

Curriculum Committee

November 17, 2017 – Student Senate Room (HUB 119)

MINUTES

Present: Kyle W. Burke (3:10 pm), Mary E. Campbell (consultant, non-voting), Patricia A. Cantor, Scott R. Coykendall, Christina A. Flanders, Sarah D. Parrish (new faculty observer, non-voting), Kathleen J. Patenaude, Sarah L. Robertson (Associate Registrar and Degree Auditor, non-voting), Hilary K. Swank (Chair), Cynthia W. Vascak, Roxana Wright (seven voting members)

Excused: Tonya B. LaBrosse (Registrar), David A. Mackey, Christie L. Sweeney

Vacant: one student member

Presenters of Proposals: Elliott G. Gruner, John C. Krueckeberg, Rachelle L. Lyons, Mary Ann McGarry, Zhizhang Shen

Guests: Crystal L. Gaff, Director of Financial Aid; Transition Leadership Team – Lori A. Armstrong, John C. Krueckeberg, Nikki-Ann Nunes, Ann K. McClellan, Jason R. Moran, Janette T. Wiggett

Note: Unless otherwise indicated, all curriculum changes noted below will become effective with the 2018-2019 edition of the Academic Catalog.

Hilary Swank called the meeting to order at 2:30 pm. She reported than an updated agenda had been distributed before the meeting due to electronic voting that occurred the evening before.

I. Approval of October 20, 2017 minutes. Discussion items [Using non-credit training for prerequisites to courses? (Roxana)] and [Clusters and Curriculum] were postponed and not discussed. The minutes were *accepted as amended*.

II. Discussion of Clusters and Curriculum (Guests: Transition Leadership Team).

TLT members joined the meeting. They are continuing to reach out to different constituents about moving clusters forward.

After much conversation, there are still a lot of unknowns. What is the role of Gen Ed in clusters? What is the role of curriculum committee in clusters? What is a cluster curriculum? What is the best mechanism for gathering ideas? What is the role of pedagogy in cluster curriculum? Who should help facilitate these conversations? How do we guarantee all students get a cluster experience? Is cluster curriculum about an overall experience? TLT feels a sense of urgency regarding curricular design of cluster experiences. PSU needs to be transitioned by 20-21 per board of trustees. They inquired about what additional resources might be needed.

The curriculum committee has defined Toolkits and Projects, based on feedback from the Spring forums about what type of experiences would support clusters. Also various themed courses are underway. The committee has extended deadlines for experimental courses. The curriculum committee is unsure if things are on hold until URI decisions are made. Dean Vascak indicated an email would be coming Monday with additional URI information. The committee is considering a ‘Summit’ of key players to help answer some of these questions.

III. Electronic Business (link to voting and proposals in Google Drive):

<https://drive.google.com/drive/folders/0B4bMxBGvflQaMmNqVklpV3IyeIE>

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Electronic Business Part 1: Voting Closed 11/14/17

a. Interdisciplinary Studies

- i. Add new discipline code, IDS, and change all IS courses in the Interdisciplinary Studies program to IDS [*Postponed to 11/17/17*]
- ii. New course: IDS 3000 Practicum in Interdisciplinary Studies (1-3 credits). Gives students the opportunity to explore connections across fields related to a theme or topics of their choices. The possibilities are many, as students work with a faculty advisor to propose and execute an applied project or experience related to their degree. Consent required of the instructor who will supervise the practicum and the Director of Interdisciplinary Studies. Offered by Individual Enrollment. Repeatable for a maximum of 12 credits. Pass/No Pass. *Prerequisite(s)*: Interdisciplinary Studies majors only. *Approved 6-0-0-3. Note: new discipline code not yet approved.*
- iii. New course: IDS 3100 Internship in Interdisciplinary Studies (1-12 credits). [*Quorum not reached.*]
- iv. New course: IDS 3200 Independent Study in Interdisciplinary Studies (1-3 credits). Offers students the opportunity to gain an in-depth understanding of an interdisciplinary topic that is not covered extensively in other courses. Working with guidance from a faculty member with relevant expertise, students select a specialized topic for exploration and prepare an appropriate syllabus to pursue. Periodic conferences with the supervising instructor are expected. Consent required of the instructor who will supervise the independent study and the Director of Interdisciplinary Studies. Offered by Individual Enrollment. Repeatable for a maximum of 12 credits. Pass/No Pass. *Prerequisite(s)*: Interdisciplinary Studies majors only. *Approved 6-0-0-3. Note: new discipline code not yet approved.*

b. Social Science

- i. Political Science minor: revise catalog description of the Political Science minor to include the statement: "Up to 6 credits of PODI courses may be used to fulfill the Political Science Minor requirement." *Approved 6-0-0-3.*

c. Social Work

- i. Experimental Course: SW 3620 Professional Presentations in Social Work (1-2 credits). Promotes professional identity while offering students opportunities to develop the professional skills of: engaging in ethical research design and execution, collaborating with others, presenting findings at an international symposium, networking, and acting professionally. Spring 2018. Pass/No Pass. *Prerequisite(s)*: SW 3520 or SW 4020; may be taken concurrently. *Approved 7-0-0-2.*

d. History, Philosophy and Social Studies Education

- i. New Course: HIDI 1360 Race, Class, and Identity in America: Understanding Society through *To Kill a Mockingbird* (3 credits). Uses *To Kill a Mockingbird*, history, and other literature to explore the Deep South of the 1930s and address key issues related to understanding one's identity and place in a society containing notions of race, class, and gender. How does the individual understand civic responsibility and justice in such a society? Students form a deeper understanding of their own personal relationship to Self and Society issues still present in American society. Summers and Early Springs. (SSDI) *Approved 7-0-0-2 pending Dean's signature. Needs to be submitted to the General Education Committee as a permanent course seeking SSDI.*
- ii. Experimental course: PY 2xxx Applied Ethics Project Course: Food Ethics. *Withdrawn.*

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- e. Lamson Library
 - i. Experimental course: LM 1010 Copyright for Content Creators (1 credit). Provides an overview of the aspects of copyright law relevant to content creators including the basic principles of copyright, licensing, determining the copyright status of a work, and fair use. Students learn to apply Creative Commons licenses and locate, identify, and properly attribute Creative Commons licensed and public domain materials for reuse in their own work. Spring 2018. Pass/No Pass *Approved 6-0-0-3.*

- f. Environmental Science and Policy
 - i. Experimental course: IS 2xxx Exploring Solutions to a Wicked Conservation Program. *[Postponed to 11/17/17]*
 - ii. Experimental course: ESP 3xxx Local Stewardship Action to Preserve Project. *[Postponed to 11/17/17]*

- g. Social Science
 - i. Experimental Project course: IS 3xxx Welcoming Immigrants to New Hampshire: Cross-cultural fieldwork. *[Postponed to 11/17/17]*

- h. College of Business Administration
 - i. Experimental Toolkit course: BU 2310 Creating a Website to Market a Business/Organization (1 credit). Websites are a critical element in the promotion of any business/organization. Teaches students the key components in engaging users and customers at a website, including relevant digital marketing strategy, the fundamentals of consumer-focused web design, and an understanding of how to use two common web-creation software platforms. Pass/No Pass. Spring 2018, Fall 2018. *Approved 7-0-0-2.*
 - ii. Experimental Toolkit course: BU 2320 Building Professional Blogging Skills (1 credit). Blogging skills are in demand when a blogger has the skills to create an interesting read. This writing course prepares students to professionally blog for themselves or an organization. Students practice finding their voice, selecting topics, and establishing a sustainable blog. Areas of focus include digital writing, properly formatting posts, using imagery, links, and blog technology. Pass/No Pass. Spring 2018, Fall 2018. *Approved 7-0-0-2.*
 - iii. Experimental Toolkit course: BU 2330 Storytelling with Data (1 credit). Pictures and graphics make it easier to see patterns and explain the meanings of data. This is storytelling with numbers, and it helps the process of analytical thinking. Students are introduced to data visualization tools and systems that apply principles from graphic design, visual art, perceptual psychology, and cognitive science. With hands-on practice, students create their own visualizations of data. Pass/No Pass. Spring 2018, Fall 2018. *Approved 7-0-0-2.*

- h. Art
 - i. Experimental Project course AR 1xxx Ceramics Project Experience. *[Withdrawn]*

Electronic Business Part 2: Voting closed 11/16/17

- a. English
 - i. EN 1200 Composition: change credits from 3 to 4. *[Postponed to 11/17/17]*
 - ii. New course: ENDI 2100 (?) The Story (3 credits). Students explore what it means to write, read, and think about narrative. Stories surround us. Our relationship to stories is bound up in our

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relationship to ourselves, our societies, and the world. This relationship is complex and important to understand, for it has a vital influence on not only what we know but also what we do. Falls and Springs. *Approved 5-0-0-4. Needs to be submitted to the General Education Committee as a permanent course seeking SSDI.*

b. Health and Human Performance

- i. PE 2735 Motor Development: change prerequisite to (pre PE or pre PEHE) or (PE or PEHE) or PE Contract majors only. [*Postponed to 11/17/17*]
- ii. PE 2860 Adventure Programming for Physical Educators (WECO): add PE 2415 as a prerequisite. *Approved 6-0-0-3.*
- iii. PE 3020 Instructional Strategies I: change prerequisite(s) to PE 2415, (PE 2731 or PE 2735), PE 3315; admittance into the Teacher Certification Option; minimum 2.5 cumulative GPA; and permission of the instructor. Corequisite(s): PE 3050. *Approved 6-0-0-3.*
- iv. HE 3105 Teaching Strategies, Methods, and Resources in Health Education: change prerequisite(s) to PE 3315 and Acceptance into PE Teacher Certification K-12 or Physical Education majors with PEHE Teacher Certification Option. *Approved 6-0-0-3.*
- v. PE 3315 Curriculum Design and Implementation: change prerequisite(s) to PE 2415. *Approved 6-0-0-3.*
- vi. BS Physical Education, Contract Option: add PE 2405 to the Professional Skills and Activity Based courses from which students must take 3 courses. *Approved 6-0-0-3.*
- vii. PE 2424 Net and Wall Activities: remove “and coaching minor” as a prerequisite.
PE 2950 Territorial and Striking/Fielding Activities: remove “and coaching minor” as a prerequisite.
Approved 6-0-0-3.
- viii. ~BS Physical Education, Physical Education and Health Education Teacher Certification Option: add to the criteria for admittance to the Option, PE 2440, PE 2405, PE 2860, PE 2950, PE 2424, PE 2425 as courses for which students must earn a minimum grade of C.
~BS Physical Education, Physical Education Teacher Certification Option: add to the criteria for admittance to the Option, PE 2440, PE 2405, PE 2860, PE 2950, PE 2424, PE 2425 as courses for which students must earn a minimum grade of C.
Approved 6-0-0-3.
- ix. Add prerequisite: Physical Education majors in pre-Teacher Certification, Teacher Certification, pre-PE/HE Teacher Certification and PE/HE Teaching Certification options only to: PE 2405, PE 2406, PE 2424, PE 2425, PE 2860, PE 2415
[Postponed to 11/17/17]

V. Unfinished Business (all postponed from online voting) [3:15 pm]

a. English

- i. EN 1200 Composition: increase the credits from 3 to 4. Discussion included: implement before a unified change to Gen Ed?; this will add one credit to all programs; concerns about the timing of the request; Elliott is okay with requesting now for the change to four credits but to wait until Gen Ed is finished; contingent on Gen Ed changing its program?; changing to four credits of composition is good for the students. *Approved 7-0-0-2, only take effect if the General Education program does not increase in total minimum credits.*

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b. Environmental Science and Policy

- i. Experimental course: IS 2xxx Exploring Solutions to a Wicked Conservation Problem (1 credit). This is proposed as a Project Cluster course, which needs to be added to the course title. “If requesting ‘IS’ discipline code, justify/explain how the course is cross-, multi- or inter-disciplinary: needs to be addressed. Needs Dean’s signature. Different title on syllabus than the proposal. *Withdrawn*.
- ii. Experimental course: ESP 3100 Local Stewardship Action to Preserve Project (2-4 credits). Explores biodiversity declines and nests the issue in local context. Documenting vernal pool habitats and amphibian presence/absence this project fills data gaps; meeting needs of community and state agencies to make inform management decisions to preserve biodiversity and project critical habitats. Students and landowners are empowered as active agents of change within their community. Pass/No Pass. *Prerequisite(s)*: junior/senior status or instructor approval. Spring 2018. *Approved pending Dean’s signature, revised course description, 7-0-0-2.*

Revised course description submitted December 13, 2017, by Rachelle Lyons:

Explores biodiversity decline within local context. Spring 2018 focuses on a comprehensive effort to map vernal pool resources and document the presence/absence of amphibian species of special concern and species of greatest conservation need as identified by the NH Wildlife Action Plan. Includes significant outreach and collaboration with diverse stakeholders. Approximately 45 hours effort is expected per credit. Students from all disciplines are welcome.

c. Social Sciences and History, Philosophy, and Social Studies Education

- i. Experimental Project course: IS 3xxx Welcoming Immigrants to New Hampshire: Cross-cultural fieldwork (2 credits). *Postponed*.

d. Health and Human Performance

- i. PE 2735 Motor Development: change prerequisite(s) to Physical Education (all options).
- ii. PE 2405 Concepts of Fitness and Skill Performance: change prerequisite(s) to Physical Education (all Teacher Certification options)
PE 2406 Concepts of Fitness and Skill Performance Lab: change prerequisite(s) to Physical Education (all Teacher Certification options)
PE 2424 Net and Wall Activities: change prerequisite(s) to Physical Education (all Teacher Certification options)
PE 2425 Lifetime/Leisure Activities: change prerequisite(s) to Physical Education (all Teacher Certification options)
PE 2860 Adventure Programming for Physical Educators: change prerequisite(s) to Physical Education (all Teacher Certification options)
PE 2415 Introduction to Physical Education and Health Instruction: change prerequisite(s) to Physical Education (all Teacher Certification options)
Approved 7-0-0-2.

e. Interdisciplinary Studies

- i. Create new discipline: IDS.
IS 2225 Introduction to Interdisciplinary Studies (TECO): change discipline to IDS
IS 4425 Interdisciplinary Studies Senior Seminar (INCO) (WRCO): change discipline to IDS
Pending new courses (Practicum in Interdisciplinary Studies; Internship in Interdisciplinary Studies; Independent Study in Interdisciplinary Studies): discipline would be IDS

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- iii. ~New Course: IDS 3100 Internship in Interdisciplinary Studies (1-12 credits). Students engage in a work program to apply, in a practical manner, knowledge gained from their academic coursework; the chosen site must be related to their Interdisciplinary Studies program. Placements and supervision are handled by the PSU Internship Office. Repeatable for a maximum of 12 credits. Pass/No Pass. *Prerequisite(s)*: Interdisciplinary Studies majors only.

~IS 3005 Interdisciplinary Studies Practicum: delete

Postponed.

VI. New Business [4:35 pm]

a. Computer Science and Technology

- i. BS in Information Technology: change degree, major electives, and mathematics requirements
- ii. BS Information Technology: add CS 3650 Big Data Analytics as a degree requirement

Approved 7-0-0-2.

iii. New Major: BS Electromechanical Technology and Robotics (120 credits)

CS 2010 Computing Fundamentals (TECO)

CS 2370 Introduction to Programming

CS 2381 Data Structures and Intermediate Programming

CS 2470 Systems Programming in C/C++

CS 2521 Introduction to Electromechanical Technology

CS 2525 Microcontroller and Distributed Systems

CS 3240 Data Communication and computer Networks

CS 3420 Introduction to Cybersecurity

CS 3690 Robotics I

CS 3720 Systems Analysis and Design

CS 3890 Engineering Design

CS 4520 CyberEthics (DICO (INCO) (WRCO)

CS 4690 Robotics II

CS 4790 Robotics III

EMTR Major Electives – complete two of the following (6-8 credits)

BU 3420 Organizational Behavior (DICO)

CM 3090 Technical Communication (TECO) (WRCO)

CS 3015 Mobile Application Development

CS 3221 Algorithm Analysis

CS 3500 Introduction to Artificial Intelligence

CS 3600 Database Management Systems

CS 3650 Big Data Analytics

CS 3820 Human-Computer Interaction

CS 4140 Software Engineering

CS 4230 System Administration

CS 4310 Operating systems

CS 4400 Computer Networks and Protocols

CS 4500 Topics in Computer Science and Technology

CS 4920 Computer Science Internship (maximum of three credits)

MT 3710 Meteorological Instruments and Observations

PS 1120 Cognitive Psychology Lab

PS 3220 Cognitive Psychology

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PY 3380 Humans and Humanoids: Ethics in Technology
PY 3610 Philosophy and Technology
TH 3300 Design for the Theatre
TH 3310 Theatre Technology: Topics
Math Requirements (14 credits)
MA 2140 Precalculus (QRCO)
MA 2250 Mathematics for computer Scientists (MATH)
MA 2300 Statistics I (QRCO)
MA 2490 Applied Calculus I (QRCO) or MA 2550 Calculus I (QRCO)
General Education (36-38 credits)
Electives (17-13 credits)

- ii. New Course: CS 2521 Introduction to Electromechanical Technology (3 credits). Introduction to basic concepts of electrical circuits, electronics, and mechanical technology, broad vision, basic structure, and applications of robots as systems with sensing, decision-making, and actuation. The laboratories identify the basic components, processors, sensors, and actuators, and connect them together into a simple but functioning system with various communication ports. Two hours of lecture and 2 hours of lab. Falls. Prerequisite(s): CS 2010.
- iii. New Course: CS 2525 Microcontroller and Distributed Systems (4 credits). Gives students an application-focused experience with microcontrollers, focusing on communication and control. Introduces concepts in analog data I/O and advanced programming methods. Laboratory exercises help students learn the practical aspects of installing, programming, troubleshooting, and networking microcontrollers in typical use. Two hours of lectures and 2 hours of lab. Springs, beginning 2019. Prerequisite(s): CS 2521.
- iv. New Course: CS 3650 Big Data Analytics (3 credits). Provides students with an understanding of Big Data analytics cluster computer framework. Students gain knowledge on managing Big Data from various data sources including public and private data sets include business and students gain a hands-on experience on various cloud-based Big Data framework and NoSQL databases including Hadoop and Spark for real-time stream processing tools for IoT (Internet of Things) devices. Falls. Prerequisite(s): CS 2370 and MA 2300.
- v. New Course: CS 3690 Robotics I (4 credits). Introductory course focuses on the core system elements and their integration in Robotics, as well as Robot Operating System (ROS). Discusses algorithmic descriptions of key components, such as transistors, and core methods, including proportional control. In the laboratories, students use Python scripting and widely available sensor and motor drivers to build simple desktop devices. Falls. Prerequisite(s): CS 2470, CS 2525, and MA 2250.
- vi. New Course: CS 3890 Engineering Design (3 credits). Engineers apply principles of math and science to solve technical problems by following a standard engineering approach. Addresses some of the issues related to the electromechanical technology and robotics field. Besides coverage of basic laws of nature, physics, mathematics, ethical, management, and communication skills, focuses on the standard engineering design process, applied to projects. Springs, beginning 2020. Prerequisite(s): CS 3690.
- vii. New Course: CS 4690 Robotics II (4 credits). In this intermediate course, students continue to use ROS, but will develop a component of the system themselves. Such a component may be a program to control an actuator, to analyze and integrate sensor signals, or to plan a path for the robot. The overall goal is to give students experience with creating their own piece of a larger system. Prerequisite(s): CS 3690.

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viii. New Course: CS 4790 Robotics III (4 credits). Advanced topics in robotics for students, intended as a capstone project course for the Electromechanical Technology and Robotics program. Based on the knowledge and experience acquired in the previous courses, students follow a standard engineering approach to pursue an individual project that incorporates sensing, control, and actuation to solve a well-defined and realistic problem in a real situation. Springs, beginning 2019. *Prerequisite(s)*: CS 3890 and CS 4690.

After much discussion, the proposal and new courses were *approved 3-1-3-2*. *This new major must be submitted to the Faculty.*

VII. Discussion – All topics below postponed till next meeting

- a. Non-Traditional Pre-reqs. (Roxana)
- b. Can Toolkit courses be required?
- c. Clusters and Curriculum cont'd (if needed)
- d. Disseminating Information about Directions Courses and Minors
- e. Cluster Connect (Sarah Parrish)

VIII. Reports

- a. *General Education Committee*. Met October 23rd. A SIDI waiver for the new BS Applied Health Sciences was approved. A Community Forum to discuss the new Gen Ed model was held November 13th and replaced their regular meeting. Another Community Forum will be held December 8th to present and discuss Themed Gen Ed.
- b. *Council of Educator Preparation*. Met November 13th. The CAEP visit is November 19th-21st; the NH State Department of Education will also attend.
- c. *Steering Committee*

IX. Adjourn. The meeting adjourned at 6:06 pm.

The Curriculum Committee meets during the academic years on the third Friday of the month from 2.30 until 5 pm in the Student Senate room (HUB 119). Proposals need to reach the Chair 10 days prior to the meeting. Their next meeting is Friday, **December 15, 2017** at **2:30 pm** in the Student Senate Room (HUB 119).

Respectfully submitted,

Mary E. Campbell, Scribe
Sarah L. Robertson, Scribe

These minutes were amended and approved December 15, 2017.