

**MINUTES OF THE 325th GRADUATE COUNCIL MEETING
UNIVERSITY OF NOTRE DAME
OCTOBER 12, 2011**

Members present: Greg Sterling, Panos Antsaklis, Philip Bess (for Dean Michael Lykoudis), Laura Carlson, Ellen Childs, Mark Cummings, Darren Davis, Jeremy Fein, A. Graham Lappin, Gerald McKenny, Marvin Miller, Paolo Carozza (for Dean Nell Newton)

Graduate School representatives present: Brian Flaherty, Ed Maginn, John Lubker

Members excused: Bob Bernhard, Sunny Boyd, David Campbell, Thomas Corke, Greg Crawford, Michael Desch, Margaret Doody, Roger Huang, Peter Kilpatrick, John McGreevy, Diane Parr Walker, Sam Rund

Guests present: Dan Lapsley, Scott Monroe, James Brockmole, Patricia Maurice, Karen Deak

Reporter: Mary Hendriksen

Dean Sterling welcomed Graduate Council members to the first meeting of the 2011-2012 academic year. After introductions, he took up the agenda items as follows:

1. Minutes of the meeting of April 27, 2011: The minutes of the Graduate Council meeting of April 27, 2011, were approved as presented. [<https://graduateschool.nd.edu/about-the-graduate-school/graduate-council/>]

2. Announcements: Dean Sterling referred to two responses he wrote to the reports of joint Graduate Council/DGS committees that were appended to the agenda and distributed in advance: Response to the Ethics Committee's report and Response to the Family-Friendly Environment report. The former had been an agenda item last year, but because of the press of other business, the Council never had time to review it. The latter was in response to the report of the committee last spring. No members had questions or comments on the reports at this meeting.

3. Information item: Psychology's Counseling Program to be Transferred to the New Psychology Clinical Program: Dean Sterling explained that Psychology had worked for a number of years to transfer the counseling program into a clinical program. Since the conversion did not represent a new program but the transformation of an existing program, it did not require a formal vote. The most important shift in the process was the accreditation by the American Psychological Association, which provided its accreditation to the clinical program this last summer. At the same time, he wanted the Council to be aware of the change and to offer its members the opportunity to register any concerns or to offer advice to the program.

Prof. Lapsley explained that this transfer was a long-standing goal of the department. Prof. Monroe elaborated, saying that about a decade ago, counseling faculty recognized that there were very few differences in their research programs and their training of graduate students from the research and training that occurs in a clinical program. Also at that time, many counseling programs were either closing down or being absorbed by departments of education.

(Currently, Prof. Monroe noted, there are about 70 accredited counseling programs and 240 accredited clinical psychology programs.) Thus, to provide the most opportunities for Notre Deame graduate students, the department decided to start moving in the direction of a clinical program.

The process took some time, because the American Psychological Association does not recognize transfers of counseling programs to clinical programs; they only accredit all-new programs. And, the department wanted to ensure that students already in the counseling program received the credentials they set out to receive and that their employment opportunities were not jeopardized in the transition process. The department received formal accreditation for its clinical program in Summer 2011, with the counseling program moving officially at the same time to “inactive” status. There are three students remaining in the counseling program—all in internships and all slated to graduate by August 2012. Twenty students are now enrolled in the clinical program.

Dean Sterling added that the counseling program was a highly rated and well-respected program. The department celebrated it as such last summer in an event that was very well done and very well deserved. Now, though, with the program defined as a clinical program, applications are up significantly.

The representatives from Psychology and Dean Sterling noted that Prof. David Smith was instrumental in effecting the transition. Prof. Smith is on a well-deserved sabbatical and not able to be present today.

4. Information item: Agreement with the Pontificia Universidad Católica de Chile (PUC) to establish a dual Ph.D. Degree in the Department of Civil Engineering: In introducing a proposed agreement for a dual degree between Notre Dame’s Department of Civil Engineering and Geological Sciences (CEGS) on the one hand and the Pontificia Universidad Católica de Chile (PUC) on the other, Dean Sterling explained the difference between a dual degree and a joint degree. He pointed out that it is common for schools to form alliances internationally. A joint degree is appropriate when two universities award a single degree and agree on all the terms related to that degree. A more common, and simpler, way for universities to collaborate is to award a dual degree. For a dual degree, the candidate receives two separate degrees. He or she must meet the criteria for a degree in a particular subject at each institution; although standard practice is for each institution to agree to accept, in part, some of the work performed at the other institution. The diploma contains a notation that two degrees have been awarded for the same work. A dual degree is proposed with the current agreement. It would be Notre Dame’s first dual degree.

Prof. Maurice, representing the department [Prof. Rob Nerenberg has taken the lead on the agreement, but he is at the PUC this semester], explained that, currently, the proposed agreement with the PUC involves only her department. Eventually, many in the College of Engineering hope that additional departments will be involved. Because CEGS has strengths in the areas of structural engineering, hydraulics, geological sciences, and environmental engineering—all strengths of the PUC as well—it is the perfect test case for a dual degree.

Prof. Maurice further explained that the PUC is one of the premier engineering schools in South America. It has an excellent faculty and excellent students. PUC students desiring the dual degree would begin classes and training in Chile. They would then apply to Notre Dame for admission, as would any other student. A unique requirement for admission is the need for letters of support from the PUC adviser as well as the proposed adviser at Notre Dame. The PUC students accepted to the program would be in residence at Notre Dame from 12 to 24 months and, typically, take a minimum of two of their six required courses. Again, like all CEGS students, they would have one teaching assistantship and also complete written comprehensives, oral examinations, and a dissertation defense. As for funding, Prof. Maurice explained, PUC students register and pay tuition at PUC only. They are expected to be funded by their PUC adviser.

Prof McKenny asked why a dual degree is more beneficial than a simple exchange.

Prof. Maurice replied that a dual degree codifies the ground rules of a student exchange. Also, with official advisers, firm requirements, and incentives for completing those requirements, students become an integral part of the department.

From the Graduate School's perspective, Dean Sterling added, there are three reasons for establishing a dual degree rather than participating in *ad hoc* exchanges. First, we are trying to build our connections in South America—with Brazil, Chile, Mexico, and Puerto Rico designated as the key countries/territory. This dual degree is a way to give us a solid presence in Chile. Second, Notre Dame is not well known in South America. Forming an alliance with one of the best and largest universities in South America will help elevate our profile in that continent. Third, the government of Chile has set aside 6 billion dollars for Chilean students to attend American universities—with individual awards covering both tuition and stipends. Now, only a handful of students access the BECAS Chile funds, but a program such as this would encourage more students to attend.

Some members discussed language complications with the dissertation. Prof. Carozza pointed out that students at many European universities submit their dissertations in English. He also asked Dean Sterling to further explain the difference between joint and dual degrees, and what estimates Dean Sterling has for the number of students utilizing the agreement.

As to the first question, Dean Sterling said that the fundamental difference was the number of degrees awarded: a joint degree awarded a single degree; the dual degree awarded two degrees. The dual degree was easier to negotiate—and hence more common—because each program maintained its requirements. Dual degrees work well when there is symmetry in degree offerings and requirements. For example, Prof. Maginn investigated whether Notre Dame and the PUC might offer a dual degree in chemical engineering, but in that case, the PUC's chemical engineering degree was more akin to our degree in chemistry. Thus, we are not going forward with a dual degree in chemical engineering now. As for the number of students availing themselves of the opportunity, Dean Sterling said he predicts that more students will come north than go south; however, he fervently hopes that some Notre Dame students will take advantage of the PUC's resources. He also hopes that the CEGS agreement will serve as a test case for

departments outside of engineering—physics, especially astrophysics, and political science might be two likely candidates for ND-PUC dual degrees.

Prof. Antsaklis inquired as to how Notre Dame can assure itself of the quality of students' PUC courses and qualifications. Prof. Maurice said that in addition to review of the PUC curriculum, which Prof. Nerenberg has completed while spending his semester there, the fact that students must pass Notre Dame's qualifying exams means that they are held to the same standards as Notre Dame students.

Prof. Antsaklis also asked why the program is designated for doctoral students rather than masters' students. Dean Sterling said that the Naughton Graduate Student Exchange Program in Science and Engineering [<http://graduateschool.nd.edu/admissions/financial-support/prestigious-fellowships/naughton-fellowships/>] program is one example of a master's degree exchange program, but a doctoral program has more opportunity for fostering collaborative research with the faculty. Prof. Maurice added that the department is small, and working with doctoral students is a better use of resources.

Finally, members of the Council discussed again whether the dissertation would be in English. Dean Sterling noted that this was the current practice of the Graduate School and promised to confirm this with PUC. [NOTE: PUC subsequently agreed that all dissertations written by students in the dual degree program would be in English. Many of their dissertations are already in English.]

With no further questions, Dean Sterling said that the dual degree does not require approval of the Graduate Council—or of the Academic Council—because it is not a new degree program; it is only a new arrangement for admitting students to an established degree program. He wanted it aired in the Graduate Council, however, to address any concerns and maintain transparency in Graduate School initiatives. Dean Sterling noted that the agreement has a five-year sunset clause, which will provide an opportunity for review. He further noted that he has asked the Advanced Studies Committee of the Academic Council to take up these kinds of arrangements as a whole and work through the principles that should govern them.

5. Proposal for a Master's in Patent Law: Dean Sterling introduced Dr. Karen Deak, a faculty member in the Department of Biological Sciences who was recruited to Notre Dame to develop the proposed master's in patent law program and, if it is approved, would become its director.

Although the Council was one member short of a quorum, Dr. Deak agreed to summarize the program to those present and answer their questions. [Members were sent an extensive program proposal before the meeting. The College Councils in Law, Science, and Engineering approved the proposal earlier this term.]

Dr. Deak explained that the program is an interdisciplinary two-semester professional master's program that will train students with backgrounds in science or engineering to become patent agents (as distinguished from patent lawyers) skilled in patent analysis, preparation, and prosecution. Specific skills to be taught are evaluation of an invention disclosure; assessment of

the patentability of the disclosed invention; drafting a patent application fully describing and claiming the invention; and analyzing and drafting responses to possible Patent Office actions during the examination of an application. She is not aware of a program like it in the United States; yet, with technology innovation increasing exponentially, a great demand exists for patent practitioners.

Prof. McKenny praised the proposal but said that his concerns with it were more global in nature. The Council has approved a few professional masters' programs in the past two years. Perhaps, rather than considering these programs one by one, it would be wise to consider professional masters' programs as a whole and how they relate to the University's overall mission and trajectory. Related to that point, he did not think that the proposal substantiated the claim that it would enhance Notre Dame's reputation as a preeminent research university. Would achieving excellence in the field of patent law enhance Notre Dame's reputation generally? He also wonders if the University might be putting itself in a position in which professional masters' programs eventually assume more prominence than doctoral programs.

Dean Sterling said that Prof. McKenny makes an excellent point. He has asked similar questions himself. In fact, in the external review of the Graduate School held just earlier this week, he asked the reviewers—the dean of the Graduate School of Princeton, the former dean of the Graduate School at Yale, and the Provost of the University of Wisconsin at Madison—their opinions of professional masters' programs. They had a range of viewpoints. One said that faculty at his institution want to deal only with doctoral students. Another said that well-conceived professional masters' program could be very beneficial. Non-tenure track faculty can be hired to teach only in these programs and can do their job very well and very efficiently.

His own view, Dean Sterling said, is that the programs established to date at Notre Dame—ESTEEM, Global Health, Applied and Computational Mathematics and Statistics—fulfill specific needs and are not designed to be “cash cows.” Moreover, he is wary of any programs that would cause the University's preeminent faculty members to devote their time to training professional masters' students rather than attending to their own research agendas. This is not the case, though, with the proposed master's of patent law program or with other recently approved programs. Rather, these programs and the need for them illustrate a new national trend: masters' degrees are quickly becoming the new bachelors' degrees. That being said, Dean Sterling said, he is wary of abuses. We need to be careful not to become a place that is a fallback for students who do not get into a certain kind of professional school.

Prof. McKenny then asked whether our peers have launched professional masters' degrees. Dean Sterling noted that some have not and others have: the Ivies have not, while many other highly ranked universities—for example, members of the Big Ten and leading private universities like Duke—are instituting them carefully—just as Notre Dame has done.

Prof. Miller spoke strongly in favor of the program. He said that Notre Dame must become an active player in the realm of intellectual property—both developing it and protecting it. We need to teach the world broadly with our publications, but we must also participate in intellectual property development. We cannot simply give our intellectual property away. It must be developed and then protected, or efforts will be wasted.

In his own research, Prof. Miller said, he can point to at least three instances in which he has lost opportunities for multi-billion-dollar revenues because of ineffective intellectual property management at the University. If this program could train students to work with faculty to protect intellectual property, the University could take a much different trajectory. At Harvard, Stanford, and Berkeley, for example, patent lawyers attend research group meetings. They do not take any of the faculty time. They are experienced enough and have enough mentoring that they can go out and talk to representatives in the private sector.

“We are desperate for this,” Prof. Miller continued, but we should proceed only in a way that would not distract or burden the faculty. He reiterated that all of Notre Dame’s peers are active in developing and protecting intellectual property. For example, the University of Minnesota recently had a \$300 million award and Emory a \$540 million award from intellectual property development. Now, Notre Dame’s expenses in the area of intellectual property are fairly even with its income. There should be orders of magnitude in difference. Intellectual property people around the world are shocked at what is not happening at Notre Dame. We have the talent and resources to be on a different plane.

Dr. Deak said that while the arrangement Prof. Miller advocates of students attending research group meetings is not part of the proposal, it is a perfect fit.

Prof. Lappin questioned the proposal’s requirement that all coursework must be completed with a grade of C or better. Dean Sterling said that a 3.0 GPA is the requirement on which members should focus. Students could theoretically earn a C or a 2.0 in a class. The Graduate School requires that students maintain an overall 3.0 GPA.

Prof. Lappin also said that if a master’s in patent law program is to compete with on-line programs, it must give students added value. He thinks that the proposal fits the bill.

Dr. Deak agreed. Currently, there is one competitor with the proposed program—an on-line course at Webster University in St. Louis. On-line programs cannot offer time with faculty, as this program would.

Prof. Lappin also asked why no local law firms have written letters of support.

Dr. Deak said that the packet does contain letters of support from attorneys who practice patent law. There are six. For example, Jonathan Burns is an associate in the Indianapolis office of Barnes and Thornburg who attests to the value of the program, particularly in its value in lifting the burden of training from firms themselves. The attorneys wrote in their personal capacities rather than to represent their individual firm’s support. In the same vein, the Patent Office is very enthusiastic about the program, but it cannot endorse something that does not yet exist.

Dean Sterling noted that he was pleased to see that the proposal now before the Graduate Council states that the program expects its students’ overall pass rate for the patent bar to approach 85 per cent. Prof. Carozza confirmed that Notre Dame Law graduates have a bar

passage rate just slightly above that number. Dr. Deak said that the average passage rate for the patent bar is about 60 per cent. To aim for 85 per cent represents a commitment to quality training. She believes that the program can deliver this. The patent bar tests a concrete, finite, and teachable skill set. She is confident the program's students can achieve the goal.

Prof. Antsaklis returned to Prof. McKenny's question on the benefits of examining the entire area of professional masters' programs. He echoed the sentiment that it would be good to examine the area as a whole. Dean Sterling said that he agrees and will constitute a committee to do just that.

Prof. Antsaklis said that he, too, would like to support the growth of intellectual property at the University. He pointed out, however, that this program is not the only way—and certainly not a traditional way—of developing expertise in patent law. He had a student who, after receiving his doctoral degree in electrical engineering, went on to law school and is now practicing patent law.

Dr. Deak agreed that Prof. Antaklis' student took a traditional path to the practice of patent law. It is not necessarily the best path for everyone, she said. A second traditional path in this area—particularly for patent *agent* training (as distinct from patent attorney training), is the one she took—having all training occur at a law firm. She went straight from a Ph.D. program to a law firm—and found that path to present a huge disconnect in skill sets. [As the attorney letters in the packet explain], this training is very burdensome for law firms, because they must use attorney time to teach. Moreover, it is burdensome for students. Generally, students do not receive the comprehensive training that would be most beneficial to them, as training at a firm necessarily occurs on a case-by-case basis. This makes it difficult for students to grasp the overall process of securing patents.

But, Prof. Antsaklis noted, the patent agents she trains will never be the managing partner of a law firm. Absolutely true, Dr. Deak agreed. Nevertheless, the salary for patent agents is quite good. Her options, for example, are illustrative. Her Ph.D. is in genetics. If she had taken an NIH-funded position post-doctoral position after receiving her doctorate, her salary would have been \$35,000 annually. She more than doubled that on her first day at a law firm.

Prof. Miller asked if the program would help decrease the tremendous backlog in applications for patents, which is a terrible problem in this country and one that is causing economic chaos. [See Section 5(a) of the proposal, under *Rationale*, for more information on the exponential increase in the amount of patent filings since 1983.] Dr. Deak said that she believes it would. Now, when a patent application is filed, it sits at the Patent Office for two years because no one is available to examine it. This is partially a funding issue and one that has been addressed with recent legislation—the America Invents Act. The Patent Office is committed to hiring new examiners—1500 to 2000 of them this year alone—which is good for graduates of the proposed program. Becoming an examiner at the Patent Office would be a good placement for a graduate of the proposed Notre Dame program.

Dean Sterling asked Dr. Deak and Prof. Carozza to address the proposal's requirement of 15 credit hours a semester. In his field, Theology, 15 credit hours a term would be an

unthinkable burden. Prof. Carozza confirmed that 15 credit hours a term is standard for law students, who need 90 credit hours to graduate in their three-year program. With one or two of the classes in the proposed program's curriculum science classes, however, he cannot speak to the question of the overall burden to students. Dr. Deak said that the proposed curriculum is entirely reasonable. In the first semester, students take two law-school-like courses and two science/engineering electives (one science or engineering elective in the spring semester). A requirement of two courses is standard for science or engineering graduate students. The remaining course each of the two terms is work on the capstone project. She added that the curriculum for the master's in patent law is designed to be completed in two semesters so that students graduate in the spring—and can thus compete for places in law firms, alongside of recent law school graduates. The patent bar can be taken any day, Monday through Friday, so that graduates of this program do not need to factor in a specific date for sitting for the bar. Her assumption is that students would sit for the patent bar relatively soon after finishing the program.

Prof. Miller commented that having access to someone trained to perform due diligence for a proposed patent is extraordinarily valuable. There is huge intellectual value at the University, but we are overwhelmed with what is needed to activate it. If the program could lower the activation barrier, it would make a tremendous difference at the University and address our aspirations to become a more research-intensive institution.

Dean Sterling, noting that a quorum was not present, asked for a straw vote: nine members indicated their approval of the program, two abstained from voting, and no members opposed the program. Cognizant of Dr. Deak's need for recruiting for the program soon if it is to admit its first class in Fall 2012 and the still lengthy approval process it faces, Dean Sterling said that he will explore options for expediting the voting, with members not present being given an opportunity to meet with Dr. Deak and ask questions about the proposal.

6. Election of the Graduate Council executive committee: Dean Sterling said that the Council must also defer elections for the executive committee. We have had two volunteers: Prof. Sunny Boyd, Biological Sciences, and Ms. Diane Walker, the Edward H. Arnold University Librarian. According to the Council's bylaws, one more member is necessary. Members who would like to nominate themselves or another member should contact Mary Hendriksen at mhendrik@nd.edu.

There being no further business, Dean Sterling adjourned the meeting at 5:00 p.m.