2015-2016 Graduate Council
Meeting Agenda: September 16, 2015 | 3:30 p.m.–5:00 p.m. | 102 Kern Graduate Building
Coffee available: 3:10 p.m.

1. Minutes of the May 6, 2015, Meeting
2. Communications to Graduate Council
3. Announcements/Remarks by the Chair - Regina Vasilatos-Younken, Vice Provost and Dean of the Graduate School, Chair of Graduate Council
4. Reports of Standing Committees of Graduate Council
   a) Committee on Committees and Procedures – Roger Finke, Chair
      Item for discussion/vote (Appendices A1 & A2):
      1) Nominations for 2015–2016 Graduate Council Standing Committees
      2) Changes to Graduate Council Bylaws and Standing Rules
   b) Committee on Programs and Courses – Andris Freivalds, Chair
      Informational items (Appendix B):
      1) Graduate Council Curriculum Report, 9/9/2015 (Appendix B)
   c) Committee on Academic Standards – L. Sam Finn, Chair
   d) Committee on Fellowships and Awards – Jennifer Graham Engeland, Chair
   e) Committee on Graduate Research – Feng Yue, Chair
   f) Committee on Graduate Student and Faculty Issues – Sarah Ades, Chair
5. Reports of Special Committees
   a) Graduate School’s Graduate Exhibition Committee – Suzanne Adair, Assistant Dean for Graduate Student Affairs
6. Special Reports
   a) Graduate and Professional Student Association
7. Unfinished Business
8. New Business
9. Comments and Recommendations for the Good of the Graduate Community
2014–2015 Graduate Council
Minutes of the Meeting: May 6, 2015

Graduate Council met on Wednesday, May 6, 2015, at 3:30 p.m. in 102 Kern Graduate Building. Dr. Regina Vasilatos-Younken, Interim Dean of the Graduate School, chaired the meeting. The minutes of the meeting of April 15, 2015 were approved.

Communications to Graduate Council

None.

Announcements/Remarks by the Chair

Dr. Vasilatos-Younken introduced Mr. James Caltagirone, who joined the Graduate School on May 4, 2015 as the Director of Alumni and External Relations. As the Graduate School continues to grow its network of and improve relations with alumni, Dr. Vasilatos-Younken requested that colleges send information regarding any noteworthy alumni achievement within their respective graduate programs for possible inclusion in a Graduate School Alumni Newsletter that will be developed and begin distribution in the near future.

Dr. Vasilatos-Younken reported that the LionPATH admissions system will be going live in August 2015. The process of integrating the GRaduate Admissions Decision System (GRADS) with the new student system will take longer than anticipated and, as a result, a few aspects of future schedules are on hold.

Reports of Standing Committees of Graduate Council

Committee on Committees and Procedures

Dr. Vasilatos-Younken recognized Dr. David Spencer, Chair, Committee on Committees and Procedures.

Dr. Spencer reminded Council members that one item had been presented for online voting prior to the meeting: Election of new members for the 2015-2016 Committee on Committees and Procedures. He announced that the Graduate Faculty members elected to serve two-year terms on the Committee are Roger Finke (College of the Liberal Arts), Jennifer Graham-Engeland (College of Health and Human Development), and Arvind Rangaswamy (Smeal College of Business). The graduate student elected to serve a one-year term on the Committee is Brad Sottile (Graduate Student in Aerospace Engineering).

Committee on Programs and Courses

Dr. Vasilatos-Younken recognized Mr. Brad Sottile, reporting on behalf of Dr. Joan Redwing, Chair, Committee on Programs and Courses.

Mr. Sottile presented the Graduate Council Curriculum Report for April 29th, 2015, as an informational item to Council on behalf of the Committee on Programs and Courses:

Graduate Council Curriculum Report, 04/29/2015

There were no questions or comments.

Committee on Academic Standards
Dr. Vasilatos-Younken recognized Dr. James Kasting, Chair, Committee on Academic Standards.

Dr. Kasting presented to Council the proposed revised policy for membership in the Graduate Faculty (Appendix A). A brief discussion occurred to clarify that a separate process to obtain approval to teach a graduate course for someone who is not a member of the Graduate Faculty is not being eliminated and will still be available, with multiple semesters of approval possible up to the duration of the individual’s appointment, and after providing SRTEs and peer evaluations for the first semesters approved. It was also clarified that in two departments (Architecture and Landscape Architecture) in which select faculty who hold professional master’s degrees have scholarly research training and records, those faculty would be granted exceptions by the dean to supervise M.S. theses. Following the discussion, the proposed revised policy from the Committee was approved by Graduate Council, to be effective beginning Fall, 2015.

Committee on Fellowships and Awards

Dr. Vasilatos-Younken recognized Ms. Barbara Struble, reporting on behalf of Dr. Krista Wilkinson, Chair, Committee on Fellowships and Awards.

Ms. Struble indicated that the Committee had nothing to report.

Dr. Vasilatos-Younken reported that she had recently presented to President’s Council a proposal for a new venue to recognize graduate student achievements. The only venue currently in place is the Student Awards Recognition Ceremony, which primarily focuses on the achievements of undergraduates. President Barron approved the new venue, which will be modeled after the University Faculty and Staff Awards Luncheon and will include attendance by the President and other University officials. In addition to the existing graduate student awards, four new awards will be given each year, including the Distinguished Master’s Thesis Award, the Graduate Student Excellence in Mentoring Award, the Graduate Student International Research Award, and the Professional Master’s Excellence Award.

Committee on Graduate Research

Dr. Vasilatos-Younken recognized Dr. David Spencer, Chair, Committee on Graduate Research.

Dr. Spencer indicated that the Committee held its last meeting of the academic year, which focused on the accomplishments of the 2014-2015 academic year and proposed issues to be addressed in the 2015-2016 academic year.

Committee on Graduate Student and Faculty Issues

Dr. Vasilatos-Younken recognized Dr. Roger Finke, Chair, Committee on Graduate Student and Faculty Issues.

Dr. Finke reminded members of Council that the Committee has been tasked with selecting speakers for the Graduate School’s commencement ceremonies and would welcome recommendations from Council members. Suggestions for speakers should be chosen from within the Graduate Faculty whenever
possible and should be received at least one semester in advance of the commencement ceremony for which the recommendation is being made.

Dr. Finke also reminded members of Council that the Committee is continuing to plan the Fall 2015 career exploration workshops. These workshops will be held on Saturday, October 24, and will focus on the job search process and the development of a positive web presence.

**Reports of Special Committees**

**Graduate School’s Graduate Exhibition Committee**

Dr. Vasilatos-Younken recognized Dr. Kevin Furlong, reporting on behalf of Dr. Richard St. Clair, Co-Chair, Graduate School’s Graduate Exhibition Committee.

Dr. Furlong reported that the Committee held its last meeting of the 2014-2015 academic year in April and that there was nothing new to report.

**Special Reports**

**Graduate and Professional Student Association (GPSA)**

Dr. Vasilatos-Younken recognized Mr. Brad Sottile, representing the GPSA.

Mr. Sottile reported that the GPSA has been involved in an inter-governmental effort with the Council of Commonwealth Student Governments (CCSG) and the University Park Undergraduate Associate (UPUA) regarding mandatory student fees. The organizations have submitted to the President a proposal to establish a uniform student fee with subdivided committees for allocation.

**Unfinished Business**

None.

**New Business**

None.

**Comments and Recommendations for the Good of the Graduate Community**

Dr. Vasilatos-Younken thanked members of Council for their service for the 2014-2015 academic year and extended wishes to all for a great summer.

There being no further comments or discussion, the meeting was adjourned at 4:45 p.m.

**Next meeting:**

Wednesday, September 16, 3:30 p.m. – 5:00 p.m., 102 Kern Graduate Building
GRADUATE FACULTY MEMBERSHIP

Nomenclature

Within the context of Graduate Faculty membership, and for purposes of clarity and consistency, the term “Tenure-Line” refers to faculty who are tenured or on the tenure-track. For other types of appointments, the terms referred to throughout these policies are defined below, consistent with Policy HR06, TYPES OF APPOINTMENTS:

Affiliate = Individuals whose primary responsibilities are non-academic, e.g., staff or non-academic administrator appointments.

Adjunct = Appointments without remuneration.

Fixed-Term I (FT-I) = Appointments that are full-time for at least six months, but with an ending date specified.

Fixed-Term Multi-Year (FTM) = Appointments that are full-time for a minimum of 36 weeks, but which have an ending date specified, and may exceed one year in duration, up to a maximum of five years for a single appointment. These appointments are renewable.

Fixed-Term II (FT-II) = Appointments that are less than full-time, or full-time for less than six calendar months.

Standing = Appointments that are full-time, but with no ending date specified.

Independent Contractor = An individual hired by Penn State to perform a non-routine activity. Per Policies HR80 and RA12, the individual may not be a current Employee of Penn State. Typically, an Independent Contractor faces the risk of loss as well as profit when providing such services, as opposed to an Employee who does not.

Other Terms Relevant to Graduate Education and Graduate Faculty Responsibilities as Used in this Policy

Head of a graduate program – Member of the Graduate Faculty with ultimate responsibility and academic authority for a graduate degree program. For departmental graduate programs, this may be the Department Head; for Intercollege Graduate Degree Programs it is a faculty Chair. In all cases, the Head must be a tenure-line member of the Graduate Faculty.

Director of Graduate Studies (DGS) or Professor-in-Charge (PIC) – Member of the Graduate Faculty who may be delegated responsibility for oversight and operation of a graduate degree program by the Head of the program. For graduate research degree (Ph.D., M.S. and M.A.) programs, must be a Category R member of the Graduate
Faculty. For graduate professional degree programs, may be a Category R or Category P member of the Graduate Faculty. Responsibilities include signatory for all official paperwork submitted on behalf of the program to the Graduate School.

**Program Coordinator** – Staff-level appointment reporting to the Head of a graduate program, or to the DGS/PIC, who generally assists with managing graduate program operations. The Program Coordinator may not be involved in academic program functions, including admission decisions, academic advising, program approvals, etc.

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**The Context for Graduate Faculty**

As a world-class, research-intensive public institution, the scope of graduate education at Penn State encompasses a broad spectrum of advanced degrees under the Graduate School. These include the highest degree that defines research universities, the research doctorate (Ph.D.) and related research master’s degrees (the M.A. and M.S.), which emphasize training in research methodologies and a focus on scholarly inquiry for the creation of new knowledge. Additionally, Penn State offers an expanding portfolio of professional doctorates (e.g., the D.Ed., D.M.A., and D.N.P.) and professional master’s degrees (M.F.A., M.B.A., M.Eng., M.Ed., M.P.S., M.P.H., M.Arch., M.L.A., etc.). Participation in graduate education at the University is reserved for individuals appointed to the Graduate Faculty whose qualifications, experience, and institutional appointments enable them to make significant contributions to the training of graduate students in research and/or professional graduate degree programs in a comprehensive and sustained manner.

*Membership in the Graduate Faculty is not intended for the limited purpose of teaching a graduate course(s), or for serving on a singular or occasional doctoral committee. Nor is it intended as a means to recognize an individual who holds a graduate degree and may be employed at the University otherwise. Membership is intended for individuals who will participate broadly in the training of graduate students (e.g., supervising research master’s or doctoral research or the culminating experience in a professional master’s program; serving on program committees; chairing doctoral committees; etc.) on an ongoing basis, and in the case of Ph.D., M.S. and M.A. degree programs, who have an active program of research or scholarship appropriate to the field.* The Graduate School recognizes that many individuals who are not eligible for membership in the Graduate Faculty nonetheless have the potential to bring significant knowledge and experience to our graduate students. Appropriately-qualified individuals who are not members of the Penn State Graduate Faculty may teach graduate-level courses, including under certain conditions for multiple year periods, with the permission of the Dean of the Graduate School (see form - [Recommendation for Approval to teach 500- or 800-level Courses](PDF) by non-members of the Graduate Faculty), or serve as a **Special Member of a doctoral committee**, and graduate programs may utilize these means to provide opportunities for such individuals to become engaged in graduate education.
In general, individuals who hold Adjunct, Affiliate, Visiting, and Part-Time appointments, and who have an interest and qualifications to make a contribution in teaching a graduate course or serving on a committee should be accommodated through the above means, rather than nomination for membership in the Graduate Faculty.

With limited exceptions (e.g., highly recognized scholars who reside outside the U.S. and who can make a unique contribution by participating in a graduate program), independent contractors are not eligible for membership in the Graduate Faculty.

Graduate students are NOT eligible for nomination to the Graduate Faculty (any category) and are not allowed to serve as the Instructor of Record (i.e., be responsible for) graduate (i.e., 500, 600- and 800-level) courses. Graduate students may serve in a limited supportive role for graduate courses, within specified guidelines and under the supervision of members of the Graduate Faculty who are responsible for all graduate courses (see POLICY FOR STUDENT INSTRUCTIONAL ASSISTANTS IN GRADUATE (500- AND 800-LEVEL) COURSES).

Categories of Membership in the Graduate Faculty (Primary Purpose, Expected Duties, Other Privileges, Minimum Qualifications, and Process for Appointment)

CATEGORY R MEMBERSHIP

Primary Purpose

Training graduate students in research doctorate (Ph.D.) and research masters' (M.S. and M.A.) degree programs offered by the Graduate School. Category R membership is restricted to those full-time faculty members who are assigned significant responsibilities in graduate education and research. It is the responsibility of the deans of the academic colleges to notify the Graduate School of faculty members who meet these criteria for membership.

For recommendation of Tenure-Line faculty who hold a research doctorate; Tenure-line faculty who hold a professional doctorate and have a record of scholarly achievement and an active program of research/scholarship appropriate to the graduate program field; and Full-time, FT and Standing faculty who hold a research doctorate or professional doctorate and have a record of scholarly achievement and an active program of research/scholarship appropriate to the graduate program field.
**Expected Duties**

Academic advising of graduate students; teaching graduate (500-, 600- and 800-level) courses; supervising research master’s (M.A. and M.S.) research; supervising research doctorate (Ph.D.) dissertation research; serving on research doctorate/masters committees; chairing research doctorate/masters committees. Perform other academic duties as may be authorized by the dean of the Graduate School.

**Other Privileges**

Serve as the Head of a graduate program (Tenure-Line only), or as DGS or PIC. May serve on Graduate Council and its committees and subcommittees, and vote on matters submitted to the Graduate Faculty for vote. May advise and supervise the culminating experience of students in a professional doctorate or professional master’s degree program.

**Minimum Qualifications**

1) A Tenure-Line appointment and a research doctorate (Ph.D.); or 2) a Tenure-line appointment and a professional doctorate (e.g., M.D.), record of scholarly achievement, and an active program of research/scholarly activity, appropriate to the field; or 3) a Full-time FT (FT-I, FTM) or Standing appointment, a research doctorate (Ph.D.) or a professional doctorate (e.g., M.D.), a record of scholarly achievement and an active program of research/scholarly activity, appropriate to the field.

**Process for Appointment to Category R Membership in the Graduate Faculty**

**Tenure-line in Academic Units That Offer a Research Doctorate (Ph.D.) and/or Research Masters (M.S., M.A.):**

Faculty members with Tenure-Line appointments in academic units that offer the research doctorate and/or research masters may be granted Category R membership in the Graduate Faculty upon recommendation of the Head of the academic unit that offers the program to which the nominee will contribute; support of the dean/chancellor for the college/school in which the program to which the nominee will contribute resides; and approval and appointment by Dean of the Graduate School.

**Tenure-line in Academic Units That Do Not Offer a Research Doctorate (Ph.D.) or Research Masters (M.S., M.A.):**

Faculty members with Tenure-Line appointments in academic units that do not offer the research doctorate and/or research masters may be granted Category R membership in the Graduate Faculty upon recommendation of the Head of the graduate program to which the nominee will contribute; support of the nominee’s unit leader; support of the
dean/chancellor for the college/school in which the program to which the nominee will contribute resides; and approval and appointment by Dean of the Graduate School.

Full-Time FT and Standing:

Faculty members with Full-time FT and Standing appointments may be granted Category R membership in the Graduate Faculty upon recommendation of the Head of a research doctorate (Ph.D.) and/or research masters (M.S., M.A.) program to which the nominee will contribute; support of the nominee’s unit leader (if different than the Head of the graduate program); approval by the Graduate Faculty Nomination Evaluation Committee for the college/school in which the program to which the nominee will contribute resides; support of the dean/ chancellor for the college/school in which the program to which the nominee will contribute resides; and approval and appointment by the Dean of the Graduate School.

• Forms for Category R Membership – Nomination for Membership in the Graduate Faculty (for Tenure-Line, Full-Time Fixed-Term, and Standing Faculty) [hyperlink will be added when new form is operational]

CATEGORY P MEMBERSHIP

Primary Purpose

Training graduate students in professional graduate degree programs under the Graduate School. For nomination of Tenure-Line, Full-Time Fixed-Term (FT-I, FTM), and Standing faculty whose highest degree is at the master’s level, or who hold a doctorate and may not have a record of scholarly achievement and an active program of research/scholarship, but have professional experience appropriate to the graduate program field.

Expected Duties

Academic advising of professional graduate degree students; teaching 800-level graduate courses; supervising the culminating experience in a professional master’s or professional doctoral degree program; chairing/serving on professional doctoral committees. Tenure-Line Category P members of the Graduate Faculty may also teach 500-level courses and may serve as a Special Member of research-doctorate (Ph.D.) committees. Perform other academic duties as may be authorized by the dean of the Graduate School.
Other Privileges

Serve as the Head of a professional graduate degree program (Tenure-Line only), or as DGS or PIC (Tenure-Line, Full-Time Fixed-Term (FT-I, FTM), and Standing). Tenure-Line and Standing Category P members of the Graduate Faculty may also serve on Graduate Council and its committees and subcommittees, and vote on matters submitted to the Graduate Faculty for vote.

Minimum Qualifications

For Participation in a Professional Master’s Degree Program (Category P-M):

A Tenure-Line, Full-Time Fixed-Term (FT-I, FTM) or Standing appointment; a master’s degree; and professional experience relevant to the professional master’s degree program field.

For Participation in a Professional Doctoral Degree Program (Category P-D):

A Tenure-Line, Full-time Fixed-Term (FT-I, FTM) or Standing appointment; a doctorate; and professional experience appropriate to the professional graduate program field.

In rare and extraordinary cases, nominations for Category P membership may be considered for individuals who do not hold a graduate degree, but for whom clear evidence of a) exceptional experience and outstanding achievement at a national or international level; b) sustained excellence and recognized leadership in their professional field; and c) effective teaching ability are evident (e.g., “Bill Gates and Yo-Yo Ma”). Such individuals would be limited to teaching graduate professional (800-level) courses.

Process for Appointment to Category P Membership in the Graduate Faculty

For Tenure-line, Full-Time FT (FT-I, FTM) and Standing Faculty in Academic Units That Offer a Professional Graduate Degree:

Faculty members with Tenure-line, Full-Time Fixed-Term (FT-I, FTM), or Standing appointments in academic units that offer a professional graduate degree under the Graduate School may be granted Category P membership in the Graduate Faculty upon recommendation by the head of the academic unit offering the professional graduate degree program to which the nominee will contribute; support of the dean/chancellor for the college/school in which the program to which the nominee will contribute resides; and approval and appointment by the Dean of the Graduate School.
For Tenure-line, Full-Time FT and Standing Faculty in Academic Units That Do Not Offer a Professional Graduate Degree:

Faculty members with Tenure-line, Full-time FT and Standing appointments in academic units that do not offer a professional graduate degree may be granted Category P membership in the Graduate Faculty upon recommendation by the Head of a professional graduate degree program to which the nominee will contribute; support of the nominee’s unit leader; support of the dean/chancellor for the college/school in which the program to which the nominee will contribute resides; and approval and appointment by the Dean of the Graduate School.

- **Forms for Category P Membership** - [Nomination for Membership in the Graduate Faculty (PDF)](For nomination of Tenure-Line, Full-time Fixed-Term and Standing faculty [hyperlink will be added when new form is operational])
DATE: September 9, 2015
FROM: Roger Finke, Chair, Committee on Committees and Procedures
TO: Graduate Council
VIA: Regina Vasilatos-Younken, Vice Provost for Graduate Education and Dean of the Graduate School, Chair, Graduate Council
RE: Nominations for 2015–2016 Standing Committees of Graduate Council

Nominations for one-year appointments to standing committees of Graduate Council were made from the 2015–2016 list of Graduate Council elected and additional members and from recommendations from college/school academic leaders. Criteria for making the selections included Council members’ expressions of interest and the maintenance of balanced representation among disciplines and colleges/schools.

The nominees in the following lists were approved by the Committee on Committees and Procedures; the individuals designated as chair were nominated and have indicated their willingness to serve as chair if the committees so agree (except in the case of the Executive Committee, which is chaired by the Graduate Council chair).

The individuals whose names are listed in italics are not nominees to be voted on by Graduate Council members but are appointed to serve according to Graduate Council Bylaws and Standing Rules.
**Executive Committee**
- Jogesh Babu, Professor of Statistics and Astronomy and Astrophysics (Eberly College of Science)
- Mary Jane De Souza, Professor of Kinesiology and Physiology (College of Health and Human Development)
- Peter LaFemina, Associate Professor of Geosciences (College of Earth and Mineral Sciences)

**Chairs of Graduate Council Standing Committees**
- L. Sam Finn, Chair, Academic Standards
- Sarah Ades, Chair, Graduate Student and Faculty Issues
- Andris Freivalds, Chair, Programs and Courses
- Feng Yue, Chair, Graduate Research; Chair, Committees and Procedures
- Chair, Fellowships and Awards [to be determined]

Regina Vasilatos-Younken, Chair, Graduate Council (Vice Provost for Graduate Education and Dean of the Graduate School)
Michael Verderame, Senior Associate Dean of the Graduate School (Ex Officio)
Caroline Eckhardt, University Faculty Senate Liaison [elected by Faculty Senate]

**Committee on Academic Standards**
- Gretchen Casper, Associate Professor of Political Science and Asian Studies (College of the Liberal Arts)
- Y. Frank Chen, Professor of Civil Engineering (Penn State Harrisburg)
- L. Sam Finn, Professor of Physics and Astronomy and Astrophysics (Eberly College of Science) **Chair**
- Karen Fisher-Vanden, Professor of Environmental and Resource Economics (College of Agricultural Sciences)
- Phillip Laplante, Professor of Software Engineering (Penn State Great Valley)
- Mary Beth Oliver, Distinguished Professor of Media Studies (College of Communications)
- Paris Von Lockette, Associate Professor of Mechanical Engineering (College of Engineering)

Regina Vasilatos-Younken, Vice Provost for Graduate Education and Dean of the Graduate School (Ex Officio)
Michael Verderame, Senior Associate Dean of the Graduate School (Ex Officio)
Vicki Hewitt, Director of Graduate Education Administration (Ex Officio)
Lori Anne Stania, Director of Graduate Student Services (Ex Officio)

**Committee on Fellowships and Awards**
- Ramaswamy Anantheswaran, Professor of Food Science (College of Agricultural Sciences)
- George Anghelcev, Assistant Professor of Communications (College of Communications)
- Squire Booker, Professor of Biochemistry and Molecular Biology (Eberly College of Science)
- Chao Chu, Professor of Information Sciences and Technology (College of Information Sciences and Technology)
- Robert Edwards, Edwin Erle Sparks Professor of English and Comparative Literature (College of the Liberal Arts)
- Jim Fairbank, Associate Professor of Management (Penn State Erie)
- Jennifer Graham-Engeland, Associate Professor of Biobehavioral Health (College of Health and Human Development) **Chair**
- Ying-Ling Jao, Assistant Professor of Nursing (College of Nursing)
- John Kelmelis, Professor of International Affairs and Science Policy, and Geography (School of International Affairs)
- Seungjin Kim, Associate Professor of Mechanical and Nuclear Engineering (College of Engineering)
- Anthony Kwasnica, Professor of Business Economics (Smeal College of Business)
- Jonathan Mathews, Professor of Energy and Mineral Engineering (College of Earth and Mineral Sciences)
- Andrea McCloskey, Associate Professor of Education (College of Education)
- Daniel Morgan, Assistant Professor, Anesthesiology (College of Medicine)
- Ute Poerschke, Professor of Architecture (College of Arts and Architecture)
- Raghvinder Sangwan, Assistant Professor of Software Engineering (Penn State Great Valley)
- Steve Schappe, Associate Professor of Management (Penn State Harrisburg)

Barbara Struble, Director, Graduate Fellowships and Awards Administration (Ex Officio)
Committee on Graduate Research

- Ali Borhan, Professor of Chemical Engineering (College of Engineering)
- Linda Collins, Distinguished Professor of Human Development and Family Studies (College of Health and Human Development)
- Kathleen Heid, Distinguished Professor of Mathematics Education (College of Education)
- Joshua Lambert, Associate Professor of Food Science (College of Agricultural Sciences)
- Siela Maximova, Senior Scientist and Professor of Horticulture (College of Agricultural Sciences)
- Lise Nelson, Associate Professor of Women’s Studies and Geography (College of the Liberal Arts)
- Brad Sottile, Graduate Student in Aerospace Engineering (College of Engineering)
- Jim Thomas, William Elliot Professor of Risk and Management (Smeal College of Business)
- Linda Thornton, Associate Professor of Music Education (College of Arts and Architecture)
- Mort Webster, Associate Professor of Energy Engineering (College of Earth and Mineral Sciences)
- Feng Yue, Assistant Professor of Biochemistry and Molecular Biology (College of Medicine) Chair

Suzanne Adair, Assistant Dean for Graduate Student Affairs; Director, Office of Postdoctoral Affairs (Ex Officio)

Committee on Graduate Student and Faculty Issues

- Sarah Ades, Associate Professor of Biochemistry and Molecular Biology (Eberly College of Science) Chair
- James Fairbank, Associate Professor of Management (Penn State Erie)
- Marie Hojnacki, Associate Professor of Political Science (College of the Liberal Arts)
- Morteza Karimzadeh, Graduate Student in Geography (College of Earth and Mineral Sciences)
- John Kelmelis, Professor of International Affairs (School of International Affairs)
- Prakash Kumar, Associate Professor of History and Asian Studies (College of the Liberal Arts)
- Jeffrey Masko, Graduate Student in Communications (College of Communications)
- Daniel Morgan, Assistant Professor of Anesthesiology (College of Medicine)
- Sarah Rich, Associate Professor of Art History (College of Arts and Architecture)

Suzanne Adair, Assistant Dean for Graduate Student Affairs; Director, Office of Postdoctoral Affairs (Ex Officio)
Robert Crane, Director, Global Engagement Network, University Office of Global Programs (Ex Officio)
Philip Burlingame, Associate Vice President for Student Affairs, Division of Student Affairs (Ex Officio)
Stephanie Preston, Senior Director, Office of Graduate Educational Equity Programs (Ex Officio)
Paul Simenson, Director, Student Aid Programs, Office of Student Aid (Ex Officio)

Committee on Programs and Courses

- Ramaswamy Anantheswaran, Professor of Food Science (College of Agricultural Sciences)
- Mallika Bose, Associate Professor of Landscape Architecture (College of Arts and Architecture)
- Robert Brooks, Professor of Geography and Wildlife and Wetlands (College of Earth and Mineral Sciences)
- Harleah Buck, Assistant Professor of Nursing (College of Nursing)
- Dmitri Burago, Distinguished Professor of Mathematics (Eberly College of Science)
- Patrick Drew, Assistant Professor of Neural Engineering (College of Engineering)
- Andris Freivalds, Professor of Industrial Engineering (College of Engineering) Chair
- Kathleen Heid, Distinguished Professor of Mathematics Education (College of Education)
- Steven Peterson, Professor of Politics and Public Affairs (Penn State Harrisburg)
- Priya Sharma, Associate Professor of Education (College of Education)
- Jianxun Song, Associate Professor of Microbiology and Immunology (College of Medicine)
- Brad Sottile, Graduate Student in Aerospace Engineering (College of Engineering)
- Theresa Vescio, Associate Professor of Psychology and Women’s Studies (College of the Liberal Arts)

Regina Vasilatos-Younken, Vice Provost for Graduate Education and Dean of the Graduate School (Ex Officio)
Michael Verderame, Senior Associate Dean of the Graduate School (Ex Officio)
Vicki Hewitt, Director of Graduate Education Administration (Ex Officio)
Eric Novotny, Acting Head, Arts and Humanities Library and News and Microforms Library (Ex Officio)
Lori Anne Stania, Director of Graduate Student Services (Ex Officio)
Bylaws of Graduate Council

Note: In the following articles, the term "Chair" signifies the Vice Provost for Graduate Education and Dean of the Graduate School, who serves (see Art. II) as the permanent chairperson of the Council. The term "Dean" signifies the Dean of the Graduate School.

ARTICLE I. COUNCIL MEMBERSHIP

Section A. Elected Members

1. There shall be approximately forty-five elected Graduate Faculty members of the Council. Each shall serve for a term of two years.
2. The elected Council members shall be apportioned among the voting units (as defined in Number 8 of this section) as follows: one group of seats (block A), equal to the number of voting units, shall be assigned one per unit; the remaining group of seats (block B) shall be assigned in proportion to the number of Graduate Faculty members in each unit by the procedure detailed in Number 3 of this section.
3. As of December 31 of each year, the Chair shall make an accurate summary of the number of Graduate Faculty members in each voting unit of the Graduate School. On the basis of this summary, the Chair shall compute the exact number of block B seats that must be assigned to each voting unit in order to achieve exact proportional representation. Numbers with fractions shall be rounded up to the next whole number if the fraction is one-half or greater and otherwise rounded down to the next whole number.
4. The Chair shall notify the chief academic administrator of each voting unit each year of the total number of persons to be elected from that unit at the next annual election. This number shall ordinarily consist of one-half of the total of the one representative allotted to each unit in Number 2 of this section plus the number computed by the procedure outlined in Number 3. In the event that the voting unit has only one representative, that unit will select its representative every other year. In the event that the voting unit has an odd number of representatives, the Chair will inform the presiding officer of the voting unit of the exact number to be elected for the year in question.
5. Prior to March 1 of each year, the members of the Graduate Faculty within each voting unit shall nominate its members of the Council and an equal number of alternates. The voting members of the Graduate Faculty within each voting unit shall establish by a majority vote their own method of nominating candidates for election, as well as other rules for the conduct of the election. Nothing in this section shall be construed to prevent election through a written ballot sent to all eligible voters. The election must be completed by April 1.
6. Immediately following the election, the presiding officer of the voting unit shall transmit to the Chair the names of those elected. Newly elected members shall take office at the beginning of the fall semester following the election.
7. The Chair shall inform each voting unit about the attendance of each member of the unit and participation in Graduate Council affairs. The voting unit may replace
an inactive Council member by an elected alternate at its discretion. Notice of the selection of a replacement shall be given in writing to the Chair by the presiding officer of the voting unit.

8. The voting units shall be the colleges and schools of the University offering graduate programs, including Great Valley School of Graduate Professional Studies and the School of International Affairs. Additional voting units may be established by vote of the Council.

9. Each member of the Graduate School at University Park or at other graduate program locations designated as a voting unit shall be affiliated with the voting unit of his or her principal appointment. Any member of the Graduate Faculty whose principal appointment is not with an established voting unit shall be assigned to the voting unit that nominated the individual for membership in the Graduate Faculty.

10. The chief academic administrator of the voting unit, or an individual designated by that administrator, shall preside over that voting unit for the purpose of conducting elections to the Council.

Section B. Qualifications of Members and Alternates

1. Faculty membership in the Council shall be limited to Members of the Graduate Faculty.

2. No elected member of the Council may serve more than four consecutive years.

3. An elected alternate shall meet all the qualifications of an elected member of Council.

Section C. Additional Members and Participants in the Council

1. The Vice Provost for Graduate Education and Dean of the Graduate School (the "Chair") shall be a voting member of the Council, ex officio. The Senior Associate Dean, Associate Dean(s), and/or Assistant Dean(s) of the Graduate School, as appropriate, shall be voting members of the Council, ex officio.

2. The Associate Vice President for Research and the AssistantAssociate Vice President for Research and Director of Strategic Initiatives shall be non-voting members of the Council, ex officio. The Associate Vice President for Academic Outreach and Executive Director for Penn State World Campus or a designee Associate Vice Provost for Online Programs shall be a non-voting member of Graduate Council, ex officio. The person must be a member of the Graduate Faculty and will serve as liaison between the Graduate Council and the World Campus. The Deans of the Dickinson School of Law and Penn State Law will each recommend to the Chair a respective designee who is a member of the Graduate Faculty and who shall be a non-voting member of the Graduate Council, ex officio.

3. A member of the Council of the University Faculty Senate designated by that body shall be a voting member of the Council. The individual selected must be a Member of the Graduate Faculty.
4. With the concurrence of the Council, the Chair may invite guests to attend and participate in Council meetings at any time.
5. The Graduate and Professional Student Association, in its capacity as the officially sanctioned graduate student organization, shall be responsible for conducting an election to choose five graduate students to serve for one year as voting members of the Council. In electing graduate students to the Council, no more than one shall be chosen from the same voting unit as defined in Article I, Section A, Number 8.

Prior to March 1 of each year, the members of the Graduate and Professional Student Association shall be called together by their President to elect graduate student members of the Council and an equal number of graduate student alternates. The members of the Graduate and Professional Student Association shall establish by a majority vote their own method of nominating candidates for election, as well as other rules for the conduct of the election. Nothing in this section shall be construed to prevent election through a written ballot sent to all eligible voters. The election must be completed by April 1.

Replacement of members by alternates shall be made in a manner similar to the replacement procedure for faculty members in Article I, Section A, Number 7.

ARTICLE II. COUNCIL ORGANIZATION

Section A. Officers

1. The officers of the Council shall be the Chair and a Secretary to the Council.
2. The Dean shall serve as the permanent chairperson (the "Chair") of the Council. In his/her absence, a Council member or a member of the administrative staff of the Graduate School may be designated by the Chair to preside.
3. The Secretary to the Council shall be appointed by the Chair.

Section B. Committees

1. Standing Committees of the Council may be established by the Council.
2. Prior to April 30 of each year the Council shall elect persons to serve on a Committee on Committees and Procedures for a two-year period. Total committee membership shall consist of seven persons, including one graduate student, who will be members of the new Council.
3. Each year before the first Council meeting of the fall semester, the Committee on Committees and Procedures shall prepare a roster of proposed Standing Committee assignments.
4. The newly elected Council at its first meeting shall review the recommendations of the Committee on Committees and Procedures and appoint members to Standing Committees.
5. The Chair may appoint Ad Hoc Committees of the Council for special purposes.
6. Graduate students shall be eligible to serve on all committees.
ARTICLE III. COUNCIL MEETINGS

Section A. Time and Place of Meetings

1. Regular meetings of the Council shall normally be held once a month at a regular time and place designated by the Chair.
2. Special meetings of the Council may be called by the Chair upon adequate notice to its members.
3. Regular meetings of the Council may be omitted upon adequate notice to the members when lack of business justifies such action.

ARTICLE IV. FACULTY LEGISLATIVE AUTHORITY

Section A. Faculty Recourse

1. Actions of the Council may be revised or nullified in the following manner:
   a. Within thirty days after the publication of any action of the Council, any member of the Graduate Faculty may challenge the action by presenting to the Secretary of the Council a petition signed by fifty members of the Graduate Faculty requesting that a review be made of the action by the Council.
   b. Within two weeks of receipt of the petition, the Council shall meet with representatives of the petitioners to attempt to resolve the difficulties.
   c. If the objection is not resolved, the Chair shall call a meeting of the Graduate Faculty as soon as feasible for the specific purpose of discussing the action that has been challenged.
   d. To become an official action, a motion to replace, overturn, revise, or nullify the contested action of the Council passed at such a special meeting by majority vote must be sustained by the Graduate Faculty by means of a ballot mailed to all members. The decision to sustain or reject the motion shall be based upon a majority vote of those voting on the issue.

Section B. Regular Graduate Faculty Meetings

1. There shall be one regular meeting of the Graduate Faculty each year. The agenda for the meeting shall be set by the Chair in consultation with the Council. The major agenda item shall be the annual report of the Vice Provost for Graduate Education and Dean of the Graduate School to the Graduate Faculty. Items for the good of the Graduate School may be discussed. Normally no legislation will be enacted at this meeting. Legislative action may be taken only when preceded by a petition submitted to the Chair thirty days prior to the meeting, signed by at least fifty Graduate Faculty members. To become effective, any legislation enacted requires approval by the Graduate Faculty through a mail ballot. The decision to sustain or reject the legislation shall be based upon a majority vote of those voting on the issue.
Section C. Special Graduate Faculty Meetings

1. Special meetings of the Graduate Faculty may be called by the Chair on his or her own initiative or upon receipt of petitions signed by fifty Graduate Faculty members. To become effective, any legislative action taken at such a meeting requires approval by the Graduate Faculty through a mail ballot. The decision to sustain or reject the legislation shall be based upon a majority vote of those voting on the issue.

ARTICLE V. IMPLEMENTATION

The Office of the Dean shall promulgate Graduate School regulations to implement the policies and intent of the Council. However, the Office of the Dean shall have the authority to grant exceptions in individual cases to any rule or regulation where special conditions warrant such action.

ARTICLE VI. PROCEDURE

The Council shall establish its rules of procedure.

ARTICLE VII. AMENDMENT

An amendment to the Bylaws may be adopted at any meeting of the Council by a two-thirds vote of those Council members present, providing that the amendment has been presented in writing at the preceding regular meeting.
Graduate Council Curriculum Report

The Graduate Council Curriculum Report (GCCR), which includes all graduate program curricular proposals approved through the Graduate Council curricular review process, is published 12 times each calendar year.

Questions/comments regarding the GCCR or its contents may be directed to the Director of Graduate Education Administration.

September 9, 2015

1. **Program Change:** Adult Education - discontinue extension of the M.Ed. in Adult Education to McKeesport (College of Education), page 2

2. **Program Change:** Molecular, Cellular and Integrative Biosciences — adoption of new MCIBS MD/PhD joint degree program (Intercollege Degree Programs), page 6

3. **Program Change:** Food Science – Add CTS dual-title option to Ph.D. in Clinical Translational Science (College of Agricultural Sciences), page 36
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Curriculum Coordinator, University Faculty Senate, 101 Kern Graduate Building, University Park. The proposals will be transmitted to the Office of the Dean of the Graduate School for entry into the Graduate Council curricular review process; for more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: College of Education
Department or Instructional Area: Learning and Performance Systems

New Graduate Program, Option, or Minor: □ Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code:

Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
□ First semester following approval
□ Second semester following approval

Existing Graduate Program Option, or Minor: □ Change □ Drop

Current designation of graduate program:
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing):
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above): See attached

Indicate effective semester: Dec 2001 (see attached memo)
□ First semester following approval
□ Second semester following approval

Submitted by Graduate Program Head

[Signature]

Printed name
Date: 6/18/15

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

[Signature]

Printed name
Date: 7/8/15

Approved by College/School Dean/Chancellor (or Designee):

[Signature]

Printed name
Date: 7/9/15
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of C. Andrew Cole
Printed name
Signature
Date: 9/4/2015

Recommended by Chair, Graduate Council Committee on Programs and Courses:

On Behalf of Joan Redwing
Printed name
Signature
Date: 9/4/2015

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken
Printed name
Signature
Date: 9/4/2015
Date:  June 18, 2015

To:  Graduate School

From:  Adult Education Program, Learning and Performance Systems Department

Re:  Discontinuation of Masters’ degree Program in 2001

Upon the closure of the Monroevile Center, the program was moved to Penn State McKeesport only for those students who had not completed their degree at the Monroevile Center.

When the last Monroevile student completed their degree, the program was closed in December of 2001. Only adult education courses taught by adult education faculty were offered. No other programs were involved in delivering the Masters degree at McKeesport.

The Masters’ degree program continues to be offered at University Park
To: Vicki L. Hewitt, Ed.D., Director of Graduate Education Administration
From: Margaret L. Signorella, Ph.D., Director of Academic Affairs
Date: June 29, 2015
Subject: M.Ed. program in Adult Education

Penn State Greater Allegheny was informed a long time ago that the M.Ed. program in Adult Education was being discontinued as a College of Education program at the campus. It is a surprise to hear that the program is still in the system, and thus the closure of the program has no impact on Greater Allegheny.
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Curriculum Coordinator, University Faculty Senate, 101 Kern Graduate Building, University Park. The proposals will be transmitted to the Office of the Dean of the Graduate School for entry into the Graduate Council curricular review process; for more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Graduate School
Department or Instructional Area: IGDPs

New Graduate Program, Option, or Minor: □ Add
Designation of new graduate program: NEW JOINT DEGREE PROGRAM: MCIJS MD/PHD joint degree program
Classification of Instructional Programs (CIP) Code: 
Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
☑ First semester following approval
☐ Second semester following approval

Existing Graduate Program Option, or Minor: □ Change
☐ Drop
Current designation of graduate program:
Current designation of graduate option:
Current designation of graduate minor:
New designation of existing graduate program (if changing):
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
☑ First semester following approval
☐ Second semester following approval

Submitted by Graduate Program Head
Melissa Rolls
Printed name
Signature
Date: 4/16/2015

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:
Jean Vasilatos-Yourken
Printed name
Signature
Date: 4/16/15

Approved by College/School Dean/Chancellor (or Designee):
Jean Vasilatos-Yourken
Printed name
Signature
Date: 4/16/15
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of C. Andrew Cole  
Printed name:  
Signature:  
Date: 8/25/2015

Recommended by Chair, Graduate Council Committee on Programs and Courses:

On Behalf of Joan Redwing  
Printed name:  
Signature:  
Date: 8/25/2015

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken  
Printed name:  
Signature:  
Date: 8/25/2015
NEW PROGRAMS, OPTIONS* AND MINORS**

A. Program Objectives.

The National Institutes of Health (NIH) has long recognized the need for dually trained physician-scientists to translate the discoveries of basic science laboratories into effective clinical treatments. Scientists with doctoral level training in both the practice of clinical medicine and research are among the most important practitioners of this critical step in the discovery of new medical treatments. The College of Medicine has had a formal MD/PhD training program in support of this goal since 1988.

The NIH supports the training of such scientists through its Medical Scientist Training Program (MSTP) grant awards; the College of Medicine is actively building its existing MD/PhD program to obtain such funding (for example, the College of Medicine MD/PhD program has been actively implementing recommendations of its external advisory board, and has established joint degree programs with Engineering Science and Mechanics and the Biomedical Sciences (BMS) graduate programs). Recently the NIH and others have recognized the need to give this training area more attention; the NIH’s Clinical and Translational Science Awards (CTSA) have a stated intent to further build this critical research capacity. The objective of the MD/PhD program is to establish a nationally recognized training program that combines the medical training at Hershey with the strength in research throughout Penn State, including at University Park.

As part of the effort to partner medical training and life science research in the most productive manner at Penn State, MD/PhD students accepted to the MD/PhD program at the College of Medicine have always been encouraged to fully explore all options for their PhD training at both Hershey and University Park. This open access to research at both campuses allows the program to attract the best students, and also to match students with labs that fit their interests and motivation as closely as possible. The proposed joint degree program with Molecular, Cellular and Integrative Biosciences (MCIBS) will allow MD/PhD students access to over 120 life sciences labs at University Park.

B. New courses to be established as a part of the new offering.

None.

C. Program Statements.

Note: Please see Table 3 at the end of the proposal for a side-by-side comparison of the PhD and MD/PhD requirements for students in the MCIBS program and in the Bioinformatics and Genomics option within MCIBS.

Admissions

Students interested in simultaneously pursuing an MD and PhD degree must apply to the College of Medicine MD program using the national American Medical College Application Service
(AMCAS) application system and indicate their intent to pursue the joint degree program. The College of Medicine MD/PhD Admissions Committee, which includes experienced graduate faculty members, reviews applications and evaluates candidates for acceptance into both the MD and PhD program. The MCIBS Chair, or designated representative, will be a part of this admissions committee. Applicants invited to interview for the MD/PhD program will be directed to complete the Graduate School application and will be provided with a fee waiver. Applicants will only need to complete the Graduate School portions of the application (not the program-specific questions) and upload their transcripts to the Graduate School application. Once admissions decisions are made, the MD/PhD program administrator will email the relevant graduate program chairs and program administrative assistants with this information; this also ensures programs are informed about all decisions and Graduate Enrollment Services will be notified.

Students accepted into the MD/PhD program will be approved for the MCIBS program. Similarly students accepted into the MD/PhD program who initially apply to BMS or one of the other graduate programs with a joint MD/PhD degree will be able to transfer to MCIBS if they choose a thesis advisor in this program. Students not accepted into the joint degree program can be referred to either the MD or PhD program, depending on their qualifications and interests.

Medical School Years 1 and 2 (MS1, MS 2)

During the first two years of medical school, the student conducts at least three research rotations in addition to the standard medical school curriculum. A Pass grade must be earned for all required courses (medical school courses are graded Pass/Fail).

Graduate Program

After successful completion of the first two years of medical school and identification of a research mentor at University Park the candidate begins the MCIBS Graduate Program dedicated course work and their dissertation research.

MCIBS Candidacy Examination

For MD/PhD students the requirement for the candidacy exam will be fulfilled by successful completion of two things before they begin the dedicated MCIBS coursework. During the summer after the second year of medical school MD/PhD students take Step 1 of the United States Medical Licensing Examination (USMLE). The content of the first two years of medical school is focused on the biological foundations underlying our understanding of health and disease, including extensive integrated coursework in biochemistry, physiology, pharmacology and related fields. This coursework provides the MD/PhD student with a strong foundation that will support both their advanced graduate coursework and their intellectual development as a clinician scientist. Step 1 extensively assesses the student’s understanding of this material and is extremely rigorous. Thus, passing Step 1 of the USMLE is required for progress in medical school, and provides evidence that the student has mastered the material satisfying the intent of the Candidacy Examination. In addition to mastery of background material, the MCIBS candidacy exam assesses critical thinking and ability to understand and present research papers. These skills are developed and assessed in a year-long course, BMS 506 A and B, which is taken in the second year of medical school. Successful completion of this course with a grade of B or higher meets the critical thinking and paper analysis requirement of the candidacy exam.
**MCIBS Program-Specific Requirements** (see below for information about completing the Option in Bioinformatics and Genomics)

The doctoral committee of an MD/PhD student in the MCIBS program is formed upon entry into the thesis laboratory. The committee must include a minimum of four faculty members, i.e., the chair and at least three additional members, all of whom must be members of the Graduate Faculty. The committee must include at least two members of the MCIBS program graduate faculty and one MD/PhD steering committee member. One member of the doctoral committee must represent a field outside the candidate's major field of study in order to provide a broader range of disciplinary perspectives and expertise. This person is the “outside field member.” Additionally, one member of the committee must be an “outside unit member:” a member of the graduate faculty outside the adviser’s administrative home (for a tenure-line faculty member this is the department that serves as their tenure home). The same person can be the outside field member and outside unit member. The outside member(s) can be members of MCIBS.

In addition to taking the required courses **MCIBS 590, Colloquium, MCIBS 591, Ethics in the Life Sciences, and MCIBS 592, Current Seminars**, elective courses are selected in consultation with the student’s dissertation adviser and doctoral committee, with guidance from the MCIBS emphasis area course lists and program chair. 6 credits of elective courses will be selected.

**Comprehensive Examination**

The MD/PhD candidate prepares a written comprehensive examination in the format of a grant application and gives an oral presentation of this proposal to their doctoral committee; the exam will be the same for the MD/PhD students and all other students in the MCIBS program.

**Doctoral Dissertation**

The MCIBS dissertation requirements for both PhD and MD/PhD students follow:

All PhD candidates must conduct original research and prepare a dissertation that makes a significant contribution of new knowledge, is presented in a scholarly manner, and demonstrates an ability on the part of the candidate to do independent research of high quality. The contents and conclusions of the dissertation must be defended at the time of the final oral examination.

Students must present their dissertation in accordance with Graduate Council and Graduate School guidelines as described in the **THESIS GUIDE: Requirements for the Preparation of Master's Theses and Doctoral Dissertations**.

**Final Doctoral Examination**

This requirement is the same as that for MCIBS PhD candidates:

The final examination of the doctoral candidate is an oral examination administered and evaluated by the entire doctoral committee. It consists of an oral presentation of the dissertation by the candidate and a period of questions and responses. These will relate in large part to the dissertation, but may cover the candidate's entire program of study, because a major purpose of the examination is also to assess the general scholarly attainments of the candidate. The portion of the examination in which the dissertation is presented is open to the University community and the public; therefore, it is expected that the examination will take place at University Park or the Hershey campus.
Information regarding Graduate Council requirements for the Ph.D., including the establishment of a doctoral committee; candidacy, comprehensive, and final oral examinations; and submission of a dissertation of original research in the field can be found in the Graduate Degree Programs Bulletin.

Additional Requirements for MCIBS students including MD/PhD students:
All MCIBS graduate students must maintain a cumulative grade-point average of ≥ 3.0 to remain in good academic standing. Furthermore, the Ph.D. student must have a 3.0 to take the doctoral candidacy, the comprehensive and the final oral examinations. One or more failing grades (F) or a cumulative grade-point average below 3.0 will be considered evidence of unsatisfactory scholarship and may be grounds for dismissal from the program.

MD/PhD Program Requirements

MD/PhD students must have submitted a first-author manuscript before defending their dissertation. Before returning to medical school the doctoral thesis must be accepted by the Graduate School.

The MD/PhD Program requires that students have one first author peer-reviewed paper published based on their research accepted prior to completing medical school, and preferably accepted for publication prior to returning to the third year of medical school. The paper does not need to be accepted or published to defend the doctoral dissertation nor to submit the final dissertation nor (assuming all other Ph.D. requirements have been met) to receive their Ph.D.

The rationale for the expectation of joint degree students to have a published first author paper upon completion of the MD/PhD program is based on current national standards for MD/PhD programs. The Penn State MD/PhD program is working to obtain National Institutes of Health (NIH) T32 Medical Scientist Training Program (MSTP) funding; such funding is virtually equivalent to national accreditation (something required of all Penn State graduate programs for which accreditation is available). One of the current expectations of NIH review panels is that all students in MD/PhD programs will have at least one first-author publication by the time they graduate.

A recent survey of MD/PhD programs around the country revealed that 59% of responding programs (n= 44) and 58% of MSTP-funded programs (n=26) have a publication requirement for their MD/PhD students; several require accepted publications before the thesis defense or before the return to medical school. Publication requirements in MD/PhD programs are common and have become the de facto national standard. The College of Medicine MD/PhD program intends to be nationally competitive. Offering the option of a PhD in MCIBS is an important part of that goal as it provides opportunities for our MD/PhD students to take advantage of the research faculty members at University Park.

MD/PhD program training faculty members are carefully selected to be productive scientists with strong publication records. While there can be no guarantees in research, MD/PhD student dissertation projects are carefully chosen to have a very high likelihood of publication. Each MD/PhD student’s dissertation committee includes a member of the MD/PhD Steering Committee who is attentive to the student’s progress both toward degree and publication.
However, the MD/PhD program recognizes that publication can sometimes be out of the control of the student. Thus, at the discretion of the CoM Vice Dean for Research and Graduate Studies, in consultation with the MCIBS Program Chair, the requirement for a first author publication prior to completing medical school may be waived. Examples of conditions that might warrant exemptions include: (a) prolonged illness, (b) mentor’s relocation, (c) mentor’s reluctance to submit the student’s work for publication, (d) the student’s project is published by another research group, or (e) delays or challenges in the publication review process beyond the control of the student or dissertation advisor.

Conferral of the PhD without the MD

If a student decides not to return to medical school, or for some other reason is not able to complete the last two years of medical school, but they have successfully completed their Ph.D. dissertation and oral defense and met all other degree requirements of MCIBS, they will still be able to complete the PhD. The latter will be conferred after the student notifies the program that she/he wishes to withdraw from the MD program and completes all requirements for conferral of the graduate degree.

Dual counting of Courses

The Graduate School’s policy on Joint Degree programs expects “that there will be some reciprocity on the part of both programs involved in the Joint offering...”.

<table>
<thead>
<tr>
<th>Table 1. MCIBS Courses replaced by SPM 711</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCIBS 503 Critical Elements of Genetics and Molecular and Cellular Biology (4 credits)</td>
</tr>
<tr>
<td>BMMB 541 Molecular Biology of Animal Development (3 credits)</td>
</tr>
<tr>
<td>BMMB 542 Eukaryotic Cell Biology (3 credits)</td>
</tr>
<tr>
<td>MCIBS 596 Individual Studies: Research Rotation (1 credit)</td>
</tr>
</tbody>
</table>

The MCIBS program will accept passing grades in the medical school courses SPM 711 Scientific Principles of Medicine (15 credits) in lieu of 11 required credits from the MCIBS Core and Elective Courses (see Table 1).

SPM 711 covers foundational science that underlies both medical practice and research in molecular and cellular biology, including cell biology, biochemistry, molecular genetics, histology, microbiology, immunology, cancer biology, and pharmacology. Substitution of these medical school courses for 11 credits of MCIBS required courses (11 credits equals 36% of the MCIBS credit requirements) meets the Graduate School’s standard of 20-40% of the graduate programs credits substituted with credits from the professional program.

Because students in the MD/PhD program are being trained to combine research and medicine, most likely in medical schools, the MCIBS requirement for exposure to undergraduate teaching is waived. MD/PhD candidates will not be required to take BIOL 593 Experiential Teaching in Biology (2 credits) or to be teaching assistants.
The College of Medicine will accept 8 credits of MCIBS 600/601 Thesis Research/Ph.D. Dissertation conducted over the four years of the graduate portion of the training program in lieu of two months of elective rotations (MED 797). In addition, the College of Medicine requires all MD students to complete a Medical Student Research project; this requirement is waived for all MD/PhD students.

**Specific requirements for the Option in Bioinformatics and Genomics (BG)**

All requirements for the joint degree are the same for the BG Option within MCIBS as MCIBS (no option) with the exception of the coursework required in the PhD. There is less overlap between BG and medical school coursework and so fewer credits will counted from medical school towards the PhD (8 rather than 11, compare Tables 1 and 2). For complete information about course work see Table 3 below. All other requirements, for example candidacy exam, comprehensive exam and final dissertation are the same for the BG Option and MCIBS (no option). The BG Option can be pursued with faculty at the Hershey and University Park Campuses and courses will be offered by video-conference as necessary.

<table>
<thead>
<tr>
<th>Table 2. BG Courses replaced by SPM 711</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMB 400 Molecular Biology of the Gene (3)</td>
</tr>
<tr>
<td>BMB 484 Functional Genomics (3)</td>
</tr>
<tr>
<td>MCIBS 596 Individual Studies: Research Rotation (2 credits)</td>
</tr>
</tbody>
</table>

D. Admission requirements.

In addition to the basic college level premedical school requirements for the Penn State College of Medicine (one each year of biology, chemistry, physics, math, and organic chemistry), the MD/PhD program has the following requirements:

- **Academic Achievement** Applicants to our program generally have very strong grades and MCAT scores. In recent years, successful applicants have an average GPA of 3.75 and MCAT scores of 33-34. Applicants are not required to take the GREs.
- **Research Experience** We are especially interested in students with a strong and sustained background in research. Students who have spent 1-2 years after graduation conducting research are strongly encouraged to apply. Alternatively in-depth research experience as an undergraduate can suffice.
- **Recommendations** We are especially interested in receiving letters of recommendation from faculty with whom you conducted research and who can comment on your passion and potential for research.
- **Goals** Applicants must be able to clearly articulate the reasons for pursuing the joint degree.
- **International Students** All qualified students are eligible to apply regardless of
E. Program Justification.

All medical schools at research-intensive universities offer an MD/PhD joint degree program, as Penn State has since 1988. This proposal extends that program to our new PhD program in Molecular, Cellular and Integrative Biosciences (MCIBS) at University Park. Life Sciences graduate programs at University Park were recently reorganized, and five of the previous programs that served as access points for MD/PhD students to dissertation research labs at University Park were merged into MCIBS. Creating a joint degree program with MCIBS will maintain the ability of MD/PhD students to choose dissertation research labs at University Park- an important aspect of the program for recruiting, grant-writing and evaluation purposes. MCIBS has different emphasis areas and can be tailored to the student’s research interests. At the same time, the program is set up to allow new students to form a cohort by taking several classes that focus on exposure to a wide variety of life sciences research and critical analysis together in the first year. MD/PhD students will take these classes, MCIBS 590 and 592, together with the entering MCIBS cohort so they will become integrated into this group and familiar with students working in wide range of research areas. The breadth of research represented by the program faculty combined with the flexibility inherent in the MCIBS program will be a major attraction to potential MD/PhD students and is expected to result in increased interest from highly qualified applicants. The Bioinformatics and Genomics Option within MCIBS takes advantage of major strengths at Penn State and allows rigorous training of students with world class faculty analyzing a variety of medically relevant data. This Option is offered both at the Hershey and University Park Campuses and courses are taught by video-conference with students at both campuses as necessary.

The existing MD/PhD program is regularly reviewed by an external advisory board (EAB) composed of directors of highly successful MD/PhD programs at other institutions. They have been guiding our efforts to develop a program capable of successfully competing for the highly competitive MSTP awards from NIH. Maintaining access and connections with labs at University Park is an important part of the strategy for being competitive.

F. Accreditation:

There is no specific accrediting body for MD/PhD joint degree programs. The Liaison Committee on Medical Education (LCME) accredits MD programs (evaluation of MD/PhD programs are reviewed as part of that accreditation if they exist). The College of Medicine MD program was reviewed by the LCME in 2010 and was fully accredited for 7 years (the maximum allowed) with recognition of the many strengths of the program. As indicated above, securing MSTP funding from NIH is an independent mark of high quality.
<table>
<thead>
<tr>
<th>Core Requirement</th>
<th>MCIBS PROGRAM</th>
<th>Core Requirement</th>
<th>MD/PhD – 30 credits required</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHD – 30 credits required</td>
<td>12 Core Requirement Credits</td>
<td>10 Core Requirement Credits</td>
<td>12 Elective Credits</td>
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<td>12 Elective Credits</td>
<td>6+ Research Credits</td>
<td>8+ Research Credits</td>
<td></td>
</tr>
<tr>
<td>Core Requirement</td>
<td>MCIBS 503 Critical Elements of Genetics and Molecular and Cellular Biology (4 credits)</td>
<td>Core Requirement</td>
<td>SPM 711 Scientific Principles of Medicine (11) (sub for 5 core and 6 elective credits)</td>
</tr>
<tr>
<td>Core Requirement</td>
<td>MCIBS 596 Individual Studies (for rotations) (1)</td>
<td>Elective</td>
<td>BMMB 541 Molecular Biology of Animal Development (3)</td>
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<tr>
<td>Elective</td>
<td>BMMB 542 Eukaryotic Cell Biology (3)</td>
<td>Core Requirement</td>
<td>MCIBS 591 Ethics (1)</td>
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<td>Core Requirement</td>
<td>MCIBS 590 Colloquium (2)</td>
<td>Core Requirement</td>
<td>MCIBS 592, Current Seminars (2)</td>
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<td>Core Requirement</td>
<td>MCIBS 592, Current Seminars (2)</td>
<td>Elective</td>
<td>Per student, adviser and program (3)</td>
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<td>Elective</td>
<td>Per student, adviser and program (3)</td>
<td>Research credits</td>
<td>MCIBS 600 and 601 (6+)</td>
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<td>Research credits</td>
<td>MCIBS 600 and 601 (6+)</td>
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### MCIBS OPTION IN BG

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<th>MD/PhD – 30 credits required</th>
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<td>8-9 Elective Credits</td>
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<td>6+ Research Credits</td>
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<td>SPM 711 Scientific Principles of Medicine (8) (sub for 2 core and 6 elective credits)</td>
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<tr>
<td>BMB 400 Molecular Biology of the Gene (3)</td>
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<td>BMB 484 Functional Genomics (3)</td>
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<td>MCIBS 554 Foundations in Data Driven Life Sciences (3)</td>
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<th>Core Requirement</th>
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<tr>
<td>STAT 555 Statistical Analysis of Genomics Data (3)</td>
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<th>Core Requirement</th>
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<tr>
<td>MCIBS 541, Critical Analysis in BG Research Topics (2)</td>
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<th>Core Requirement</th>
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<th>Research credits</th>
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<td>Chosen from courses* below (2-3)</td>
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<tr>
<th>Research credits</th>
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<tr>
<td>MCIBS 600 and 601 (6+)</td>
<td>MCIBS 600 and 601 (6+)</td>
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*Electives will be chosen from these courses based on the student’s background

- BIOL 405 Molecular Evolution (3)
- BMMB 852 Applied Bioinformatics (2)
- STAT 500 Applied Statistics (3)
**Bulletin Copy**

*MCIBS Program*

**Degrees conferred:**

PhD, MD/PhD, M.S.

**The Graduate Faculty**

(unchanged)

**PhD Admissions Requirements**

(unchanged)

**MD/PhD Admissions Requirements**

In addition to the basic college level premedical school requirements for the Penn State College of Medicine (one each year of biology, chemistry, physics, math, and organic chemistry), the MD/PhD program has the following requirements:

- **Academic Achievement** Applicants to our program generally have very strong grades and MCAT scores. In recent years, successful applicants have an average GPA of 3.75 and MCAT scores of 33-34. Applicants are not required to take the GREs.

- **Research Experience** We are especially interested in students with a strong and sustained background in research. Students who have spent 1-2 years after graduation conducting research are strongly encouraged to apply. Alternatively in-depth research experience as an undergraduate can suffice.

- **Recommendations** We are especially interested in receiving letters of recommendation from faculty with whom you conducted research and who can comment on your passion and potential for research.

- **Goals** Applicants must be able to clearly articulate the reasons for pursuing the joint degree.

- **International Students** All qualified students are eligible to apply regardless of citizenship.

(http://www.pennstatehershey.org/web/md/admissions/overview/requirements)

**Master’s Degree Requirements**

(unchanged)

**Doctoral Degree Requirements**
MD/PhD Degree Requirements

Students interested in simultaneously pursuing an MD and PhD degree must apply to the College of Medicine MD program using the national American Medical College Application Service (AMCAS) application system and indicate their intent to pursue the joint degree program. The College of Medicine MD/PhD Admissions Committee reviews applications and evaluates candidates for acceptance into both the MD and PhD program. Students not accepted into the joint degree program can be referred to either the MD or PhD program, depending on their qualifications and interests.

During the first two years of medical school, the student conducts at least three research rotations. After successful completion of the first two years of medical school the candidate joins their thesis lab in the MCIBS Graduate Program.

During the summer after the second year of medical school MD/PhD students take Step 1 of the United States Medical Licensing Examination (USMLE), which serves in lieu of the knowledge-based part of the Candidacy Examination for the MCIBS program. Successful completion of BMS 506 A and B, which is taken in the second year of medical school, with a grade of B or higher meets the critical thinking and paper analysis requirement of the candidacy exam.

MCIBS Program Requirements

The doctoral committee of an MD/PhD student in the MCIBS program is formed upon entry into the thesis laboratory. The committee must include a minimum of four faculty members, i.e., the chair and at least three additional members, all of whom must be members of the Graduate Faculty. The committee must include at least two members of the MCIBS program graduate faculty and one MD/PhD steering committee member. One regular member of the doctoral committee must represent a field outside the candidate's major field of study in order to provide a broader range of disciplinary perspectives and expertise. This person is the “outside field member.” Additionally, one member of the committee must be an “outside unit member:” a member of the graduate faculty outside the adviser’s administrative home (for a tenure-line faculty member this is the department that serves as their tenure home). The same person can be the outside field member and outside unit member. The outside member(s) can be members of MCIBS.

In addition to taking the required courses MCIBS 590, Colloquium, MCIBS 591, Ethics in the Life Sciences, and MCIBS 592, Current Seminars, elective courses are selected in consultation with the student’s dissertation adviser and doctoral committee, with guidance from the MCIBS emphasis area course lists and program chair. 6 credits of elective courses will be selected.

The MD/PhD candidate prepares a written comprehensive examination in the format of a grant application and gives an oral presentation of this proposal to their doctoral committee.

A dissertation must be prepared and defended by each MD/PhD candidate as for all MCIBS students. In addition, MD/PhD students must have submitted a first-author manuscript before defending their dissertation. Before returning to medical school the doctoral thesis must be accepted by the Graduate School.
The MD/PhD Program requires that students have one first author peer-reviewed paper published based on their research accepted prior to completing medical school, and preferably accepted for publication prior to returning to the third year of medical school. At the discretion of the College of Medicine Vice Dean for Research and Graduate Studies, in consultation with the MCIBS Program Chair, the requirement for a first author publication prior to completing medical school may be waived. Examples of conditions that might warrant exemptions include: (a) prolonged illness, (b) mentor’s relocation, (c) mentor’s reluctance to submit the student’s work for publication, (d) the student’s project is published by another research group, or (e) delays or challenges in the publication review process beyond the control of the student or dissertation advisor.

If a student decides not to return to medical school, or for some other reason is not able to complete the last two years of medical school, but they have successfully completed their Ph.D. dissertation and oral defense and met all other degree requirements of MCIBS, they will be able to complete the PhD. The latter will be conferred after the student notifies the program that she/he wishes to withdraw from the MD program and completes all requirements for conferral of the graduate degree.

For students who choose the Option in Bioinformatics and Genomics within MCIBS, all requirements are the same as above with the exception of coursework taken during the PhD. BG students will take required courses: MCIBS 590, Colloquium, MCIBS 591, Ethics in the Life Sciences, MCIBS 554 Foundations in Data Driven Life Sciences, MCIBS 541, Critical Analysis in BG Research Topics, STAT 555, Statistical Analysis of Genomics Data. In addition, based on the background and needs of the student at least one of the following elective courses will also be taken: BIOL 405, Molecular Evolution, STAT 500, Applied Statistics, BMMB 852, Applied Bioinformatics (2).
Index of consultation/ support letters

This proposal was drafted with input from Dr. Cooduvalli Shashikant, the director or the Bioinformatics and Genomics Option within MCIBS.

Page 14. letter of support from the MD/PhD program co-directors, Dr. Bob Levenson and Dr. Leslie Parent

Page 15. letter of support from Dr. Craig Hillemeyer, Dean of the Medical School

Page 16. letter of support from Dr. Michael Verderame, Associate Dean for Graduate Studies in the College of Medicine

Page 17. letter of support from Dr. Chuck Fisher, Associate Dean for Graduate Education in the College of Science

Page 18. letter of support from Dr. Gary Thompson, Associate Dean Research and Graduate Education in the College of Agriculture

Page 19. letter of support from Dr. Val Beasley, Department Head, Veterinary and Biomedical Sciences, College of Agriculture (with questions and answers about the program included)

Page 23. letter of support from Dr. Catherine Harmonosky, Interim Associate Dean, College of Engineering- with support from Dr. Will Hancock, Chair of the Bioengineering Graduate Program, and Dr. Michael Lanagan, Professor of Engineering Science and Mechanics

Page 25. letter of support from Dr. Eric Silver, Associate Dean for Research in the College of Liberal Arts, with request from Dr. Christopher Long, Associate Dean for Undergraduate and Graduate Education, that Dr. Silver be the consultant

Page 27. letter of support from Dr. Kathryn Drager, Associate Dean for Research and Graduate Education, College of Health and Human Development
March 23, 2015

Melissa Rolls, Ph.D.
Chair, Molecular, Cellular and Integrative Biosciences Graduate Program
Associate Professor of Biochemistry and Molecular Biology
Eberly College of Sciences
Pennsylvania State University
0118 Life Sciences Building
University Park, PA 16802

Dear Melissa,

We are delighted to give our enthusiastic support for the creation of a dual degree program between the Penn State MD/PhD Program and the Molecular, Cellular and Integrative Biosciences Graduate Program. This new opportunity for our students to perform their thesis work with the outstanding faculty members in the MCIBS Program enriches the program and provides exciting options for our students when choosing a research mentor at Penn State.

As Associate Program Director of the MD/PhD Program, you already play an important leadership role in the program. We are extremely excited about forming this partnership with you and your colleagues in this new dual degree graduate program. We look forward to working with you in this collaborative effort to expand the options for the MD/PhD students.

Best regards,

[Signature]

Robert Levenson, Ph.D.
Co-Director, MD/PhD Program

[Signature]

Leslie J. Parent, M.D.
Co-Director, MD/PhD Program
March 20, 2015

Melissa Rolls, Ph.D.
Chair, Molecular, Cellular, and Integrative Biosciences Graduate Program
Associate Professor of Biochemistry and Molecular Biology
Eberly College of Sciences
Pennsylvania State University
0118 Life Sciences Building
University Park, PA 16802

Dear Dr. Rolls,

I am pleased to provide my support for the establishment of an MD-PhD dual degree program in Molecular, Cellular and Integrative Biosciences (MCIBS). This program represents an important addition to our MD-PhD program as it will provide opportunities for our students to consider many of the outstanding laboratories at University Park for their doctoral studies. In addition, creating this program now is timely as we prepare an application to establish an NIH funded Medical Scientist Training program.

Thank you for working with Professors Parent and Levenson in preparing this proposal, and I look forward to its approval in the near future.

Sincerely,

A. Craig Hillemeier, M.D.
Dean, Penn State College of Medicine
Chief Executive Officer, Penn State Milton S.
Hershey Medical Center and Health System
Senior Vice President for Health Affairs, Penn State

AHC/cal
March 18, 2015

Melissa Rolls, PhD
Chair, Molecular, Cellular, and Integrative
Biosciences Graduate Program
Associate Professor of Biochemistry and Molecular Biology
Eberly College of Sciences

Dear Melissa,

I am pleased to support this proposal to create an MD-PhD dual degree program with the Molecular, Cellular, and Integrative Biosciences (MCIBS) Graduate Program. As you know, the College of Medicine has been committed to offering our MD/PhD students a broad range of disciplines from which to choose. Having opportunities on the University Park campus will allow students to choose areas of study not available at Hershey, for example, a broad range of bioinformatics projects. In addition, such expanded opportunities will be viewed favorably when our application to NIH for a Medical Scientist Training Program grant is reviewed later this year.

I thank you and the faculty of MCIBS for working to make this opportunity available to our MD-PhD students, and look forward to working with you to ensure its success.

Best wishes,

Michael F. Verderame, PhD
Associate Dean for Graduate Studies
Professor of Medicine
College of Medicine Distinguished Educator
Dear Melissa,
I have reviewed your proposal for an MCIKS MD/PhD joint degree program and I enthusiastically endorse the program. This will be important to sustain the momentum we have been building for more collaborations and beneficial interactions between UP and Hershey labs, as well as continuing an excellent program for graduate students.
Thanks and Cheers
Chuck Fisher

Charles Fisher
Professor of Biology
Associate Dean for Graduate Education
Office, 219 Mueller Laboratory
814 865-3395
Mailing Address:
206 Mueller Laboratory
The Pennsylvania State University
University Park, PA 16802
From: Gary Thompson gat10@PSU.EDU
Subject: RE: Joint degree proposal between MCIBS and MD/PhD
Date: March 16, 2015 at 6:06 PM
To: Melissa Rolls mru22@PSU.EDU
Cc: Rachel Unger rlu12@PSU.EDU, Val Beasley vbeasley@PSU.EDU

Dear Melissa,

Thank you for sending me the joint degree proposal for MCIBS and the MD/PhD program. I have reviewed the proposal and requested comments from Dr. Val Beasley, Department Head of Veterinary and Biomedical Sciences. We both support moving the proposal forward and appreciate the opportunity for input that you have provided at this stage.

Best regards,

Gary

Gary A. Thompson, Ph.D.
Associate Dean for Research and Graduate Education
Director, Pennsylvania Agricultural Experiment Station
College of Agricultural Sciences
Penn State University
217 Agricultural Administration Building
University Park, PA 16802-2600
TEL: 814-865-3136
FAX: 814-863-7905
Email: gat10@psu.edu
http://agsci.psu.edu/research
Hi Melissa,

Thanks for sending this information. This and your earlier email addressed nearly everything that I had raised.

My suggestion about care and feeding so that they can stay upbeat and have fun as they go probably has merit. Of course, selection of the right students — with the sharp mind, fire in the belly and the tenacity built on curiosity and drive to help others — is paramount.

I appreciate your reaching out to CAS for input!

Kind regards,

Val

Val Beasley DVM, PhD, Diplomate ABVT
Professor and Head
Department of Veterinary and Biomedical Sciences
College of Agricultural Sciences
The Pennsylvania State University
115D Henning Building
University Park, PA 16802

Phone:
814-865-7696 (Department); 814-863-8520 (Direct); 217-621-4079 (Mobile)
Fax:
814-863-6140

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From: Melissa Rolls <mur22@psu.edu>
Date: Monday, March 16, 2015 at 6:10 PM
To: Gary Thompson <gat10@PSU.EDU>, Val Beasley <vbeasley@psu.edu>
Subject: Re: Joint degree proposal between MCIBS and MD/PhD

Hi Val

Gary Thompson forwarded your thoughts to me. I think most of your questions relate to the MD/PhD program itself and not specifically the joint degree program with MCIBS. The MD/PhD program has been in existence for many years and works pretty well. The med school years are paid for by the med school, including a stipend for the students. The PI picks up the stipend for the student during the PhD years, just as they would for any MCIBS student. The time for PhD is not totally rigid- the goal is 4 years, but this is not always possible.

The rotations are for the students to find a lab and are done during the summers in the first two years of med school- again this is general for the MD/PhD program and not specific to this joint degree proposal.

Most MD/PhD students stay at Hershey for their PhD, but there has always been an option for students to come to UP for their thesis. and I think this is great! We get an influx of students with a different background.
and they get more labs to choose from. Right now we have 4 MD/PhD students working on their theses at UP.
The rationale for this proposal is the reorganization of graduate programs up here. The students used to be
able to come into programs like Genetics and Molecular Medicine, but these were all merged into MCIBS last
summer, so if we want to maintain the ability for students to work in labs up here we need this joint degree
program in place.

Does that answer your questions?
thanks for going through it!!

Melissa

Melissa Rolls
Associate Professor of Biochemistry and Molecular Biology
Penn State
118 Life Sciences Building
University Park, PA 16802
814-867-1395, 814-933-6432
Chair, Molecular, Cellular and Integrative Biosciences program
http://www.huck.psu.edu/education/molecular-cellular-and-integrative-biosciences/
Director, Center for Cellular Dynamics
http://www.huck.psu.edu/centerCELLULAR-DYNAMICS

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From: Val Beasley
Sent: Monday, March 16, 2015 1:01 PM
To: Gary Thompson
Subject: Re: Joint degree proposal between MCIBS and MD/PhD

Hi Gary,

In general, I am supportive.

This description seems rather rigid. If the students will need very many courses for the PhD, they may be
short on time to complete a high quality PhD project. What if a study or two doesn’t work? Could 6 months
or a year be added? If so, when?

I think there should be some elaboration on when they would do rotations during the first two years and
where as well. Apparently, these are one-month long, but that is not 100% clear. Are they normally to be
done during break times (e.g., if they are one month in length, they could easily be done during the
summer). Is there a quality piece — high case load, research focus, related to their area of interest. The
aims of the rotations are not spelled out. It would help if they related to the application of the research
focus.

Are there any carrots for the faculty members who will taken on these students?

There should be some attention to counseling the students in this marathon – and encouragement of them
to take breaks, have some fun, stay healthy, progress with their personal lives. It helps such students and it
to take breaks, have some fun, stay healthy, progress with their personal lives. It helps such students and it may reduce attrition.

I think that there should be a separate document that addresses the budgetary implications of the program. As we discussed today, some proponents of rigorous DVM/PhD programs hold that students of such prolonged education endeavors need waivers of tuition for all 8 years, plus stipends (should be provided by mentors for students in research laboratories). In that regard, here is probably some need for students to sign a paper that indicates if they fail to complete both degrees, they will have to refund $. 

All the best,

Val

From: Gary Thompson <gat10@psu.edu>
Date: Monday, March 16, 2015 at 8:43 AM
To: Val Beasley <vbeasley@psu.edu>
Cc: Rama Radhakrishna <brr100@psu.edu>
Subject: FW: Joint degree proposal between MCIIBS and MD/PhD

Val,
I am back in the office and catching up after two weeks on the road. I received this proposal from Melissa Rolls, and I assume that you have received it as well. I wanted to get some feedback from you prior to responding to Melissa. Are you and your faculty supportive of this proposal as written? If not, what are some of the concerns.
Thanks,
Gary

Gary A. Thompson, Ph.D.
Associate Dean for Research and Graduate Education
Director, Pennsylvania Agricultural Experiment Station
College of Agricultural Sciences
Penn State University
217 Agricultural Administration Building
University Park, PA 16802-2600
TEL: 814-865-3136
FAX: 814-863-7905
Email: gat10@psu.edu
http://aescl.psu.edu/research

From: Melissa Rolls <mailto:mur22@psu.edu>
Sent: Monday, March 02, 2015 3:50 PM
To: Gary Thompson
Subject: Joint degree proposal between MCIIBS and MD/PhD

Dear Gary

I am writing to you in your role as associate dean for grad ed in the college of agriculture, which has faculty that participate in the Molecular, Cellular and Integrative Biosciences (MCIIBS) Graduate Program.
One way UP and the College of Medicine have interfaced successfully is through the MD/PhD program. Students in this program apply through the College of Medicine. They do 2 years of medical school at Hershey, and in the summers around this do three rotations, which can include labs at UP. After the first 2 years they join a thesis lab and a graduate program. They typically do a few courses that complement the courses done in the medical school years and take their comprehensive exam after the first year- most programs count success on the first medical board exam and med school in lieu of the candidacy. The comprehensive exam, thesis expectations and defense are the same as for PhD students. After 4-5 years of the thesis the students return for the last two years of medical school. In the past MD/PhD students have had access to labs at UP through inter-college graduate programs (IGDPs). Right now we have 4 MD/PhD students working on their theses at UP. However, with the replacement of most of the IGDPs at Hershey with the Biomedical Sciences Graduate Program and the merger of 5 IGDPs at UP into MCIBS last year, this door is largely closed. So, I am asking for your support on a nice solution!

I have prepared a joint degree proposal for MCIBS and the MD/PhD program. This proposal is based on the joint degree program recently approved between Biomedical Sciences (the main Hershey grad program) and the MD/PhD program. I aim to get the MCIBS joint degree program in place by FA15 so that MD/PhD students still have access to labs at UP. I have attached the proposal, and would like to ask whether you could send me an email/letter of support to be submitted with it. I am happy to meet with you to go through it if you like!

best wishes

Melissa
Hello Melissa,

I have now received feedback from two departments that would be most relevant for the MD/PhD joint degree with MCIBS IGDP. The two emails are included below, and they are both very supportive.

The College of Engineering fully supports your proposal.

Catherine

Catherine M. Harmonosky, Ph.D.
Interim Associate Dean
Office of Undergraduate and Graduate Education
Associate Professor of Industrial Engineering
College of Engineering
Penn State University
102A Hammond Building
University Park, PA 16802
814-863-3750
cmhie@engr.psu.edu
www.engr.psu.edu

From: MICHAEL T LANAGAN [mailto:mxl46@psu.edu]
Sent: Friday, March 20, 2015 4:14 PM
To: Catherine M. Harmonosky
Cc: Judith Todd; Al Segall
Subject: Re: Consultation for MD/PhD joint degree with MCIBS IGDP

Hi Catherine, I support this proposal which is geared toward cellular biology, and see no conflicts with the ESM MD/PhD program. Mike Lanagan

From: William Hancock
Sent: Friday, March 20, 2015 2:35 PM
To: Catherine M. Harmonosky
Subject: Re: Consultation for MD/PhD joint degree with MCIBS IGDP
Importance: High

Catherine,

I looked over the MCIBS MD/PhD proposal and I approve. I am pretty familiar with MD/PhD programs. This dual degree program is particularly suited to the MCIBS PhD program due to the overlap of courses. The requirement for one first author publication before graduating with the PhD is an excellent addition. I fully support the proposal.

Will
Hi Melissa, thank you for the opportunity to review the proposal. The program is well thought out and will surely bring value to the students involved. You have the support of Liberal Arts to proceed. Best of luck with the process. Eric

On Fri, Mar 6, 2015 at 12:06 PM, Melissa Rolls <mur22@psu.edu> wrote:
Dear Chris and Eric

thanks! I am looking forward to feedback, and am happy to answer any questions!

Melissa

Melissa Rolls
Associate Professor of Biochemistry and Molecular Biology
Penn State
118 Life Sciences Building
University Park, PA 16802
814-867-1365 814-865-5432
Chair, Molecular, Cellular and Integrative Biosciences program
http://www.huck.psu.edu/education/molecular-cellular-and-integrative-biosciences/
Director, Center for Cellular Dynamics
http://www.huck.psu.edu/center/cellular-dynamics

On Mar 6, 2015, at 10:42 AM, Christopher Long <longc@psu.edu> wrote:

Dear Melissa:

I have been in conversation with Eric Silver, Associate Dean for Research in the College, about this program. Eric is in charge of graduate curriculum development, so I am copying him here. He will be able to weigh in on the specifics of the proposal.

Sincerely,
Chris

Christopher P. Long
Professor of Philosophy and Classics
Associate Dean for Graduate and Undergraduate Education
College of the Liberal Arts
The Pennsylvania State University
www.cdlong.org

On Mon, 2 Mar 2015 at 15:46 Melissa Rolls <mur22@psu.edu> wrote:

Dear Christopher

I am writing to you in your role as associate dean for grad ed in the college of liberal arts, which has faculty that participate in the Molecular, Cellular and Integrative Biosciences (MCIBS) Graduate Program.

One way UP and the College of Medicine have interfaced successfully is through the MD/PhD program. Students in this program apply through the College of Medicine. They do 2 years of medical school at Hershey, and in the summers around this do three rotations, which can include labs at UP. After the first 2 years they join a thesis lab and a graduate program. They typically do a few courses that complement the courses done in the medical school years and take their comprehensive exam after the first year- most programs count success on the first medical board exam and med school in lieu of the candidacy. The comprehensive exam, thesis expectations and defense are the same as for PhD students. After 4-5 years of the thesis the students return for the last two years of medical school. In the past MD/PhD students have had access to labs at UP through inter-college graduate programs (IGDPs). Right now we have 4 MD/PhD students working on their theses at UP. However, with the replacement of most of the IGDPs at Hershey with the Biomedical Sciences Graduate Program and the merger of 5 IGDPs at UP into MCIBS last year, this door is largely closed. So, I am asking for your support on a nice solution!

I have prepared a joint degree proposal for MCIBS and the MD/PhD program. This proposal is based on the joint degree program recently approved between Biomedical Sciences (the main Hershey grad program) and the MD/PhD program. I aim to get the MCIBS joint degree program in place by Fall so that MD/PhD students still have access to labs at UP. I have attached the proposal and
Dear [Name],

I hope this email finds you well. I have been working on my Ph.D. degree program and I want to extend my gratitude for your support and guidance. I have attached the proposal, and I would like to ask whether you could send me an email letter of support to be submitted with it. I am happy to meet with you to go through it if you like.

Best wishes,

Melissa

Melissa Rolls
Associate Professor of Biochemistry and Molecular Biology
Penn State
118 Life Sciences Building
University Park, PA 16802
814-867-1365, 814-863-5332
Chair, Molecular, Cellular and Integrative Biosciences program
http://www.huck.psu.edu/education/molecular-cellular-and-integrative-biosciences/
Director, Center for Cellular Dynamics
http://www.huck.psu.edu/center/cellular-dynamics

---

Eric Silver
Professor of Sociology and Criminology
Associate Dean for Research
College of the Liberal Arts, 105 Sparks Building
Pennsylvania State University
Web Page: http://sociology.las.psu.edu/people/ese44
Creativity, Productivity, Grant Activity

---

26
Hi Melissa,  
We've had a chance to take a look at the proposal for the MCIBS MD/PhD program. We feel it is a well-designed and rigorous program and the College of Health and Human Development is happy to support the proposal and, when appropriate, participate as a UP PhD part of the students' program. Let me know if you need a formal letter of support and I'll be happy to provide that.

Kathy

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Kathryn Drager, PhD, CCC-SLP  
Associate Dean for Research and Graduate Education  
Professor of Communication Sciences and Disorders  
College of Health and Human Development  
The Pennsylvania State University  
201 Henderson Building  
University Park, PA 16802  
(p) 814-863-2426 | (f) 814-865-3282  
http://www.hhdev.psu.edu/research | http://aac.psu.edu/

From: "Melissa Rolls" <mur22@psu.edu>  
To: kdd5@psu.edu  
Sent: Monday, March 2, 2015 3:52:31 PM  
Subject: Joint degree proposal between MCIBS and MD/PhD

Dear Kathryn

I am writing to you in your role as associate dean for grad ed in the college of HHD, which has faculty that participate in the Molecular, Cellular and Integrative Biosciences (MCIBS) Graduate Program.

One way UP and the College of Medicine have interfaced successfully is through the MD/PhD program. Students in this program apply through the College of Medicine. They do 2 years of medical school at Hershey, and in the summers around this do three rotations, which can include labs at UP. After the first 2 years they join a thesis lab and a graduate program. They typically do a few courses that complement the courses done in the medical school years and take their comprehensive exam after the first year- most programs count success on the first medical board exam and med school in lieu of the candidacy. The comprehensive exam, thesis expectations and defense are the same as for PhD students. After 4-5 years of the thesis the students return for the last two years of medical school. In the past MD/PhD students have had access to labs at UP through inter-college graduate programs (IGDPs). Right now we have 4 MD/PhD students working on their theses at UP. However, with the replacement of most of the IGDPs at Hershey with the Biomedical Sciences Graduate Program and the merger of 5 IGDPs at UP into MCIBS last year, this door is largely closed. So, I am asking for your support on a nice solution!
a nice solution!

I have prepared a joint degree proposal for MCIBS and the MD/PhD program. This proposal is based on the joint degree program recently approved between Biomedical Sciences (the main Hershey grad program) and the MD/PhD program. I aim to get the MCIBS joint degree program in place by FA15 so that MD/PhD students still have access to labs at UP. I have attached the proposal, and would like to ask whether you could send me an email/letter of support to be submitted with it. I am happy to meet with you to go through it if you like!

best wishes

Melissa

Melissa Rolls
Associate Professor of Biochemistry and Molecular Biology
Penn State
118 Life Sciences Building
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Chair, Molecular, Cellular and Integrative Biosciences program
http://www.huck.psu.edu/education/molecular-cellular-and-integrative-biosciences/
Director, Center for Cellular Dynamics
http://www.huck.psu.edu/center/cellular-dynamics
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Curriculum Coordinator, University Faculty Senate, 101 Kern Graduate Building, University Park. The proposals will be transmitted to the Office of the Dean of the Graduate School for entry into the Graduate Council curricular review process; for more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: College of Agricultural Sciences
Department or Instructional Area: Food Science

New Graduate Program, Option, or Minor: Add
Designation of new graduate program: 
Designation of new graduate option: 
Designation of new graduate minor: 

Indicate effective semester: 
- First semester following approval
- Second semester following approval

Existing Graduate Program Option, or Minor: Change
Drop

Current designation of graduate program: GRADUATE PROGRAM IN FOOD SCIENCE
Current designation of graduate option: 
Current designation of graduate minor: 

New designation of existing graduate program (if changing):
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above): adding CTS dual title option

Indicate effective semester:
- First semester following approval
- Second semester following approval

Submitted by Graduate Program Head

Robert F. Roberts
Printed name
Signature
Date: 3-14-15

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

R.C. Ananthaswaran
Printed name
Date: 3-9-15

Approved by College/School Dean/Chancellor (or Designee):

Gary A. Thompson
Printed name
Signature
Date: 3-20-15
Recommended by Chair, Graduate Council Subcommittee on New and Revised Programs and Courses:

On Behalf of C. Andrew Cole  
Printed name  
Signature  
Date: 9/4/2015

Recommended by Chair, Graduate Council Committee on Programs and Courses:

On Behalf of Joan Redwing  
Printed name  
Signature  
Date: 9/4/2015

Noted by Dean of the Graduate School:

On Behalf of Regina Vasilatos-Younken  
Printed name  
Signature  
Date: 9/4/2015
Graduate Program in Food Science change proposal

Adoption of the dual-title Ph.D. degree program in Clinical and Translational Sciences

Contents

1. Objectives of the Program Change ................................................................. 1
2. Justification for Program Change ................................................................. 1
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1. Objectives of Program Change

This document proposes a Dual-Title Ph.D. in Food Science (FD SC) and Clinical and Translational Sciences (CTS). A dual-title Ph.D. in FD SC and CTS will expand the educational experience of students studying in the Graduate Program in Food Science (GPFS) by including training via a unique curriculum and research focus. This training prepares students for career paths in research, teaching, or policy roles that bridge university environments, including health care settings within medical schools, private research laboratories in the food industry, and government agencies. The FD SC component of the dual-title focuses on the varied scientific disciplines needed to provide an abundant supply of affordable, safe, nutritious, and appealing food; these disciplines include but are not limited to chemistry, engineering, and microbiology. The CTS component of the dual-title provides an emphasis on epidemiological, behavioral science, health outcomes, and health services research that moves laboratory findings to the clinical setting to best practices in the community. Pairing the two training experiences in the Dual-Title Ph.D. in FD SC and CTS yields opportunities for interdisciplinary scholarship at the interface of basic science, clinical science, the food supply, diet, and human health. This new offering does not duplicate other degree programs within the Department of Food Science, the College of Agricultural Sciences, or the University.

2. Justification for Program Change

The existing Graduate Certificate Program in Clinical Research offered through the Department of Public Health Sciences at the College of Medicine provides limited exposure to the field of CTS. The certificate is an important adjunct for a small pool of professionals, most of whom have completed their doctoral program, but it does not offer the same integrated training and research experiences offered by a dual-title Ph.D. degree. The Dual-Title Ph.D. in FD SC and CTS is part of a national effort, led by the National Institutes of Health (NIH) Roadmap, to encourage interdisciplinary team-based science by reducing program compartmentalization.

Interdisciplinary training in CTS prepares students for successful careers in industry (ranging from the study of bioactivity at the lab bench to the execution of human clinical trials on putatively beneficial ingredients in food) and community and public health, as well as more traditional academic and clinical venues. Of particular interest is the explosive growth of clinical
research sponsoring organizations, which now employ more than 66,000 people worldwide and account for $20 billion of industry revenue in 2010.¹

The expected benefits of the Dual-Title Ph.D. in FD SC and CTS include:

- Value-added training and scholarship for current students rather than competition between graduate programs for an applicant pool;
- Addition of novel course work and training not offered in an existing (primary) graduate degree program;
- Integration of clinical/translational research training into thesis and dissertation work (e.g., Candidacy and Comprehensive Examinations, original research);
- Enhanced methodological/analytical skills and training; and
- Expanded employment and career opportunities.

The Dual-Title Ph.D. Degree in FD SC and CTS will encourage interdisciplinary scholarly work at the interface of many domains by focusing on food, diet, and health. Using practicum, course work and research, the proposed program of study is designed to extend students’ knowledge beyond their primary area of study within FD SC to foster a greater understanding and competence in clinical and health-related research. This translational training is critical given the growing emphasis on bioactivity, functional foods, and health. Ultimately, this approach should enable a new breed of scientists capable of targeting their research programs to address the unmet preventative, therapeutic, and diagnostic needs of the future.

The Dual-Title Ph.D. Degree in FD SC and CTS has four general features.

1. Basic and clinical science didactic course work in each of the following areas:
   - Statistics (3 credits);
   - Epidemiology (3 credits);
   - Bioinformatics (3 credits);
   - Experimental design and interpretation (3 credits);
   - The regulatory environment (3 credits); and
   - Scientific communication (3 credits).
2. Co-mentoring by basic and clinical scientists during students’ dissertation research.
3. Structured experiences in clinical research or other health care settings.
4. Exposure to opportunities afforded by focusing basic sciences, clinical sciences, and community engagement on both treatment and prevention to enhance human diet and health.

The FD SC Ph.D. program requires 6 credits of required courses and 6 credits of graduate-level electives, some of which could be accrued toward requirements of both (i.e., FD SC and CTS) programs. Thus, the minimum number of additional credits added to the curricular experience of FD SC doctoral students accepted to the dual-title program would be 12 (plus CTS Seminar and at least 1 credit of clinical rotation or practicum). This additional course work would be

¹ http://www.acrohealth.org/fact-sheet.html
achievable by the end of the third year of graduate studies. Students will select these additional courses from a list of pre-existing courses (see chart below). No new FD SC courses are required to support the Dual-Title Ph.D. Degree in FD SC and CTS.

Prospective dual-title trainees will express an interest in the program as early as during the recruitment process and will apply to the dual-title program no later than the end of the spring semester of the first year of study in the Food Science Ph.D. program. Students interested in the dual-title program will be considered for admission to the CTS program by a committee consisting of the CTS program co-directors and faculty affiliated with the Dual-Title Ph.D. Degree in FD SC and CTS. Typically, students in the FD SC graduate program complete the Candidacy Examination no later than the end of their 3rd semester in the doctoral program. To allow exposure to the CTS curriculum and to assure commitment of an appropriate dissertation mentor, graduate FD SC students accepted to the Dual-Title Ph.D. Degree in FD SC and CTS will take the Candidacy Examination by the end of the 4th semester of doctoral training.

Requirements for the Dual-Title Ph.D. Degree in FD SC and CTS include 18 credits from the list of approved electives in the following areas. Students in the dual-title program may also petition the Directors of the CTS dual-title graduate degree program to fulfill these requirements with courses not currently listed.

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Epidemiology</th>
<th>Bioinformatics</th>
<th>Experimental Design and Interpretation</th>
<th>The Regulatory Environment</th>
<th>Scientific Communication</th>
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<tr>
<td>HD FS 519 (3) Methods of Statistical Analysis in Human Development</td>
<td>PHS 550 (3) Principles of Epidemiology</td>
<td>H P A 528 (3) Health Data Analysis for Research</td>
<td>BMS 551 (3) Molecular and Translational Approaches to Human Disease</td>
<td>BIOET 502 (3) Perspectives in Macro-Bioethics</td>
<td>KINES 588 (3) Scientific writing in Kinesiology</td>
</tr>
<tr>
<td>H P A 564 (3) Research Methods in Health Services Research</td>
<td>PHS 551 (3) Advanced Epidemiological Methods</td>
<td>PHS 516 (3) Statistical Genetics</td>
<td>HD FS 506 (3) Design and Evaluation of Prevention and Health Promotion Programs Across the Life Span</td>
<td>MCIBS 591 (1) Ethics in the Life Sciences</td>
<td>PHS 518 (2) Scientific Communication</td>
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<tr>
<td>Statistics (3 credits)</td>
<td>Epidemiology (3 credits)</td>
<td>Bioinformatics (3 credits)</td>
<td>Experimental Design and Interpretation (3 credits)</td>
<td>The Regulatory Environment (3 credits)</td>
<td>Scientific Communication (3 credits)</td>
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<td>H P A 566 (3)</td>
<td>STAT 507 (3)</td>
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<td>HD FS 508 (1-6) Best Practices in Preventative Intervention</td>
<td>H P A 520 (3) Introduction to Health Services Organizations and Delivery</td>
<td>PSIO 501 (1) Scientific Analysis and Presentation</td>
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<tr>
<td>Advanced Methods in Health Services Research</td>
<td>Epidemiologic Research Methods</td>
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<tr>
<td>PHS 520 (3) Principles of Biostatistics</td>
<td>PHS 552 (3) Molecular Epidemiology of Chronic Disease</td>
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<td>PHS 521 (3) Applied Biostatistics</td>
<td>PHS 553 (3) Infectious Disease Epidemiology</td>
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<td>PHARM 520 (2) Principles of Drug Action</td>
<td>PHS 500 (1) Research Ethics for Clinical Investigators</td>
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<tr>
<td>PHS 522 (3) Multivariate Biostatistics</td>
<td>VS SC 444 (3) Epidemiology of Infectious Diseases</td>
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<td>PHS 504 (3) Behavioral Health Intervention Strategies</td>
<td>PHS 505 (3) Public Health Program Planning and Evaluation</td>
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<tr>
<td>PHS 523 (3) Multivariate Analysis</td>
<td>VS SC 445 (3) Molecular Epidemiology of Infectious Disease</td>
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<td>PHS 505 (3) Public Health Program Planning and Evaluation</td>
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<td>PHS 524 (3) Longitudinal Data Analysis</td>
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<td>PHS 511 (1) Methods used in Translational Research</td>
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<td>PHS 525 (3) Biostatistics for Lab Scientists</td>
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<td>PHS 519 (2) Patient-Centered Research</td>
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<td>PHS 527 (3) Survival Analysis</td>
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<td>PHS 535 (3) Quality of Care Measurement</td>
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<td>PHS 528 (3) Bayesian Methods</td>
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<td>PHS 536 (3) Health Survey Research Methods</td>
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<td>STAT 500 (3) Applied Statistics</td>
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<td>PHS 540 (1) Decision Analysis I</td>
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<td>STAT 501 (3) Regression Methods</td>
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<td>PHS 580 (3) Clinical Trials: Design and Analysis</td>
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<td>STAT 502 (3) Analysis of Variance and Design of Experiments</td>
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<td>PSY 583 (3) Designing Research in Social Psychology</td>
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<tr>
<td>Statistics (3 credits)</td>
<td>Epidemiology (3 credits)</td>
<td>Bioinformatics (3 credits)</td>
<td>Experimental Design and Interpretation (3 credits)</td>
<td>The Regulatory Environment (3 credits)</td>
<td>Scientific Communication (3 credits)</td>
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<td>STAT 504 (3) Analysis of Discrete Data</td>
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<td>STAT 503 (3) Design of Experiments</td>
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<tr>
<td>STAT 505 (3) Applied Multivariate Statistical Analysis</td>
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<td>STAT 509 (3) Design and Analysis of Clinical Trials</td>
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<tr>
<td>STAT 506 (3) Sampling Theory and Methods</td>
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In addition to mandatory Scholarship and Research Integrity (SARI) and Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) training (as appropriate), CTS Seminar (two semesters), and one to six credits of clinical rotation or practicum approved by the Directors of the CTS Graduate Program (e.g., BMS 571), are required to complete the curriculum.

Graduate trainees accepted to the Dual-Title Ph.D. Degree in FD SC and CTS and trainees in the CTS program will be served by the CTS Institute’s (CTSI) Mentoring and Career Advisory and Development Panel (MCDAP). The MCDAP approves the elective courses that a student selects and provides mentoring and guidance beyond that offered by the primary research mentor in FD SC. MCDAP members are selected by the CTSI Education and Training Co-Directors, due to their experience with mentoring and training graduate students and junior faculty in clinical, behavioral, and applied sciences. High priority is given to experience with cross-campus training. As CTS Program trainees are accepted, they identify a lead mentor from the MCDAP roster. Together, the trainee, FD SC mentor, and MCDAP mentor will comprise a three-person mentoring team that will monitor student progress and identify areas for development that are aligned with the core competencies of the Dual-Title Ph.D. Degree in FD SC and CTS. Areas for development may include “soft skills” such as leadership, diversity, and teamwork that are expected competencies for successful translational scientists but are not formally evaluated in the Candidacy Examination, Comprehensive Examination, or other required elements of the primary or dual-title degree.

**Fiscal Resources and Extramural Support.** The program is supported through the Penn State CTSI, sponsored by the University and the NIH. Currently, CTSI support is available for eight semesters per year, with an additional four semesters of support matched by the College of Health and Human Development and two semesters by the College of Medicine. Each student will be provided 12 months of graduate stipend support. Up to seven trainees per year (four grant-funded and three institutional matches) are supported.
The proposed program will minimally impact current course offerings, faculty loads, and faculty advising duties. Trainees must complete a Final Examination in which the dissertation research is accepted by their mentors and doctoral committee. Thus, a Ph.D. is requested as the degree title for this dual-title program.

There is no accrediting body for the proposed program area. A proposed sequence of study for students seeking the Dual-Title Ph.D. in FD SC and CTS is presented below.

**Year One**
- FD SC Course work (including a graduate-level statistics class)
- CTS Course work (statistics and epidemiology; select classes from list)
- Complete Scholarship and Research Integrity (SARI) Training [1st semester]
- Apply to Dual-Title program
- Establish CTS mentors
- Language Proficiency
- Residency Requirement Fulfilled

**Year Two**
- FD SC Course work
- CTS Course work (bioinformatics, experimental design, regulatory environment; select classes from list)
- CTS 590 (Seminar in Clinical and Translational Sciences)
- CTS 595 or BMS 571 (Clinical Rotation / Internship)
- Complete Candidacy Examination (scheduled by the FD SC and CTS program) during 2nd semester
- Form Doctoral Committee
- Identify Dissertation Topic

**Year Three and Beyond**
- CTS 590 (Seminar in Clinical and Translational Sciences)
- CTS course work (scientific communication; select class from list)
- Complete Comprehensive Examination (schedule with FD SC and CTS program) [no later than 2nd semester]
- Work on Dissertation Topic (e.g., review literature, collect data)
- Write Dissertation
3. Proposed Bulletin Listing (with changes tracked)

**Food Science (FD SC)**

Program Home Page (Opens New Window)

ROBERT F. ROBERTS, Head of the Department
202 Rodney A. Erickson Food Science Building
814-865-5444

**Degrees Conferred:**

Ph.D., M.S.

**The Graduate Faculty**

- Ramaswamy C. Anantheswaran, Ph.D. (CORNELL UNIVERSITY), Professor of Food Science
- Rodolphe Barrangou, Ph.D. (NORTH CAROLINA STATE UNIVERSITY), Adjunct Professor of Food Science
- Robert B. Beelman, Ph.D. (OHIO STATE UNIVERSITY), Professor Emeritus of Food Science
- J. Lynne Brown, Ph.D. (MASSACHUSETTS INSTITUTE OF TECHNOLOGY), Professor Emeritus of Food Science
- Jonathan Campbell, Ph.D. (IOWA STATE UNIVERSITY OF SCIENCE AND TEC), Assistant Professor of Animal Science and Food Science
- John Neil Coupland, Ph.D. (UNIVERSITY OF LEEDS), Professor of Food Science
- Catherine Cutter, Ph.D. (CLEMSON UNIVERSITY), Professor of Food Science
- Stephanie Doores, Ph.D. (UNIVERSITY OF MARYLAND COLLEGE PARK), Associate Professor of Food Science
- Edward G. Dudley, Ph.D. (UNIVERSITY OF WISCONSIN-MADISON), Associate Professor of Food Science
- Ryan J Elias, Ph.D. (UNIVERSITY OF MASSACHUSETTS IN AMHERST), Associate Professor of Food Science
- Hassan Gourama, Ph.D. (UNIVERSITY OF NEBRASKA, LINCOLN), Associate Professor of Food Science
- Federico Harte, Ph.D. (WASHINGTON STATE UNIVERSITY), Associate Professor of Food Science
- John Hayes, Ph.D. (UNIVERSITY OF CONNECTICUT), Associate Professor of Food Science
- Kerry Kaylegian, Ph.D. (CORNELL UNIVERSITY), Dairy Foods Research and Extension Associate
• Kathleen Keller, Ph.D. (RUTGERS, STATE UNIVERSITY OF NEW JERSEY), Assistant Professor of Nutritional Sciences and Food Science
• Stephen J. Knabel, Ph.D. (IOWA STATE UNIVERSITY), Professor of Food Science
• Luke La Borde, Ph.D. (UNIVERSITY OF WISCONSIN-MADISON), Associate Professor of Food Science
• Joshua D Lambert, Ph.D. (UNIVERSITY OF ARIZONA), Associate Professor of Food Science
• Sara Milillo, Ph.D. (CORNELL UNIVERSITY), Instructor
• Robert F. Roberts, Ph.D. (UNIVERSITY OF MINNESOTA MINNEAPOLIS), Professor of Food Science
• Robert Steele, Ph.D. (UNIVERSITY OF WISCONSIN-MADISON), Professor Emeritus
• Jairam Vanamala, Ph.D. (TEXAS A & M UNIVERSITY), Associate Professor of Food Science
• Gregory R. Ziegler, Ph.D. (CORNELL UNIVERSITY), Professor of Food Science

The Programs

Graduate work leading to the M.S. and Ph.D. degrees in Food Science is directed toward a multidisciplinary and integrated approach to teaching and research relevant to processing and manufacture of value-added foods from agricultural commodities. Through integration of the disciplines of chemistry, microbiology, engineering, and nutrition, students learn to ensure that consumers can make healthful choices from an abundant supply of affordable, safe, nutritious, and appealing foods.

Admission Requirements

Requirements listed here are in addition to requirements stated in the GENERAL INFORMATION section of the Graduate Bulletin.

Scores from the Graduate Record Examinations (GRE) are required for admission.

Students with a 3.00 junior/senior average (on a 4.00 scale) will be considered for admission to the program. Exceptions may be made for students with special backgrounds, abilities, and interests.

Best preparation for graduate work would be the completion of an undergraduate degree in food science, biochemistry, microbiology, or other related areas. The undergraduate program must include calculus, organic chemistry, microbiology, and general physics. Students may be admitted with deficiencies but are required to make them up without degree credit.

Students are generally admitted directly to a master's program unless they have previously earned an M.S. degree in food science or an appropriate related area; in such cases, admission can be made directly to the doctoral program by approval of the graduate program committee.
**Master's Degree Requirements**

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the Graduate Bulletin.

Minimum course requirements for the M.S. degree are as follows:

- Fundamentals of Food Science (FD SC 500A, FD SC 500B, FD SC 500C, and FD SC 500D), 4 credits
- Research Methods in Food Science (FD SC 501), 2 credits
- Supervised Experience in College Teaching (FD SC 602), 1 credit
- Other 500-level FD SC courses, 6 credits (3 credits of the requirement can be satisfied by 400 level Food Science courses with permission of the adviser.)
- Additional 400 or 500-level courses, 6 credits
  - Must include Statistics (STAT 500 Applied Statistics or equivalent)
- Thesis Research (FD SC 600), 6 credits

The M.S. degree also requires the formation of a master’s committee, the writing of a satisfactory thesis accepted by the master’s committee and the Graduate School, and the passing of a final oral examination.

**Doctoral Degree Requirements**

Requirements listed here are in addition to requirements stated in the [DEGREE REQUIREMENTS](#) section of the Graduate Bulletin.

Minimum course requirements for the Ph.D. degree are as follows:

- Fundamentals of Food Science (FD SC 500A, FD SC 500B, FD SC 500C, and FD SC 500D), 4 credits (Not needed if student received credit for these courses during master’s degree program at Penn State.)
- Research Methods in Food Science (FD SC 501), 2 credits (Not needed if student received credit for this course during master’s degree program at Penn State.)
- Supervised Experience in College Teaching (FD SC 602), 2 semesters of 1 credit each
- Other 500-level FD SC courses, 6 credits (3 credits of this requirement can be satisfied by 400-level Food Science courses with permission of the adviser.)
- Additional 400 or 500-level courses, 12 credits
- Additionally, students must have satisfactorily completed at least one 400 or 500-level course in statistics (i.e., STAT 500 Applied Statistics or equivalent) during their undergraduate or graduate program
Except in special cases, an M.S. in Food Science is earned before pursuing a Ph.D. degree. Although most applicants to the Ph.D. program have already obtained a Master’s degree in Food Science or a related program, the M.S. degree is not a prerequisite for entrance into the doctoral program. For students entering the Ph.D. program without having earned an M.S. degree in Food Science, there are two additional course requirements:

- Thesis Research (FD SC 600), 6 credits
- Additional 400 or 500-level FD SC courses, 6 credits

The Ph.D. degree also requires the passing of a candidacy examination, the formation of a doctoral committee, the passing of a comprehensive examination, the writing of a satisfactory dissertation accepted by the doctoral committee, the head of the graduate program, and the Graduate School, and the passing of a final oral examination. In addition, all Food Science Ph.D. candidates are assessed for English competency. International students who plan to be teaching assistants must also take the American English Oral Communicative Proficiency Test (AEOCPT).

**Dual-Title Ph.D. in Clinical and Translational Sciences**

Doctoral students with research and educational interests in clinical and translational science must apply for the Dual-Title Ph.D. Degree in Food Science and Clinical and Translational Sciences following admission to the Graduate School and Food Science and prior to taking the candidacy examination in Food Science. An admissions committee comprised of faculty affiliated with the dual-title program will evaluate applicants. Applicants must have a graduate GPA of at least 3.5 in a research area related to human health. Prospective dual-title program students must include in their application a statement of purpose that addresses the ways in which their research and professional goals will be enhanced by an interdisciplinary course of study in clinical and translational sciences.

The Dual-Title Ph.D. Degree in Food Science and Clinical and Translational Sciences emphasizes interdisciplinary scholarship at the interface of basic sciences, clinical sciences, and human health. Students in the dual-title program are required to have two advisers from separate disciplines: one individual serving as the primary mentor from the Graduate Program in Food Science and another individual serving as the secondary mentor from an area covered by the dual-title program who is a member of the Clinical and Translational Sciences faculty.

**Degree Requirements**

Requirements listed here are in addition to requirements stated in the Degree Requirements section of the Graduate Bulletin.

The Dual-Title Ph.D. Degree in Food Science and Clinical and Translational Sciences requires the completion of 18 credits of course work from an approved list of courses covering the areas of
epidemiology, bioinformatics, experimental design and interpretation, statistics, the regulatory environment, and scientific communication. Approximately 6 credits of course work may overlap with elective courses required by the Ph.D. Program in Food Science.

For students in the dual-title program, the candidacy examination consists of the standard Food Science candidacy exam with one modification. A member of the CTS faculty will join the standing FD SC candidacy committee during the normal FD SC exam and assess the student’s CTS knowledge. This occurs by assigning the student a paper that has clinical relevance, or by asking the student questions that required him or her to extend the assigned paper into a clinical/translational context. This examination must be completed before the end of the second year, within four semesters (summer sessions do not count) of entry into the doctoral program.

The student’s doctoral committee will include graduate faculty from the major program of study and faculty with expertise in clinical and translational science. In accordance with Graduate Council policy, the doctoral committee of a Food Science and CTS dual-title doctoral degree student must include at least one member of the CTS graduate faculty. Faculty members who hold appointments in both programs’ graduate faculty may serve in a combined role. If the chair of the doctoral committee representing Food Science is not also a member of the graduate faculty in CTS, the member of the committee representing CTS must be appointed as co-chair.

The fields of food science and clinical and translational sciences will be integrated in the student’s comprehensive examination. All students are required to conduct dissertation research that contributes fundamentally to the fields of food science and clinical/translational sciences.

**Student Aid**

Graduate assistantships available to students in this program and other forms of student aid are described in the STUDENT AID section of the Graduate Bulletin.

**Courses**

Graduate courses carry numbers from 500 to 599 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

**FOOD SCIENCE (FD SC) course list**
Hi John,

AS PIC of the BBH department I support you program’s addition to the Dule-title program and welcome your students to our classes.

See also attached.

Rob

On Mon, Jun 29, 2015 at 9:26 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Rob,

The FDSC faculty has voted to offer our students a dual title in Clinical and Translational Sciences and Food Science. As this potentially affects BBH, Graduate Council has requested we consult with your program before listing BBH courses in the table of approved electives for the CTS program.

A one line email indicating your support should sufficient. If you have any additional questions or concerns, I am happy to discuss this further.

Thanks!

John

--
Rob Turrisi, Ph.D.
Professor and Professor in Charge of the Graduate Program
Department of Biobehavioral Health
Director, Prevention Research to Optimize (PRO) Health Lab
Edna Bennett Pierce Prevention Research Center
The Pennsylvania State University
210 Biobehavioral Health Building
For mail: 219 Biobehavioral Health Building
University Park, PA 16802-6504
Phone(814)865-7808
Fax: (814)865-0612
rturris@psu.edu
URL: http://bbh.hhdev.psu.edu/lab/prcasp/index.html
Subject: Re: Support Email for CTS / FDSC dual title

Date: Wednesday, July 1, 2015 at 6:50:34 AM Eastern Daylight Time

From: Ralph L. Keil
To: John Hayes

Dear John,

The Biomedical Sciences (BMS) Graduate Program fully supports Food Science including BMS courses as electives for the CTS dual-title program. If necessary, would be happy to work with Food Science to help make arrangements for students to take these courses at UP via distance technology.

Ralph

Ralph L. Keil, PhD
Chair, Biomedical Sciences Graduate Program; med.psu.edu/bms
Chair, Biosafety & Recombinant DNA Committee; http://infonet.hmc.psu.edu/safety/biological/rDNA/index.htm

Dept of Biochemistry & Molecular Biology H171 | 500 University Dr. Rm. C5715 | Penn State College of Medicine | Hershey, PA 17033
| phone: 717-531-8595 | e-mail: rkeil@psu.edu | fax: 717-531-7072

On Jun 29, 2015, at 9:29 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Dr. Keil,

The FDSC faculty has voted to offer our students a dual title in Clinical and Translational Sciences and Food Science. As this potentially affects BMS, Graduate Council has requested we consult with your program before listing BMS courses in the table of approved electives for the CTS program.

A one line email indicating your support should sufficient. If you have any additional questions or concerns, I am happy to discuss this further.

Thanks!

jh
--
John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
Subject: Re: Consultation on CTS / FDSC dual title

Date: Tuesday, June 30, 2015 at 3:30:36 PM Eastern Daylight Time

From: David Gilmour

To: John Hayes

Hi John,

Since the only course that should be affected is BMMB 852 - Applied Bioinformatics, I support the CTS dual title.

******************************************************************

David S. Gilmour
Professor of Biochemistry and Molecular Biology
Co-director of the BMMB graduate program
Center for Eukaryotic Gene Regulation
Department of Biochemistry and Molecular Biology
465A North Frear
Penn State University
University Park, PA 16802

Office: 814-863-8905
Lab: 814-865-3795
Fax: 814-863-7024
Cellphone: 814-777-4166
Research web page: http://bmb.psu.edu/directory/dsg11
BMB Department: http://bmb.psu.edu/
Center for Eukaryotic Gene Regulation: http://www.huck.psu.edu/institutes-and-centers/cgr

On Jun 29, 2015, at 9:35 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Dr. Gilmore,

The FDSC faculty has voted to offer our students a dual title in Clinical and Translational Sciences and Food Science. As this potentially affects BMMB, Graduate Council has requested we consult your program before listing BMMB courses in the table of approved electives for the CTS program. Given your program’s prior support for the CTS dual title, I am assuming this shouldn’t require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh
--
John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
Subject: Re: Consultation on CTS / FDSC dual title
Date: Tuesday, June 30, 2015 at 10:43:33 AM Eastern Daylight Time
From: Jonathan H. Marks
To: eah28@psu.edu
CC: John Hayes

Dear John,

I concur. We would be happy to have all BIOET/bioethics courses listed as electives!

Best wishes,
Jonathan

Jonathan H. Marks
Director, Bioethics Program
Senior Fellow, Rock Ethics Institute, Penn State;
Network Fellow, Edmond J. Safra Center for Ethics, Harvard
814-865 5938
jonathanmarks.info
bioethics.psu.edu

From: "Erin Heidt-Forsythe" <eah28@psu.edu>
To: "John Hayes" <jeh40@psu.edu>, "Jonathan H. Marks" <jhm20@psu.edu>
Sent: Tuesday, June 30, 2015 2:45:07 AM
Subject: Re: Consultation on CTS / FDSC dual title

Hi Dr. Hayes,

This sounds good to me. A quick note that today is my last day as interim director; I've cc:d Jonathan Marks who will take over as director of Bioethics July 1.

Best
Erin

On Mon, Jun 29, 2015 at 3:39 PM, John Hayes <jeh40@psu.edu> wrote:

Dear Dr. Heidt-Forsythe,

The FDSC faculty has voted to offer our students a dual title in Clinical and Translational Sciences and Food Science. As this potentially affects BIOET, Graduate Council has requested we consult your program before listing BIOET courses in the table of approved electives for the CTS program. Given your program's prior support for the CTS dual title, I am assuming this shouldn't require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions
or concerns, I am happy to discuss this in more detail.

Thanks!

jh

--

John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40

--

Erin Heidt-Forsythe
Assistant Professor, Departments of Women's Studies and Political Science
Interim Director, Bioethics Program
Penn State University
123 Willard Building
University Park, PA 16803
Subject: Re: Consultation on CTS / FDSC dual title
Date: Thursday, July 2, 2015 at 12:38:35 AM Eastern Daylight Time
From: Eva S. Lefkowitz
To: John Hayes

Dear John,

The HDFS department supports your pursuit of adding the option of a dual title in Clinical and Translational Sciences and Food Science.

Let me know if you have further questions.

Eva S. Lefkowitz, Ph.D.
Professor of Human Development
Professor-in-Charge, HDFS Graduate Program
Human Development and Family Studies
Penn State University
119 Health and Human Development Building
University Park, PA 16802
phone: 814-863-7005
fax: 814-863-7963

my web sites:

http://www.hhdev.psu.edu/hdfs/faculty/lefkowitz.html
http://www.evalefkowitz.com/prof-dev-blog.html
https://twitter.com/EvaLefkowitz

departmental web site:

http://www.hhdev.psu.edu/hdfs/

On Mon, Jun 29, 2015 at 9:42 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Eva,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences and Food Science. As this potentially affects HDFS, Graduate Council has requested we consult your program before listing HDFS courses in the table of approved electives for the CTS program. Given your program's prior support for the CTS dual title, I am assuming this shouldn't require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh
--
John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
Subject: Re: Consultation on CTS / FDSC dual title

Date: Thursday, July 2, 2015 at 12:39:38 PM Eastern Daylight Time

From: CHRISTOPHER ALAN CALKINS

To: John Hayes

Dear John,

I need to share this with Marianne Hillemeier, our department head. As for the MHA programs we are in agreement with your proposal.

Chris

----- Original Message ----- 
From: "John Hayes" <jeh40@psu.edu>
To: cxc20@psu.edu
Sent: Monday, June 29, 2015 9:46:40 AM
Subject: Consultation on CTS / FDSC dual title

Dear Chris,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences and Food Science. As this potentially affects HPA, Graduate Council has requested we consult your program before listing HPA courses in the table of approved electives for the CTS program. Given your program¹s prior support for the CTS dual title, I am assuming this shouldn¹t require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh

--
John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
Subject: Re: Consultation on CTS / FDSC dual title
Date: Saturday, July 25, 2015 at 10:14:17 AM Eastern Daylight Time
From: Steve Piazza
To: John Hayes
CC: Jim Pawelczyk

Hi John,
I'm sorry I didn't respond to your earlier email - I received it when I was on vacation and failed to follow up on it when I got back.

Your plans to list KINES 588 among the electives in your dual-title with CTS has our full support.

Best regards,
Steve

--
Stephen Piazza, PhD
Professor
Departments of Kinesiology, Mechanical Engineering (by courtesy),
and Orthopaedics & Rehabilitation (by courtesy)
Graduate Program Professor-in-Charge, Department of Kinesiology
Biomechanics Laboratory
29 Recreation Building
The Pennsylvania State University
University Park, PA 16802

----- Original Message ----- 
| From: "John Hayes" <jeh40@psu.edu>
| To: piazza@psu.edu
| Cc: "Jim Pawelczyk" <jap18@psu.edu>
| Sent: Friday, July 24, 2015 4:54:06 PM
| Subject: Re: Consultation on CTS / FDSC dual title
|
| Dear Dr. Piazza,
|
| Just following up to see if you had time to consider my request regarding
| the CTS program.
|
| Thank you.
|
| jh
|
| On 6/29/15, 10:07 AM, "John Hayes" <jeh40@psu.edu> wrote:
|
| >Dear Dr. Piazza,
|>
| >The FDSC faculty has voted to offer our students the option of a dual
|>title in Clinical and Translational Sciences. As this potentially affects
|>KINES, Graduate Council has requested we consult your program before
|>listing KINES 588 in the table of approved electives for the CTS program.
|>Given your program's prior support for the CTS dual title, I am assuming
|>this shouldn't require much if any discussion.
If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
Subject: Re: consultation on CTS/FDSC dual title

Date: Wednesday, July 1, 2015 at 12:27:05 PM Eastern Daylight Time

From: Melissa Rolls

To: Cooduvalli Shashikant

CC: John Hayes, tlo12@psu.edu

Dear John

I am very supporting of the CTS Dual Degree Program, and it is great you are adding this as an option with FDSC!

best

Melissa

Melissa Rolls
Associate Professor of Biochemistry and Molecular Biology
Penn State
118 Life Sciences Building
University Park, PA 16802
814-867-1395, 814-933-6432
Chair, Molecular, Cellular and Integrative Biosciences program
http://www.huck.psu.edu/education/molecular-cellular-and-integrative-biosciences/
Director, Center for Cellular Dynamics
http://www.huck.psu.edu/center/cellular-dynamics

On Jun 30, 2015, at 11:46 AM, Cooduvalli Shashikant <css13@psu.edu> wrote:

I am okay with this. I am copying to Melissa Rolls for her approval as well.

On Tue, Jun 30, 2015 at 11:35 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Cooduvalli,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences. As this potentially affects two MCIBS courses (551 and 591), Graduate Council has requested we consult program chairs before listing them in the table of approved electives for the CTS / FDSC dual title.

Given the previous support of the IBIOS program for the CTS dual title, I am assuming this shouldn’t require much, if any, discussion. If you could please send me a one line email indicating the support of MCIBS, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

--

John E. Hayes, Ph.D.
--
Cooduvalli S Shashikant
Associate Professor of Molecular and Developmental Biology
Department of Animal Science, College of Agricultural Sciences

Program Director, CBIOS Predoctoral Training Program
Co-Director, MCIBS Graduate Program Option in Bioinformatics and Genomics
The Huck Institutes of the Life Sciences
The Pennsylvania State University

Mail: 324 Henning Building, University Park, PA 16802.
Office: 323 ASI, Lab: 308 Henning, Tel no. 814-863-0658 (O); 814-863-6042 (Fax)
814-883-5572 (cell)
Subject: RE: Consultation on CTS / FDSC dual title
Date: Friday, July 24, 2015 at 5:27:19 PM Eastern Daylight Time
From: Kristen Kjerulff
To: John Hayes, khk2@psu.edu
CC: Jim Pawelczyk

Hi John,

Yes, I support the listing of PHS courses in the table of approved electives for the dual title program in Clinical and Translational Sciences.

Thank you,

Kris

Kristen H. Kjerulff, Ph.D., M.A.
Professor
Departments of Public Health Sciences and Obstetrics and Gynecology
Director, Master of Science Program, Department of Public Health Sciences
College of Medicine, Penn State University
90 Hope Drive
Hershey, PA 17033
717-531-1258 (Phone)
717-531-0188 (Fax)
khk2@psu.edu

-----Original Message-----
From: John Hayes [mailto:jeh40@psu.edu]
Sent: Friday, July 24, 2015 4:55 PM
To: khk2@psu.edu
Cc: Jim Pawelczyk
Subject: Re: Consultation on CTS / FDSC dual title
Importance: High

Dear Dr. Kjerulff,

Just following up to see if you had time to consider my request regarding the CTS program.

Thank you.

jh

On 6/29/15, 10:10 AM, "John Hayes" <jeh40@psu.edu> wrote:

Dear Dr. Kjerulff,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences. As this potentially affects PHS, Graduate Council has requested we consult your program
before listing PHS courses in the table of approved electives for the CTS program. Given your program’s prior support for the CTS dual title, I am assuming this shouldn’t require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh

--

John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
Subject: Re: Consultation on CTS / FDSC dual title
Date: Monday, June 29, 2015 at 9:46:11 PM Eastern Daylight Time
From: Kristin
To: John Hayes
CC: kab37@psu.edu

Dear John,
Yes you can continue to list PSY 583 as an approved elective for the CTS program.
Best,
Kristin

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Kristin A. Buss, PhD
Professor of Psychology
Director of Graduate Training
The Pennsylvania State University
Director of Harrisburg Center for Healthy Child Development and PACT
256 Moore Bldg.
814-863-1715
kbuss@psu.edu

On Jun 29, 2015, at 9:15 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Dr. Buss,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences. As this potentially affects your program, Graduate Council has requested we consult you before listing PSYCH 583 in the table of approved electives for the CTS program.
Given your program’s prior support for the CTS dual title, I am assuming this shouldn’t require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh
--
John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
**Subject:** Consultation on CTS / FDSC dual title  
**Date:** Friday, July 3, 2015 at 11:58:33 AM Eastern Daylight Time  
**From:** Bronson, Sarah  
**To:** John Hayes  
**CC:** Gill, Donald, Lynch, Christopher

Hi John,

Thank you for giving us the opportunity to review your program change to adopt the Dual-Title in Clinical and Translational Science. The opportunities that the Biomedical Sciences doctoral trainees have had via the Dual-Title are exciting and valuable; and increasing the number of graduate degree programs that offer the Dual-Title increases the interdisciplinary composition of the classes and improves the education for all so we are happy to support your initiative.

In the event that PSIO 501 is the appropriate course for an FDSC student due to their location on the Hershey campus they would be very welcome to register and participate.

Sarah

Sarah K. Bronson, Ph.D  
Associate Professor of Cellular & Molecular Physiology  
Director, Research Development and Interdisciplinary Research  
Co-Director, Junior Faculty Development Program  
The Penn State University College of Medicine  
500 University Drive; H166; Room C1742A  
Hershey, PA 17033-0850  
717 531-5194 (voice)  
717 531-7667 (facs)  
sbronson@psu.edu  
http://www.pennstatehershey.org/web/researchdevelopment/home  
http://www2.med.psu.edu/researchconcierge/

-----Original Message-----
From: John Hayes [mailto:jeh40@psu.edu]  
Sent: Monday, June 29, 2015 5:04 PM  
To: Bronson, Sarah  
Subject: Re: Consultation on CTS / FDSC dual title

Sarah,

Yes, in theory we are talking about PSIO 501 per the menu of courses that were previously negotiated between UP and HMC for the CTS program.

Candidly, it is very unlikely one of our UP based students would travel down for this course, but Graduate Council is requesting that we contact all programs that are potentially affected by this program change. And since PSIO 501 is on the list that the CTS program put together, I did some googling and figured you were the best person to contact.

Cheers.

John
On 6/29/15, 4:51 PM, "Bronson, Sarah" <sbrson@hmc.psu.edu> wrote:

John,
What program are you looking to receive consultation from? Biomedical Sciences? IGDP in Physiology?
You did not attach your proposal but I am assuming that the table on pages 3-5 is what you are referring to?
Those courses were added to the table primarily for students on the Hershey campus and are examples of reciprocity between the degrees.
Please advise.
Sarah

-----Original Message-----
From: John Hayes [mailto:jeh40@psu.edu]
Sent: Monday, June 29, 2015 10:27 AM
To: skb8@psu.edu
Subject: Consultation on CTS / FDSC dual title

Dear Dr. Bronson,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences. As this potentially affects your program, Graduate Council has requested we consult you before listing PSIO courses in the table of approved electives for the CTS program.
Given your program's prior support for the CTS dual title, I am assuming this shouldn't require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh
--
John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
Subject: RE: Consultation on CTS / FDSC dual title
Date: Monday, June 29, 2015 at 10:56:08 AM Eastern Daylight Time
From: Vrana, Kent
To: John Hayes
CC: Yun, Jong

John -
Your plan to participate in the CTSI dual-title program has the full support of the Department of Pharmacology.

Good luck.

Cheers,
Kent

Kent E. Vrana, Ph.D.
Elliot S. Vesell Professor & Chair
Department of Pharmacology

Editor-in-Chief, PHARMACOLOGY –
International Journal of Experimental and Clinical Pharmacology (Karger Press)

Penn State College of Medicine
500 University Drive, R130
P.O. Box 850
Hershey, PA 17033-0850

Member, Society of Distinguished Educators &
Co-Director, Clinical Learning and Competencies (PBL)
Phone: 717-531-8285
Fax: 717-531-0419
e-mail: kvrana@psu.edu

-----Original Message-----
From: John Hayes [mailto:jeh40@psu.edu]
Sent: Monday, June 29, 2015 10:27 AM
To: kev10@psu.edu
Subject: Consultation on CTS / FDSC dual title

Dear Dr. Vrana,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences. As this potentially affects your program, Graduate Council has requested we consult you before listing PHARM 520 in the table of approved electives for the CTS program.

Given your program's prior support for the CTS dual title, I am assuming this shouldn't require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!
John E. Hayes, Ph.D.
Associate Professor, Food Science
Director, Sensory Evaluation Center
The Pennsylvania State University
220 Erickson Food Science Building
University Park, PA 16802
(814) 863-7129
http://foodscience.psu.edu/directory/jeh40
Subject: Re: Consultation on CTS / FDSC dual title

Date: Monday, June 29, 2015 at 11:02:30 AM Eastern Daylight Time

From: Anthony Schmitt

To: John Hayes

CC: Val Beasley

Hi John,

Glad to hear of your interest in adding the dual title CTS program for Food Science. I think it is a great opportunity for programs like FDSC and VBS that have strong basic science focus that relates to human health and disease.

May I ask which VBSC courses you will list as electives? I don't anticipate that there will be any difficulties or objections at all, but I should notify those instructors so that they are aware of the situation.

Thanks,

Tony

________________________________________________________

Anthony P. Schmitt, Ph.D.
Associate Professor of Molecular Virology
Center for Molecular Immunology and Infectious Disease
Department of Veterinary and Biomedical Sciences
The Pennsylvania State University
115 Henning Building
University Park, PA 16802

phone: (814) 863-6781
e-mail: aps13@psu.edu

On Jun 29, 2015, at 10:33 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Dr. Schmitt,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences. As this potentially affects your program, Graduate Council has requested we consult you before listing VBSC courses in the table of approved electives for the CTS program.

Given your program's prior support for the CTS dual title, I am assuming this shouldn't require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh
Subject: Re: Consultation on CTS / FDSC dual title
Date: Friday, August 21, 2015 at 3:00:11 PM Eastern Daylight Time
From: Aleksandra Slavkovic
To: John Hayes
CC: sesa@stat.psu.edu, MOSUK CHOW

Dear John,

I apologize for a delay in responding! I hope this is still in time for you to process everything.

Statistics will support the CTS dual title.

I am also cc-ing on this email Dr. Mosuk Chow, the director of our Masters of Applied Statistics program as many classes you have listed are typically taken by the MAS students.

Please let me know if you need any other info at this point.

Best,
Aleksandra

On Jun 29, 2015, at 10:29 AM, John Hayes <jeh40@psu.edu> wrote:

Dear Dr. Slavkovic,

The FDSC faculty has voted to offer our students the option of a dual title in Clinical and Translational Sciences. As this potentially affects your program, Graduate Council has requested we consult you before listing STAT courses in the table of approved electives for the CTS program.

Given your program's prior support for the CTS dual title, I am assuming this shouldn't require much if any discussion.

If you could send me a one line email indicating your support, I would greatly appreciate it. Alternatively, if you have any additional questions or concerns, I am happy to discuss this in more detail.

Thanks!

jh

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