

Engineering and Public Policy PhD Program

Supporting Documents

10/4/18

- 1) Library (FaghriA_Engineering and Public Policy PhD_DawesT LibrarySupportLetter_2018-09-24pdf)
- 2) College of Engineering (FaghriEngineering PublicPolicy2.pdf)
 - a. Dean Babatunde A. Ogunnaike
 - b. Mechanical Engineering – Ajay Prasad
 - c. Chemical and Biomolecular Engineering – Eric Furst
 - d. Electrical and Computer Engineering – Ken Barner
 - e. Computer and Information Systems – Kathy McCoy
 - f. Materials Science and Engineering – Darrin Pochan
 - g. Biomedical Engineering – Dawn Elliott
- 3) Course Approval (FaghriEngineeringPP4.pdf)
 - a. Business Administration (BUAD) – Hemant Kher
 - b. Disaster Science and Management (DISA) – Joseph Trainor
 - c. Economics (ECON) – Michael Arnold
 - d. Energy and Environmental Policy (ENEP) – Ismat Shah
 - e. Accounting and Management Information Systems (MISY) – Carolyn Levine
 - f. Philosophy (PHIL) – Joel Pust
 - g. Political Science and International Relations (POSC) – Dave Redlawsk
 - h. Sociology and Criminal Justice (SOCI) – Karen Parker
 - i. Geography (GEOG) – Del Levia
 - j. Marine Science and Policy (MAST) – Mark Moline
- 4) Civil and Environmental Engineering Graduate Committee (FaghriEngineering PP6.pdf)



University of Delaware Library

VICE PROVOST FOR LIBRARIES AND MUSEUMS
AND MAY MORRIS UNIVERSITY LIBRARIAN

181 South College Avenue
Newark, DE 19717-5267
Phone: 302-831-2231
Fax: 302-831-1046

September 24, 2018

Memorandum

To: Ardeshir Faghri
Professor
Department of Civil and Environmental Engineering

From: Trevor A. Dawes
Vice Provost for Libraries and Museums
and May Morris University Librarian

I am responding to your request to supply information about the capability of the University of Delaware Library to support permanent status for the PhD in Engineering and Public Policy.

The existing online and print collections of the University of Delaware Library, Museums and Press, which are strong in the sciences, social sciences and related interdisciplinary areas, are currently able to support this program. However, no additional funding is available for new resources. Enclosed is a description of collections, resources and services available for this purpose.

I would be pleased to respond to any questions.

/nb
Enclosure

c: University of Delaware Library, Museums and Press
Susan Davi, Associate Librarian and Head,
Collection Management and Licensed Electronic Content Department
M. Dina Giambi, Associate University Librarian for Budget and Collections
Sabine Lanteri, Senior Assistant Librarian, Reference and Instructional Services Department
Thomas Melvin, Librarian, Reference and Instructional Services Department
Carol Rudisell, Librarian and Head, Reference and Instructional Services Department
William Simpson, Associate Librarian, Reference and Instructional Services Department
John Stevenson, Associate Librarian and Head, Multimedia Collections and Services Department



September 24, 2018

Report on Library Services and Collections in Support of the
PhD in Engineering and Public Policy

General Description

The University of Delaware Library, Museums and Press includes the Hugh M. Morris Library, where the main collection is housed; two branch libraries located on the Newark campus, the Chemistry Library and the Physics Library; and a third branch library, the Marine Studies Library, located in Lewes, Delaware. The Library collections parallel the University's academic interests and support all disciplines. The graduate programs in bioinformatics are interdisciplinary and are directly supported by the Library's strong collections in agriculture and natural resources, health sciences, all aspects of engineering, mathematics, marine science, biology, chemistry, public policy and other interdisciplinary areas.

Databases, full-text electronic journals and electronic books, books, periodicals, microforms, government publications, maps, manuscripts and media provide a major academic resource for the University of Delaware, the surrounding community, the state of Delaware and the nation. Library staff members provide a wide range of services.

The University of Delaware Library, Museums and Press is a U.S. depository library and a U.S. patent depository library and contains the complete file of every patent issued by the U.S. Patent and Trademark Office (USPTO).

The online catalog, DELCAT Discovery, provides access to millions of items by author, title, subject and keyword.

Library collections number over 2,720,000 and are broadly based and comprehensive. In 2016/2017, the Library Web <library.udel.edu> received over 3,900,000 page views.

Specific Support for Engineering and Public Policy

From the Draft Policy Statement dated September 2, 2018:

“Students will design a plan of study tailored to their interests. Possible topic areas include transportation, civil infrastructure, smart cities, sustainability, and energy and the environment. While initially these areas are focused in civil engineering, the intention is

that eventually the program will expand beyond civil engineering to areas such as biomedical ethics, cybersecurity, and net neutrality.”

The Library’s collections are strong and are well able to support the PhD in Engineering and Public Policy. For many years, the Library has supported related graduate and undergraduate programs in all areas in engineering, computer & information sciences, operations research, economics, geography, business administration, and public policy. The collections in these areas are excellent and continue to grow.

The Library has two experienced librarians who are available to work with the faculty and students in this program. They are:

- Thomas Melvin (tmel@udel.edu), Librarian, Reference & Instructional Services Department.
Areas of expertise: Earth, Ocean & Environment, Civil & Environmental Engineering, Electrical & Computer Engineering, Materials Science & Engineering, Mechanical Engineering, Patents.
- John Stevenson (varken@udel.edu), Associate Librarian and Head, Multimedia Collections & Services Department.
Areas of expertise: Public Policy & Administration, Digital Mapping/GIS, Government Documents (U.S.).

These liaison librarians can work with you to:

- Further develop Library collections, both print and electronic to support the teaching, learning and research needs of the program
- Provide research support for faculty and students in a consultation setting
- Provide instruction in a classroom setting
- Serve as a resource for the information needs of the faculty and students as they relate to the Library, Scholarly Communication, Open Access and other topics

Two other science librarians, Sabine Lanteri, Senior Assistant Librarian, and William Simpson, Associate Librarian, both in Reference & Instructional Services Department, have considerable expertise in related subject areas and can provide additional specialized services, as needed.

More than 200 research guides <guides.lib.udel.edu/> in all subject areas have been developed and are maintained by librarian liaisons. These research guides describe library resources and assist students in the research process. These guides introduce students to a wide array of useful resources including databases, eJournals, eBooks, reference materials, visual material and more. The librarians mentioned above are also available to work with faculty to develop research guides for specific courses within this program.

The Library subscribes to more than 400 online databases <library.udel.edu/databases/> which support research in all areas. Among the most important databases for study and research in engineering and public policy are: *Compendex*, *Scopus*, *Web of Science*, *CAB Abstracts*, *GeoRef*, *Materials Science & Engineering Database*, *ASTM Standards & Engineering Digital Library*, *IEEE Xplore*, *PAIS*, and *Business Source Premier*. *PolicyMap* (a data and mapping platform) and *ArcGIS* will also be useful to students in this program.

In addition to its extensive print-based collections, the Library provides access to more than 100,000 electronic journals <library.udel.edu/ejournals/> and more than 670,000 electronic books <library.udel.edu/ebooks/>. Within the Library's eJournal collection, the sciences are particularly strong, including almost all the journals published by Elsevier, Springer, and Wiley as well as smaller publishers such as Association for Computing Machinery (ACM), IEEE and IET, American Society of Civil Engineers (ASCE).

Within the eBook collection, online access to almost all eBooks published by Springer from 2005-present are of particular importance. The conference proceedings of the ACM and IEEE are available online via the *ACM Digital Library* and *IEEE Xplore*. *Knovel* and *Safari Tech Books* provide sci-tech reference data and eBooks on technology topics. Other eBooks related to this program are available from *ProQuest Ebook Central* and *EBSCOhost eBooks*.

The Library also subscribes to *RefWorks*, a web-based citation management tool that can be used with most databases.

The Library has strong collections of film and video <library.udel.edu/filmandvideo/> which support study and teaching in all subject areas.

The Library has a nationally recognized Student Multimedia Design Center <library.udel.edu/multimedia/> which provides access to equipment, software and training related to the creation of multimedia projects. The Student Multimedia Design Center includes over 80 workstations, six studios and two classrooms focused on multimedia creation. University of Delaware users also may borrow a wide variety of multimedia equipment. Through its Multimedia Literacy program, the Student Multimedia Design Center provides instructional support for faculty seeking to incorporate multimedia into their assignments.

The Library also maintains an Institutional Repository (<udspace.udel.edu/>), which archives research reports, documents and other resources produced by University of Delaware faculty and students.



Trevor A. Dawes
Vice Provost for Libraries and Museums
and May Morris University Librarian

On Apr 10, 2018, at 3:59 PM, Faghri, Ardeshir <faghri@udel.edu> wrote:

Hello Chairs. Attached, please find the latest draft of the doctoral program in Engineering & Public Policy. Ultimately, I will need a simple e-mail from each of you that says you are OK with the establishment of the program and look forward to collaborating in the future (or some statement like that).

Please let me know if you have any questions.

Thanks;

Arde Faghri
Civil Engineering

<Ph.D. in Engineering and Public Policy 8.11.2017-as.docx>

I support the program.

Babatunde A. Ogunnaike
William L. Friend Chaired Professor of Chemical Engineering,
Dean College of Engineering,
102 DuPont Hall,
Newark, DE 19716
ogunnaike@udel.edu
Phone: (302)-831-8017
Fax: (302)-831-6751

Sent from my iPad

On Apr 24, 2018, at 4:22 PM, Faghri, Ardeshir <faghri@udel.edu> wrote:

Dear Dean Ogunnaike:

For the record, please send me an e-mail expressing your support for the doctoral program in engineering and public policy. FYI, I've already received positive supports from Eric Furst, Darrin Pochan, Ajay Prasad and Dawn Elliott. Kathy McCoy and Ken Barner should be sending me their responses soon.

Thanks;

Arde

From: Prasad, Ajay K
Sent: Thursday, April 19, 2018 11:41:10 AM
To: Faghri, Ardeshir
Subject: RE: Doctoral program in Engineering & Public Policy

Arde,

On behalf of the ME department, I am pleased to provide support for your proposal to create a doctoral program in Engineering & Public Policy.

Ajay

Ajay K. Prasad
Engineering Alumni Distinguished Professor and Chair
Department of Mechanical Engineering
University of Delaware
Newark, DE 19716-3140
Ph: 302 831 1673
Fax: 302 831 3619
prasad@udel.edu

From: Furst, Eric M.
Sent: Thursday, April 19, 2018 7:07:02 AM
To: Faghri, Ardeshir
Subject: Re: Doctoral program in Engineering & Public Policy

Dear Prof. Faghri,

I support the proposal for a doctoral program in engineering and public policy. Having graduated from Carnegie Mellon University, who continue to offer a leading program in EPP, I can attest to the importance in studying the interface of engineering and policy. I believe it will be of great interest to those in chemical engineering working in renewable energy, CO2 sequestration, and other technologies designed to address pressing environmental and economic needs in our society.

Kind regards,
Eric

Eric M. Furst
Professor and Department Chair
Department of Chemical & Biomolecular Engineering
University of Delaware

Allan P. Colburn Laboratory, 150 Academy Street, Newark, DE 19716 USA
tel- +1 302-831-0102 email- furst@udel.edu web- lem.che.udel.edu

[Now in press: Microrheology, Oxford University Press, 2017](#)

[Watch the movie: Delaware Chemical and Biomolecular Engineering](#)

[Make a gift to Delaware Chemical and Biomolecular Engineering](#)

From: Kenneth Barner <barner@udel.edu>
Sent: Thursday, April 26, 2018 5:36:05 PM
To: Faghri, Ardeshir
Subject: Re: Doctoral program in Engineering & Public Policy

Okay — I'm good with this. But yes, there's a lot more we can do...

Kenneth E. Barner
Charles Black Evans Professor & Chair
Department of Electrical and Computer Engineering
University of Delaware Newark, Delaware 19716
Phone: (302) 831-6937 Fax: (302) 831-4316
Email: barner@udel.edu Web: www.ece.udel.edu/~barner

On Thu, Apr 26, 2018 at 12:16 PM, Faghri, Ardeshir <faghri@udel.edu> wrote:
Dear Ken;

Thanks for your response (Better late than never!) There are literally thousands of opportunities and ideas at the intersection of Cybersecurity technology, law and policy. One of the more recent and progressive centers I have seen (While I was in California last year) is a center for Cybersecurity Policy at the University of California-Irvine. Here's their web site:

<https://cpri.uci.edu/>

Some of the interesting research projects that are currently being worked on include:

- *Enhancing Supply Chain Security With Block chain and Related Emerging Technologies; and*
- *Towards a More Holistic Attribution Model for Cybersecurity.*

Having said that, I still need a simple e-mail from you confirming your approval for the establishment of the doctoral program in Engineering & Public Policy at the University of Delaware.

Thanks a lot, and I look forward to your approval e-mail.

Best Regards;

Arde



[UCI Cybersecurity Policy & Research Institute](#)

cpri.uci.edu

Individuals, corporations, governments and other institutions face unprecedented vulnerabilities in a world where everything is increasingly connected.

From: Kenneth Barner <barner@udel.edu>

Sent: Thursday, April 26, 2018 11:14:32 AM

To: Faghri, Ardeshir

Cc: McCoy, Kathleen F

Subject: Re: Doctoral program in Engineering & Public Policy

I'm late to the party — sorry about that.

I think we should look at the intersections between Cybersecurity and policy — there are a lot of opportunities in that area. Like I said, I know I'm late to the party, but what do you think about trying to see what intersections there might be we could capture?

Ken

Kenneth E. Barner
Charles Black Evans Professor & Chair
Department of Electrical and Computer Engineering
University of Delaware Newark, Delaware 19716
Phone: (302) 831-6937 Fax: (302) 831-4316
Email: barner@udel.edu Web: www.ece.udel.edu/~barner

Thanks a lot Kathy;

Arde

From: Kathleen McCoy <mccoy@udel.edu>

Sent: Tuesday, April 24, 2018 11:01:19 PM

To: Faghri, Ardeshir

Cc: Barner, Kenneth E.

Subject: Re: Doctoral program in Engineering & Public Policy

I am sorry for the delay. CIS supports the program.

Good luck!

Kathy

Kathleen. F. McCoy

Professor and Chair

Computer and Information Sciences

101J Smith Hall

University of Delaware

Newark, DE 19716

mccoy@udel.edu

Phone: 302-831-2711

Dear Prof. Faghri,

I support the new doctoral program in Engineering and Public policy. Much luck in getting things started.

Sincerely,

Darrin



Darrin J. Pochan, Professor and Chair
Materials Science and Engineering
Soft Matter, Editor in Chief
201 DuPont Hall
University of Delaware
Newark, DE 19716
302-831-3569 (ph)
<http://www.mseg.udel.edu>

Dear Prof. Faghri,

I support the proposal for a doctoral program in engineering and public policy.

Kind regards,

Dawn Elliott

DAWN M. ELLIOTT PH.D.

Chair of Biomedical Engineering

Blue and Gold Distinguished Professor of Biomedical Engineering

161 Colburn Lab

150 Academy Street

Newark, DE 19716

P: 302-831-1295

E: delliott@udel.edu

Dear Professor Faghri, after reading what my colleagues had to say about your proposal, I approve it based on your email below (maximum number of students taking the above courses in each academic year will not surpass 5).

Wish you the best for your program.

Hemant

Hemant Kher, Chairperson
Business Administration
Professor of Operations Management
kher@udel.edu
206 Alfred Lerner Hall
University of Delaware
Newark, DE 19716

From: Faghri, Ardeshir
Sent: Tuesday, September 4, 2018 4:34 PM
To: Kher, Hemant <kher@udel.edu>
Subject: Fw: New program

Dear Professor Kher:

The Department of Civil & Environmental Engineering (CEE) together with the School of Public Policy & Administration (SPPA) are in the process of creating a new doctoral degree program called Ph.D. in Engineering & Public Policy (the attached document gives more detail). Some of the technical elective courses that we have listed in this program are from your department. They are:

BUAD-621-Decision Analytics & Visualization
BUAD-831-Operation Management & Management Science

According to the UD Faculty Senate rules, we will need your (e-mail) approval if we want to successfully launch the program. We are anticipating a maximum of 20 students in the program, which means the maximum number of students taking the above courses in each academic year will not surpass 5.

Thank you for your time and consideration. Please inform me if you have any questions or concerns.

Best Regards;

Arde FAGHRI
Professor of Civil & Environmental Engineering

From: Joseph Trainor <jtrainor@udel.edu>
Sent: Wednesday, September 5, 2018 4:23 PM
To: Faghri, Ardeshir <faghri@udel.edu>
Subject: RE: Fw: New doctoral program

Dr. Faghri,

As the Director of the Disaster Science and Management Program, I am happy to provide this letter of support for the exciting new program in Engineering and Public Policy you have been developing with my colleagues in SPPA. I deeply appreciate my long standing collaborations with colleagues in the engineering department. I am sure the program will provide important interdisciplinary training to its students and would be happy to support this effort as appropriate. We would welcome students from this program in our DISA courses.

Best,
Joe

Joseph E. Trainor, PhD

Associate Professor, School of Public Policy & Administration
Director of Doctoral Studies, School of Public Policy and Administration
Program Director, Disaster Science and Management (DISA)
Core Faculty Member, Disaster Research Center
166 Graham Hall • Newark, DE 19716
jtrainor@udel.edu • Phone: 302-831-6618
www.sppa.udel.edu

Arde:

I am supportive of the inclusion of ECON804 and ECON825 with a few points of clarification. ECON670 will need to be addressed separately as the is offered through the School of Marine Science and Policy as MAST672 (it is only cross listed as ECON670). The Director there, Mark Moline, should be consulted regarding MAST672.

1. ECON804 is only offered intermittently and has a prerequisite of ECON803. ECON803 is required for both MA students in Economics and MS students in finance and is often full, so it might be difficult for students in your program to enroll in the prerequisite course. When offered, ECON804 would have more than sufficient capacity to accommodate your students, so I support including it on the list of technical electives.
2. ECON825 has two prerequisites, ECON822 and ECON823. All three of these courses could accommodate students from the new Ph.D. program, and I support the inclusion of ECON825 on the list as well.

Please let me know if you need any additional information or a more detailed letter of support.

Sincerely,

Michael

Michael Arnold, Chair
Department of Economics
University of Delaware
Newark, DE 19716

From: Faghri, Ardeshir
Sent: Tuesday, September 4, 2018 4:46 PM
To: Arnold, Michael A <marnold@udel.edu>
Subject: Fw: Need your approval for a new program

Dear Professor Arnold:

The Department of Civil & Environmental Engineering (CEE) together with the School of Public Policy & Administration (SPPA) are in the process of creating a new doctoral degree program called Ph.D. in Engineering & Public Policy (the attached document gives more detail). Some of the technical elective courses that we have listed in this program are from your department. They are:

ECON-670-Benefit/Cost Analysis
ECON-804-Applied Econometrics
ECON-825-Time-Series Econometrics

According to the UD Faculty Senate rules, we will need your (e-mail) approval if we want to successfully launch the program. We are anticipating a maximum of 20 students in the program, which means the maximum number of students taking the above courses in each academic year will not surpass 5.

Thank you for your time and consideration. Please inform me if you have any questions or concerns.

Best Regards;

Arde FAGHRI
Professor of Civil & Environmental Engineering

From: Shah, Syed
Sent: Tuesday, September 4, 2018 5:03:44 PM
To: Faghri, Ardeshir
Subject: Re: Engineering & Public Policy

Dear Arde-

With this e-mail I approve the addition of the ENEP courses as tech. elective courses to the new PhD in Engineering and Public Policy curriculum. Please let me know if ENEP can be of further help.

Thanks,
Ismat



S Ismat Shah
Director, Energy and Environmental Policy Program
Professor
Physics and Astronomy
Materials Science and Engineering
University of Delaware
208 DuPont Hall
Newark, DE 19716
Ph. 302-831-1618
Fx. 302-831-4545
Ismat@udel.edu

If you are born with wings, why crawl through life. Rumi

From: Faghri, Ardeshir
Sent: Tuesday, September 4, 2018 4:52:53 PM
To: Shah, Syed
Subject: Fw: Engineering & Public Policy

Dear Professor Ismat Shah:

The Department of Civil & Environmental Engineering (CEE) together with the School of Public Policy & Administration (SPPA) are in the process of creating a new doctoral degree program called Ph.D. in Engineering & Public Policy (the attached document gives more detail). Some of the technical elective courses that we have listed in this program are from your department. They are:

ENEP-625-Energy Policy & Administration
ENEP-626-Climate Change
ENEP-660-Engineering Economic Analysis for Sustainable Energy
ENEP-667-Environmental Conflict Resolution
ENEP-810-Political Economy of the Environment
ENEP-820-International Perspectives on Energy & the Environment
ENEP-821-Technology, Environment & the Society
ENEP-824-Sustainable Energy Policy & Planning

According to the UD Faculty Senate rules, we will need your (e-mail) approval if we want to successfully launch the program. We are anticipating a maximum of 20 students in the program, which means the maximum number of students taking the above courses in each academic year will not surpass 5.

Thank you for your time and consideration. Please inform me if you have any questions or concerns.

Best Regards;

Arde FAGHRI
Professor of Civil & Environmental Engineering

From: Levine, Carolyn
Sent: Tuesday, September 4, 2018 8:01:42 PM
To: Faghri, Ardeshir
Subject: Re: Approval Needed

I checked with the faculty and we would be happy to have those electives included in your program.

Please consider this our department's formal approval.

Looking forward to working with you in the future,
Carolyn

Carolyn Levine

Professor and Chairperson

Accounting and Management Information Systems

206 Purnell Hall

Lerner College of Business and Economics

University of Delaware

302-831-2973

clevine@udel.edu

On Sep 4, 2018, at 5:19 PM, Faghri, Ardeshir <faghri@udel.edu> wrote:

Dear Professor Levine:

The Department of Civil & Environmental Engineering (CEE) together with the School of Public Policy & Administration (SPPA) are in the process of creating a new doctoral degree program called Ph.D. in Engineering & Public Policy (the attached document gives more detail). Some of the technical elective courses that we have listed in this program are from your department. They are:

MISY-631-Data Mining for Business Analytics
MISY-840-Project Management & Costing

According to the UD Faculty Senate rules, we will need your (e-mail) approval if we want to successfully launch the program. We are anticipating a maximum of 20 students in the program, which means the maximum number of students taking the above courses in each academic year will not surpass 5.

Thank you for your time and consideration. Please inform me if you have any questions or concerns.

Best Regards;

Arde FAGHRI
Professor of Civil & Environmental Engineering
<Ph.D. in Engineering and Public Policy 9.2.2018.docx>

Dear Professor Faghri,

I am, as of a few days ago, the new Chairperson of Philosophy. Your email was forwarded to me by the former chair, Prof. Draper.

This email constitutes our approval to include

PHIL-648-Environmental Ethics

as an elective for the proposed Ph.D. Program in Engineering and Public Policy.

I should, however, note that while the department will likely be offering this course regularly, we cannot guarantee its being offered indefinitely as we are an undergraduate-only program and may have other teaching priorities. I assume that is not a problem as the course would merely be one of a large number of elective courses.

Sincerely Yours,

Joel Pust

Joel Pust
Department of Philosophy
University of Delaware
Newark, DE 19716-2567
<http://udel.edu/~jpust/>
302-831-8208

Dear Prof. Faghri,

The Department of Political Science and International Relations approves the listing of our course, POSC 818, as an elective in your program. Please note that this course is generally taught no more often than every other year.

Best wishes,

Dave Redlawsk
Chair

At 05:27 PM 9/4/2018, Faghri, Ardeshir wrote:

Dear Professor Redlawsk:

The Department of Civil & Environmental Engineering (CEE) together with the School of Public Policy & Administration (SPPA) are in the process of creating a new doctoral degree program called Ph.D. in Engineering & Public Policy (the attached document gives more detail). Some of the technical elective courses that we have listed in this program are from your department. They are:

POSC-818-Environmental Politics & Policy (With UAPP)

According to the UD Faculty Senate rules, we will need your (e-mail) approval if we want to successfully launch the program. We are anticipating a maximum of 20 students in the program, which means the maximum number of students taking the above courses in each academic year will not surpass 5.

Thank you for your time and consideration. Please inform me if you have any questions or concerns.

Best Regards;

Arde FAGHRI

Professor of Civil & Environmental Engineering

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David P. Redlawsk, Ph.D.

Twitter: @DavidRedlawsk

Email: [redlawsk@udel.edu](mailto:redlawsk@udel.edu)

Web: [www.poscir.udel.edu](http://www.poscir.udel.edu)

James R. Soles Professor and Chair  
Department of Political Science and International Relations  
University of Delaware  
344 Smith Hall, 18 Amstel Ave.  
Newark, DE 19716  
302-831-2357

President, International Society of Political Psychology  
[www.ispp.org](http://www.ispp.org)



Hi Arde. Thanks for reaching out to us about the new doctoral degree program in CEE and SPPA. It sounds exciting and we wish you the best with it.

You have my approval to list SOCI-605 among the electives.

As for SOCI 676- Adv Qualitative Methods, this course is only offer every 2 years and it is at capacity. We do not want it listed as an elective until the course can be offered more often, etc.

SOCI-625 is also problematic. It has two prerequisties (SOCI 605 and SOCI 614) which means students in your new program would not be able to enroll without taking those courses first. It is also offered only once every 2 years.

If you have questions, let me know. Karen

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**From:** Faghri, Ardeshir  
**Sent:** Tuesday, September 4, 2018 5:37:11 PM  
**To:** Parker, Karen Faye  
**Subject:** Fw: A new doctoral program

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Dear Professor Parker:

The Department of Civil & Environmental Engineering (CEE) together with the School of Public Policy & Administration (SPPA) are in the process of creating a new doctoral degree program called Ph.D. in Engineering & Public Policy (the attached document gives more detail). Some of the technical elective courses that we have listed in this program are from your department. They are:

SOCI-605-Data Collection & Analysis  
SOCI-625-Advanced Social Statistics  
SOCI-676-Advanced Quantitative Methods

According to the UD Faculty Senate rules, we will need your (e-mail) approval if we want to successfully launch the program. We are anticipating a maximum of 20 students in the program, which means the maximum number of students taking the above courses in each academic year will not surpass 5.

Thank you for your time and consideration. Please inform me if you have any questions or concerns.

Best Regards;

Arde FAGHRI  
Professor of Civil & Environmental Engineering

I approve the inclusion of GEOG649, GEOG670, and GEOG671 into your curriculum.

Kind regards,

Del Levia

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Delphis F. Levia, Ph.D.  
Professor of Ecohydrology

Chair, Department of Geography

Joint Appt., Department of Plant & Soil Sciences  
University of Delaware, Newark, DE 19716-2541, USA  
Series Editor, Ecological Studies- Analysis and Synthesis (Springer Nature)  
Associate Editor, *Journal of Plant Nutrition and Soil Science* (Wiley)  
Skype: del.levia; Tel: (302) 831-3218; Fax: (302) 831-6654

This is great, thank you so much Mark, we will take all your comments into consideration before submitting our proposal to faculty senate.

Thanks again;

Arde

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**From:** Moline, Mark Alan  
**Sent:** Friday, September 28, 2018 11:00:03 AM  
**To:** Faghri, Ardeshir  
**Subject:** RE: THANK YOU

Hello Arde

Thank you for the request to highlight these courses in the proposed PhD in Engineering and Public Policy. The faculty body responsible for reviewing these courses was unanimously in support of including these courses. I too am in favor of adding these to the proposed major.

There were some discussions about particular offerings for consideration with an offer to work with our faculty as the program develops to best tailor some of these courses for students in this new degree. Ideas below.

Current proposed courses approved by SMSP. See one possible exception in red.

MAST-663-Decision Tools for Policy Analysis  
MAST-660-International & National Ocean Policies  
MAST-662-Climate Change  
MAST-674-Legal Aspect of the Coastal Zone  
MAST-684-Electric Vehicles & the Grid  
MAST-692-Environmental Values, Movements & Policies (Likely not going to be taught again as instructor has shifted focus)

Other course suggestions and possible options for this degree.

1. Selected methods courses for connecting engineering/technology and policy
  - a. Cost Benefit Analysis  
MAST 672/ECON 670 Benefit Cost Analysis
  - b. Environmental economics (good elective)  
MAST 675 Economics of Natural Resources  
MAST 676 Environmental Economics
  - c. Legal courses related to climate and environment (electives that may broaden)  
MAST 439/480 Renewable Energy & Climate: Law, Regulation and Environment
2. Selected topics courses that may be relevant
  - a. Marine technology and infrastructure courses  
MAST 428 Offshore Wind Power, Science, Engineering and Policy

- b. Marine resource/energy course(s)  
MAST 660 Int'l and Nat'l Ocean Policy  
MAST 674 Legal Aspects of the Coastal Zone
- 3. Capstone type courses integrating engineering, technology, policy  
MAST 802 Case Study in Environmental Decision Making  
(could fit) MAST 428 Offshore Wind Power, Science, Engineering and Policy

Thank you again for the opportunity to support this new degree.

Regards,

Mark

Mark A. Moline, Director  
School of Marine Science and Policy  
College of Earth, Ocean, and Environment  
University of Delaware  
700 Pilottown Road  
Lewes, DE 19958  
(302) 645-4263  
[mmoline@udel.edu](mailto:mmoline@udel.edu)

Newark Campus  
101 Robinson Hall  
Newark, DE 19716  
(302) 831-6707

**From:** Faghri, Ardeshir  
**Sent:** Friday, September 14, 2018 1:00 PM  
**To:** Moline, Mark Alan <[mmoline@udel.edu](mailto:mmoline@udel.edu)>  
**Subject:** THANK YOU

Dear Professor Moline:

My department of Civil & Environmental Engineering together with the School of Public Policy and Administration are creating a new doctoral program called Ph.D. in Engineering & Public Policy (the attached document gives more detail). Some of the technical elective courses that we have listed in the program are from your department. They are:

MAST-663-Decision Tools for Policy Analysis  
MAST-660-International & National Ocean Policies  
MAST-662-Climate Change  
MAST-674-Legal Aspect of the Coastal Zone  
MAST-684-Electric Vehicles & the Grid  
MAST-692-Environmental Values, Movements & Policies

According to the UD Faculty Senate rules, we will need your e-mail approval if we are to successfully launch the program. We are anticipating a maximum of 20 students in the program, which means the maximum number of students taking the above courses in each academic year will not surpass 5.

I sent an e-mail to Dean Atekwana, but did not receive a response.

I'd appreciate your response at your earliest convenience.

Best Regards;

Arde Faghri  
Professor of Civil & Environmental Engineering

**From:** Victor Kaliakin <[kaliakin@udel.edu](mailto:kaliakin@udel.edu)>

**Sent:** Tuesday, May 1, 2018 5:54 PM

**To:** Faghri, Ardeshir <[faghri@udel.edu](mailto:faghri@udel.edu)>; Attoh-Okine, Busby N O <[okine@udel.edu](mailto:okine@udel.edu)>; Hsu, Tianjian <[thsu@udel.edu](mailto:thsu@udel.edu)>; Shenton, Tripp <[shenton@udel.edu](mailto:shenton@udel.edu)>; Cha, Daniel K <[cha@udel.edu](mailto:cha@udel.edu)>; Michael, Holly Anne <[hmichael@udel.edu](mailto:hmichael@udel.edu)>

**Cc:** Reoli, Christine S. <[creoli@udel.edu](mailto:creoli@udel.edu)>

**Subject:** Doctoral program in Engineering & Public Policy

Graduate Committee Members:

Attached is the latest draft of the doctoral program in Engineering & Public Policy, courtesy of Arde Faghri. For it to move forward, Arde would need a simple e-mail from each of you in support of establishing such a program in our department.

As such, please read over the draft and direct any questions to Arde (with a copy to the rest of the committee members).

Thanks,

Vic

+++++

Victor N. Kaliakin

Professor, Department of Civil & Environmental Engineering

University of Delaware

360F P.S. DuPont Hall

Newark, DE 19716 U.S.A.

voice: 302.831.2409 ; FAX: 302.831.3640

web: <http://nwp.engr.udel.edu/cieg/faculty/kaliakin/>

Dear Vic

I am ok - moving forward

Nii

On Tue, May 1, 2018 at 5:54 PM, Victor Kaliakin <[kaliakin@udel.edu](mailto:kaliakin@udel.edu)> wrote:

Graduate Committee Members:

Attached is the latest draft of the doctoral program in Engineering & Public Policy, courtesy of Arde Faghri. For it to move forward, Arde would need a simple e-mail from each of you in support of establishing such a program in our department.

As such, please read over the draft and direct any questions to Arde (with a copy to the rest of the committee members).

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Victor N. Kaliakin

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voice: 302.831.2409 ; FAX: 302.831.3640

web: <http://nwp.engr.udel.edu/cieg/faculty/kaliakin/>



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*Nii O. Attoh-Okine, Ph.D., P.E., F.ASCE*

Academic Director, UD Cybersecurity Initiative

Professor, Civil and Environmental Engineering

Professor, Electrical and Computer Engineering

[okine@udel.edu](mailto:okine@udel.edu)

+1-302-831-4532

Dear Arde,

I have read the draft and I support the establishment of the doctoral program in Engineering & Public Policy.

Best,

Tom

Tian-Jian Hsu (Tom)

Professor

Civil & Environmental Engineering

University of Delaware

Newark, DE 19716, USA

Hi Arde,

I support the proposed doctoral program in Engineering & Public Policy

.

Dan.

---

Daniel K. Cha, Ph.D.

Professor

Department of Civil and Environmental Engineering

University of Delaware

Newark, DE 19716

(302)831-2435

Arde,

I read the document and support the proposed program.

Best,

Holly

---

Holly Michael  
Unidel Fraser Russell Career Development Chair in the Environment  
DENIN Associate Director for Environmental Initiatives  
Associate Professor  
Department of Geological Sciences  
Department of Civil and Environmental Engineering  
University of Delaware

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