched. The master's online program has a different protocol than the residential master's program. The residential program is almost entirely international students and the online master's program reaches into the U.S. industry and allows professionals from within the U.S. hospitality industry to take the next step in their education. Dr. Day described the Hotel Tourism Management open courses in partnership with corporate sponsors, pathways to online masters) using stackable Revenue Management open courses.

Dr. Mark Lundstrom described a new program that Electrical and Computer Engineering will be proposing for Electrical and Computer Engineering Technology Innovation Professional MS Program with the following:

- 30-credit, 1-year, on campus program.
- Focus on engineering depth + "breadth at the edges" + professional and technical success skills.
- Traditional 3-cr.courses, year-long project, success skills seminar + unique set of 1-cr. courses.
- 1-cr. Courses will be offered on-campus, on-line for Purdue credit, online at nominal, and online at no cost.
- The on-line courses will serve several purposes, but will also market the on-campus program.
- Would also like the on-line courses to reduce the course load for on-campus students and to screen applicants.

Dr. Harbor noted that Dr. Amy David, Clinical Assistant Professor of Management and Director of Global Supply Chain Management was not able to attend the Graduate Council meeting today. Dr. David presented a video noting that the MS in Global Supply Chain Management is a one-year program, 30 credit hours with students entering in January and completing in December.

Dr. David noted that Massachusetts Institute of Technology (MIT) approved Krannert with an opportunity that will help to grow the program this year. MIT offers a MicroMasters credential consisting of five courses, taught and graded by MIT faculty, and a comprehensive final exam with roughly a 75% pass rate. Students will complete the MicroMasters credential through MIT and are then able to convert it to roughly one-third of the credit hours required for a master's program, if they continue their education at MIT. MIT asked Krannert if they would also accept the MicroMasters credential in lieu of some of the credits towards the degree. Looking at course equivalencies, Krannert would offer 10 of the 30 credit hours to these students. Dr. David noted that Krannert would retain full control over the admission's decisions, with students still needing to provide all required application materials, including transcripts, GMATs, recommendations, and TOEFL scores where appropriate.

Dr. David noted that last year, MIT told Krannert they had approximately 600 students completing the MicroMasters credential, and 200 who applied to continue their education and finish out the master's degree. Of the 200 MIT judges, roughly 120 of them to be well-qualified applicants, but only had room for 40 due to capacity constraints. Dr. David noted that by partnering with MIT, they would be able to increase the size of the applicant pool and possibly attract some very good students who exceed the capacity that MIT has at this time. Krannert feels that by allowing the conversion of the MIT MicroMasters credential into graduate credit is a great way to grow their applicant pool, and to compete with other universitites who are moving more and more of their education online. Dr. David noted that this is a low risk for Krannert, as they retain the complete control of admission's decision, and helps them to be part of graduate education in the year 2018.

In closing, Dr. Harbor noted that this a rising trend of interest not only on our campus, but nationally and internationally for providing these pathways into their graduate programs. For units looking to grow their graduate programs, this a way to reach a much larger audience of those who may eventually apply to our graduate programs as a way to increase our impact. Dr. Harbor noted that other institutions such as MIT in their Supply Chain Management MicroMasters, as well as other universities are offering advanced standing credits in MicroMasters. In addition, there are internationally universities such as Deakin University in Australia asking Purdue to collaborate on several programs.

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

Ms. Marcela Martinez, President of the Purdue Graduate Student Government (PGSG) noted the following items that PGSG will be working on:

- Graduate Appreciation Week will be held the first week of April
- Lectureship Series: Karith Foster, humorist and author, "Can We Speak Freely?" will be held on Monday, April 2, 2018.
- Mental Health Awareness Benefit Dance and Silent Auction will be held on Friday, April 6, 2018.

VI. OLD BUSINESS

a) Dr. James Mohler presented Graduate Council Document 18-C, Modifications to Graduate Faculty Status. The modification was approved by the council, upon a motion by Dr. Natalie Carroll. (Appendix B).

VII. NEW BUSINESS

Dr. Thomas Atkinson presented the following items:

1. There will be a new update to the Slate application in early July.
2. Proposal to cut the application fee for graduate certificate programs to $30 for both domestic and international applicants. This will require the Board of Trustees approval before it can be implemented.
3. International Programs, Dean Michael Brzezinski, suggested that we require the same English Proficiency for non-degree applicants as what is required for degree-seeking applicants. System-wide there are very few non-degree students, with approximately 250 at West Lafayette; 14 at Fort Wayne; 75 at PNW that were reported last Fall including domestic and international students. This would impact approximately 30 students on the West Lafayette campus, which were mainly in Engineering Professional Education. **Due to concerns raised during the meeting, as well as an inaccurate vote representation – to the point of questioning whether there was a quorum, the issue will be revisited at the April meeting and another vote taken - per James L. Mohler.**

VIII. CLOSING REMARKS AND ADJOURNMENT

The council meeting was adjourned by Dr. Mason at 3:00 p.m.

Linda J. Mason, Interim Chair
Tina L. Payne, Secretary

APPENDIX A

PENDING DOCUMENTS

(March 22, 2018)

BOLDED ITEMS ARE IN REVIEW WITH AN AREA COMMITTEE

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

Graduate Council Document 17-33b, **CGT 67000, Applications in Visual Analytics (PWL)**
Graduate Council Document 18-7a, **CSR 60200, Transitional Health Disparities: Research, Practice, and Policy (PWL)**
Graduate Council Document 17-43a, **CSR 60300, Advanced Writing for Consumer and Public Health (PWL)**
Graduate Council Document 17-43b, **CSR 62000, Consumer Health Theories**
Graduate Council Document 17-48a, **ENGT 50700, Fundamentals of Collaborative Leadership and Agile Strategy for Engineering Technology (PWL)**

Area Committee B, Special Committee for Area Committee A Excess (Mary Johnson, chair: mejohnson@purdue.edu):

Graduate Council Document 17-47a, **AT 50700, Quantitative Research Methodologies in Transportation (PWL)**
Graduate Council Document 17-47b, **AT 53300, Aviation Graduate Professional Practice Internship (PWL)**
Graduate Council Document 17-47c, **AT 54000 (Upgrade to 64000), Aviation and Aerospace Sustainability (PWL)**
Graduate Council Document 17-47e, **AT 57500 (Upgrade to 67500), Aviation Safety Program Development (PWL)**
Graduate Council Document 17-47d, **AT 65900, Airport and Transportation Sustainability (PWL)**

Graduate Council Document 17-45a, **BCM 57200, Construction Research Fundamentals (PWL)**
Graduate Council Document 17-49a, **CNIT 53000, Information Technology Business Analysis (PWL)**
Graduate Council Document 17-49b, **CNIT 53100, IT Requirements Analysis & Modeling (PWL)**

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

Graduate Council Document 18-8a, **ANSC 55200, Advanced Meat Science (PWL)**
Graduate Council Document 18-11a, **NUR 52200, Psychopharmacology Across the Life Span (PWL)**
Graduate Council Document 18-11b, **NUR 53800, Psychiatric Mental Health Nurse Practitioner Roles and Psychotherapeutic Frameworks and Modalities (PWL)**
Graduate Council Document 18-11c, **NUR 53900, Psychiatric Mental Health Nurse**

Practitioner Roles and Therapeutic Modalities Preceptorship (PWL)
***Graduate Council Document 18-11d,* NUR 54400, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan I (PWL)**
***Graduate Council Document 18-11e,* NUR 54500, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan I Preceptorship (PWL)**
***Graduate Council Document 18-11f,* NUR 57600, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan II (PWL)**
***Graduate Council Document 18-11g,* NUR 57700, Advanced Practice Psychiatric Mental Health Nursing Across the Lifespan II Preceptorship (PWL)**
***Graduate Council Document 18-11h,* NUR 69200, Applied Statistics in Healthcare Research (PWL)**

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

***Graduate Council Document 17-11a,* ECON 63300, Macroeconomics with Heterogeneous Agents (PWL)**
***Graduate Council Document 17-11b,* ECON 64100, Computational Economics/Numerical Methods (PWL)**
***Graduate Council Document 17-11c,* ECON 65300, Economics of Early Childhood and Skill Formation (PWL)**
***Graduate Council Document 17-11d,* ECON 68100, Bayesian Econometrics I (PWL)**
***Graduate Council Document 17-11e,* ECON 68200, Bayesian Econometrics II (PWL)**
***Graduate Council Document 16-16a,* HTM 50300, Business Statistics and Quantitative Analysis in Hospitality (PWL)**

APPENDIX B

To: **Graduate Council**

From: **James Mohler, Associate Dean**

Date: **February 16, 2018**

Subject: **Modifications to Graduate Faculty Status (v. 3.4)**

Background

The current structure for graduate faculty status assignment was created and implemented around 2012 by the Graduate School. The system migrated the campus from what was known as the previous "P-star" (P*) system to a system that originally had two categories: regular and special. However, over time the regular and special classifications were modified to provide greater distinction between status levels based on faculty role, credentials, and other factors governing the member's relationship to the university (namely experience and attendance at a required graduate orientation workshop).

Problem

The current system has expanded into an unwieldy system of classifications (there are currently 24 total types of statuses amongst the regular and special classifications). Some of these status types have created inconsistencies (e.g., it is possible for a person outside the university to have a higher classification than someone inside the university with the same credentials), unfair elevation of certain credentials (e.g., while PhDs can serve on any committee, other doctorates that include a thesis or dissertation cannot), and unfair treatment of faculty based on their roles (e.g., the elevation of tenure track faculty above clinical faculty even when all other credentials are equal).

Proposed Modification

The proposed modification of the Graduate Faculty Status classification structure reduces the number of classifications from eight (8) regular statuses to four (4) and sixteen (16) special statuses to five (5). It solves all three problems listed above as described below. Accompanying this document is a spreadsheet, titled *Graduate Faculty Status Changes (Graduate Council Document 18-C)*, which provides a visual overview of the proposed changes.

For regular status, the proposal sets as equal faculty ranks of tenure track, clinical, professor of practice, research faculty and emeritus faculty, removing the perceived distinction that the current system propagates amongst these faculty classifications; any distinction in the proposal among these is focused on degree credential rather than position type. Similarly, the proposed system makes the distinction amongst doctorate degrees based on whether the degree included a thesis/dissertation rather than the approach that the "PhD supersedes all" while other doctorates are deemed as lesser. And, while the proposed system makes the distinction amongst doctorates based on the presence or absence of a thesis (like the distinction made for MS degrees, that is, whether it is thesis or non-thesis), the proposed system maintains the precepts that 1) to chair or co-chair a committee of any kind, the faculty member must have that degree and 2) faculty assigned classification requests originate in the department with

the Graduate School providing the highest classification requested by the department within the governing classification structure. The latter precept ensures that departments maintain control over faculty status assignments because they know best the research active faculty and who is best qualified to serve on graduate committees. It should be emphasized that the Graduate Status Policy provides the highest levels possible for a faculty member who meets the criteria. **However, graduate status is not an entitlement or guarantee that the faculty will receive the level or status for which they might qualify; the decision of appropriate level of status for any faculty resides with the department and its governing faculty.**

For special status, the proposal provides one category for faculty who separate from the university, allowing them to continue to serve for a limited time (one year) as they finish up students. This status is renewable by the department. The remainder of the special statuses provide status for research faculty with no departmental affiliation, Purdue employees of various non-permanent types (including LTLs, CTLs, Visiting faculty or postdocs), and non-Purdue employees. The special classifications set each of these as equal, only distinguished by the earned degree that they hold.

In the same spirit as chairing or co-chair committees, special faculty can only serve on committees for which they have earned the same degree and the special faculty are limited to service in specific departments. This latter point is important as one department may want postdocs, LTLs, visiting faculty, etc. to be able to serve on graduate committees whereas another department may not desire this. Thus, special status enables decision making at the department level as to how individuals with special status service on graduate committees and who can garner special graduate status.

Timeline

If approved, the proposed modifications would become effective fall 2018. The goal would be to modify the Graduate School database in the spring/summer and conduct a reclassification and review of all faculty in late spring and through the summer. It has been approximately six (6) years since the last reclassification. While reclassifying all faculty will require effort on the part of departments (as they must originate the requests) it will put into place a more fair system and simultaneously permit a review of graduate faculty that is to occur every five years anyway.

Proposed Graduate Faculty Status Changes

3/22/2018
v3.4

Existing

Degree	PhD			Post-MS			MST/MFA			MSNT			
Role	C	CC	M	C	CC	M	C	CC	M	C	CC	M	*Definitions*
R1	X	X	X	X	X	X	X	X	X	X	X	X	TT+DT
R2	X	X	X	X	X	X	X	X	X	X	X	X	RF/EF+DT
R3A	X	X	X	X	X	X	X	X	X	X	X	X	TT+DNT
R3					X	X	X	X	X	X	X	X	TT+MST/MFA
R4								X	X	X	X	X	TT+MSNT
R5A				X	X	X	X	X	X	X	X	X	EF+DNT
R5							X	X	X	X	X	X	EF+MST/MFA
R6										X	X	X	EF+MSNT
S1		X	X		X	X	X	X	X	X	X	X	CF+DT
S2		X	X		X	X		X	X	X	X	X	RF/RFN+DT
S2A	X	X	X	X	X	X	X	X	X	X	X	X	RFN+DT || DNT
S3		X	X		X	X		X	X		X	X	NP+DT || DNT
S3A		X	X		X	X		X	X		X	X	RFN+DT || DNT
S4		X	X		X	X		X	X	X	X	X	PE+DT
S4A					X				X	X	X	X	PE+DNT
S5A						X		X	X	X	X	X	FS+DNT
S5					X	X		X	X	X	X	X	FS+MST/MFA
S6									X	X	X	X	FS+MSNT
S7A					X	X		X	X		X	X	NP+DNT
S7					X	X		X	X		X	X	NP+MST/MFA
S8											X	X	NP+MSNT
S9A						X			X		X	X	CF/PE+DNT
S9									X		X	X	CF/PE+MST/MFA/MSNT
S10													PE+MST/MSNT

Proposed

Degree	DT			DNT			MST			MSNT			
*Role**	C	CC	M	C	CC	M	C	CC	M	C	CC	M	*Definitions*
R1	X	X	X	X	X	X	X	X	X	X	X	X	TT/CF/PP/RF/EF+DT
R2			X	X	X	X	X	X	X	X	X	X	TT/CF/PP/RF/EF+DNT
R3							X	X	X	X	X	X	TT/CF/PP/RF/EF+MST
R4									X	X	X	X	TT/CF/PP/RF/EF+MSNT
S1	X	X	X	X	X	X	X	X	X	X	X	X	FS (1 year; renewable)
S2		X	X		X	X		X	X		X	X	RFN/PE/NP+DT
S3					X	X		X	X		X	X	RFN/PE/NP+DNT
S4								X	X		X	X	RFN/PE/NP+MST
S5											X	X	RFN/PE/NP+MSNT

***Note:**

1.) To serve as chair or co-chair, the member must have the degree (or higher) being sought by the student.
2.) For advisory and exam committees, at least 51% of the committee members must have regular graduate faculty certification
3.) Non-thesis master's degree programs may seek approval for a one-member advisory/examination committee

Legend

Roles
- C=Chair
- CC=Co-chair
- M=Member

Positions
- TT=Tenure Track
- CF=Clinical Track
- PP=Professor of Practice
- RF=Research Faculty (w/ dept affiliation)
- EF=Emeritus Faculty
- FS=Faculty Separated from University
- RFN=Research Faculty (w/o dept affliation)
- PE=Purdue Employee (Non faculty, LTL, CTL, adjunct, visiting, Postdoc, staff)
- NP=Non-Purdue Employee

Degree Types
- DT=Doctorate w/ thesis/dissertation/research
- DNT=Doctorate w/o thesis/dissertation/research
- MST=Master's w/ thesis (including MBA, MFA, etc.)
- MSNT=Master's w/o thesis (including MBA, MFA, etc.)

NEW DOCUMENTS RECEIVED
(After the March 22, 2018 Graduate Council Meeting)

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

Graduate Council Document 18-7b, **CSR 52500, Strategic Planning and Marketing for Healthcare** (PWL) Sem. 1 and 2. SS. Lecture 1 time per week for 50 minutes. Presentation 1 time per week for 120 minutes. Credit 3.

This course provides an introduction to the conceptualization, development and implementation of strategic planning and marketing for healthcare organizations across several practice settings. Topics covered in the course include theories of decision-making, strategic planning and resource allocation, consumer behavior and provider comparisons. *This course is a core class for the "Healthcare Quality Management" certificate program.*

Graduate Council Document 18-24a, **PSY 58100, Neuroethics** (PWL) Sem. 1. Lecture 2 times per week for 75 minutes. Credit 3.

Neuroscience research has led to a better understanding of the neuronal basis of behavior. The knowledge, together with new technological approaches that can predict and even control some aspects of human behavior, can have a major impact on social and legal policies. The course explores ethical, social, and legal implications of the use of new technological and pharmacological advances in brain research.

Graduate Council Document 18-19a, **YDAE 55100, International Engagement & Development Strategies** (PWL) Sem. 2. SS. Lecture 6 hours/week for 50 minutes for 8 weeks. Distance Credit 3.

An overview of cross-disciplinary, cultural, theoretical frameworks, communication tools, and assessment methods applied to international agricultural development and engagement. Lectures, panel discussions, and case studies on appropriate methods of development and engagement, international project planning, intercultural effectiveness, principles of sustainable agricultural, food, community development, and program/project monitoring and evaluation will be the basis of assignments and team work. This eight-week course will provide the theoretical and social frameworks and principles needed to successfully work in multi-agency partnerships on international development projects. Graduate student status or permission from instructor.

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

Graduate Council Document 18-23a, **CS 52900, Security Analytics** (PWL) Sem. 1. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: CS 52600 Introduction to Information Security with a grade of "C" or better.

This course focuses on applied data mining, machine learning, data analytics techniques, and their application and relevance in information security. The course covers basic concepts of data mining and machine learning, computation platforms in support of big data analytics including Map-Reduce and Spark, machine learning algorithms such as classification trees, logistic regression, naive Bayes, k Nearest Neighbors, Support Vector Machines, Artificial Neural Networks (including Feed Forward, Convolutional, and Recurrence), the application of these algorithms to security tasks such as Spam/Phishing detection, malware detection, intrusion detection, and situational awareness. The future and potential role of applying machine learning techniques in information and data security is explored.

Graduate Council Document 18-23b, **CS 56000, Reasoning About Programs** (PWL) Sem. 1. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: Graduate status or "C" or better in (Foundations of Computer Science (CS 18200) or equivalent) and (Systems Programming (CS 25200) or equivalent) and (Introduction to the Analysis of Algorithms (CS 38100) or equivalent).

The course focuses on the logical foundations and algorithmic techniques used to ensure program correctness. With an emphasis on *automated* program verification and synthesis, the course covers classical concepts and techniques such as Hoare logic, abstract interpretation, abstraction-refinement and bounded model checking. The course also exposes students to approaches for program synthesis – a new frontier for program reasoning - such as inductive synthesis, synthesis using version space algebras, constraint-based synthesis and synthesis based on machine-learning techniques. The courses emphasizes both theoretical foundations as well as hands-on experience with verification/synthesis tools and SAT/SMT solvers. Students are expected to have completed undergraduate coursework in Foundations of Computer Science (CS 18200) or equivalent, Systems Programming (CS 25200) or equivalent and Introduction to the Analysis of Algorithms (CS 38100) or equivalent. Mathematical maturity is expected.

Graduate Council Document 18-14b, **ECE 56000, Body Sensors and Body Communications Networks** (PFW) Sem. 1 and 2. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: ECE 30200 and ECE 36200, or equivalent courses or instructor approval.

Principles of the acquisition, communication, and processing of in-body and on body signals. Design and implementation of Body sensors. Path-Loss modeling for on-body and in-body communications. Body sensor networks and topologies. Related communication protocols and Standards. Low Power sensors and signal processing. Multi-Sensor Fusion.

Graduate Council Document 18-14c, **ECE 57500, Bioelectromagnetism, Modeling and Simulation Methods** (PFW) Sem. 1 and 2. Lecture 2 times per week for 75 minutes. Credit 3. Prerequisites: ECE 31100 or equivalent courses.

Fundamental physical knowledge and electrostatic and magnetic field equations. Fundamentals of bioelectromagnetism. Bioelectric sources and conductive environment. Electrodynamics of bioelectrical fields. Concepts of bioelectrical and biomagnetic measurement. Measurement methods, modeling and simulation techniques.

Area Committee D, Humanities and Social Sciences (Manushag (Nush) Powell, chair; mnpowell@purdue.edu):

Graduate Council Document 18-3b, **COM 65000, Communication and Leadership** (PWL) Sem. 1 and 2. SS. Distance for 8 weeks. Credit 3.

Communication is the essence of leadership, and this course aims to identify how communication can fuel productivity, drive consensus and push the organization to a leadership position within a market. At the same time, communication can sabotage one's success or be used as a weapon to silence voices and promote political agendas. This course aims to empower you to shape leadership throughout the organization and to know how to advise other leaders in their efforts to overcome communication challenges.

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

Graduate Council Document 18-15a, **BTNY 56000, Survey of Mathematical Biology** (PWL) Sem. 1. Lecture 2 times per week for 75 minutes. Credit 3.

This course is intended to help students understand why having some kind of model is probably essential to the scientific process. In fact I intend it to show students that they probably already have a model in their heads, and they just don't know it! I think that few biologists realize that when they can draw a picture of their system, or explain important pathways in words, that this is a model. From there, it isn't hard to start some basic math. The course will be a broad overview of different techniques that can be used to model biological systems. Each lecture topic in this course could itself form an entire course, so students will not complete the course as experts in mathematical modeling. Instead, my objective is to: 1) expose students to a number of tools in mathematical modeling; 2) give students some practical experience with these tools, and; 3) develop a component of their thesis research into a model.

Graduate Council Document 18-15b, **BTNY 56200, Plant Hormone Biology** (PWL) Sem. 1. Lecture 3 times per week for 50 minutes. Credit 3. Prerequisites: (Undergraduate level HORT 30100 Minimum Grade of D- and Undergraduate level AGRY 32000 Minimum Grade of D-).

This course will provide a broad and integrated overview of the current status of plant hormone research. All aspects of plant hormones including biosynthesis, metabolism, transport, signal transduction will be discussed in relation to the role of hormones in plant growth and developmental processes. Cross-talk between hormones and how plants use hormones to integrate developmental or environmental signals to regulate plant growth will be included. In addition, practical aspects of hormones in the agriculture, horticulture, and pathogen responses will be covered to demonstrate the impacts of basic plant science to a modern agriculture. The course will consist of lecture and discussion of primary research papers. Upon completion of the course, the students will acquire a comprehensive knowledge of the action of plant hormones as growth regulators, critical thinking skills, and ethical research.

Graduate Council Document 18-15c, **BTNY 69100, Skill for Success in Grad School** (PWL) Sem. 1. Lecture 1 time per week for 50 minutes. Credit 1.

This course is aimed at first year graduate students in the BTNY department. Its purpose is to introduce the students to the department, teach them what it takes to be a successful graduate students, and to help them develop effective written and oral communication skills.