




MEMORANDUM

TO: President Edward T. Foote II

FROM: David L. Wilson 
Chair, Faculty Senate

DATE: September 18, 1996

SUBJECT: Faculty Senate Legislation #96003(B) - Establishment of the Master of Science Degree in Neuroscience

The Faculty Senate, at its meeting on September 9, 1996, voted to approve Faculty Senate Legislation #96003(B) - Establishment of the Master of Science Degree in Neuroscience. The proposal for the program is attached.

This legislation is now forwarded to you for your action.

DLW/b

Attachment

cc: Provost Luis Glaser
Dean Tarek M. Khalil, Graduate School
Dean John Clarkson, School of Medicine
Professor Kenneth J. Muller, Chair, Neuroscience
Program Steering Committee



Proposal for a Master of Science in Neuroscience

The University-wide graduate program in Neuroscience was established to train doctoral students. Therefore in its charter, approved four years ago, no provision was made for the Program to grant the Master's degree. Although the Program will not change its policy of admitting only students who intend to pursue a Ph.D. or Ph.D./M.D. degree, the Neuroscience Program Steering Committee, representing the program faculty, seeks permission to grant a Master of Science in Neuroscience.

Master's degrees would be granted only under special circumstances to students who had entered the program intending to receive a Doctor of Philosophy degree. The Master's degree would not be given to students on the way to obtaining a Ph.D. degree in the Program. Moreover, the Master's degree would not be a terminal degree awarded to students whose poor performance causes them to be prematurely terminated. If, however, a student were in good standing and had conducted meritorious research, but he or she could not continue working toward a Ph.D. either for personal reasons or because the Program did not offer training in a specialized area of neuroscience of interest to the student, then the Steering Committee might wish to grant the student a Master's degree. At present the Committee cannot grant a Master's, and this lack of recognition for successful work by a student unable to continue could harm the program by making it less attractive to prospective students while creating dissatisfaction among existing students.

As we Steering Committee members envision it, the Master's candidate would enroll in Master's Thesis (Course # 710) and would be expected to have successfully completed formal coursework required of Ph.D. students. The Master's student will have completed a body of research during one of his or her laboratory rotations, enabling the student to write a Master's thesis. Three members of the program faculty, including the head of the laboratory in which the research was conducted, would comprise a committee to supervise the research and examine the student. The final examination would occur not less than two weeks after the student submitted a Master's thesis written to conform with the guidelines for Ph.D. dissertations. Master's theses would not necessarily represent wholly independent research projects, nor projects of the student's own design. Rather, the Master's student will have demonstrated competence in conducting neuroscience research and in composing an acceptable report of that research, including writing an introduction that provides appropriate background and rationale for the research. A Master's degree is expected typically to be completed within two years, but could be done in fewer or more.

The Neuroscience Program Steering Committee and faculty do not at present plan to require Master's candidates to pass the qualifying examination required of Ph.D. candidates. Nonetheless, the requirement that Master's degree students be in good standing in the Ph.D. program certifies the expectation that grades of B or better will have been obtained in core courses, with an overall grade point average of at least a B. Students obtaining a Master of Science in Neuroscience will therefore be students of which the University can be proud.

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Requirements for a Master of Science in Neuroscience

The basic requirements for the M.S. in Neuroscience shall include those described in the *Graduate Bulletin* for an M.S. in general, namely:

- A. Thirty-four graduate credits, including thesis credits, with an average grade of "B" and no single grade below "C-."
- B. A thesis, with 6 credits in thesis work.
- C. At least 12 credits in Neuroscience Program core courses.
- D. There is *no* requirement for knowledge of a foreign language.

In addition,

- E. Grades of B (3.0) or better will have been obtained in core courses.
- F. It is expected that M.S. students shall have entered the Neuroscience Program with the intention of receiving a Ph.D. degree and, therefore, will have fulfilled the requirements for admission to the Ph.D. program. Thus, candidates must have a bachelor's degree in one of the biological, behavioral, or physical sciences. They should have a strong quantitative background, should place in the 80th percentile or higher on the General Test of the GRE, and have a GPA of 3.0 or above (4-point scale). M.S. candidates are not required to pass the qualifying examination given to Ph.D. candidates.

For Admission to Candidacy, as described in the *Bulletin*, the candidate must have completed at least 12 graduate credits in residence. Typically, students will have completed the core courses for the neuroscience program. No student may receive the degree in the same semester or summer session in which he or she is admitted to candidacy. As stated in the *Bulletin*, at the time of applying for admission to candidacy the student must have:

1. a planned and approved program;
 2. removed all deficiencies;
 3. taken the Graduate Record Examination and submitted satisfactory scores;
 4. chosen the thesis topic;
 5. an average of B (3.0) in work undertaken as a graduate student and leading to the degree.
- The application is reviewed by the program and by the Dean of the Graduate School.

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with the Office of the Graduate School on or before the date specified in the calendar published each session. Each thesis must be accompanied by a certificate of approval of oral defense of thesis signed by all members of the Committee.

Faculty members of the Neuroscience Program (4/96), by department affiliation:

Biochemistry and Molecular Biology:	Rudolf Werner, Ph.D.
Biology:	Luis Glaser, Ph.D.; Thomas G. Nolen, Ph.D.; David L. Wilson, Ph.D.
Cell Biology and Anatomy:	Mary Bartlett Bunge, Ph.D.; Kermit Carraway, Ph.D.; Richard Rotundo, Ph.D.
Marine Biology:	Daniel Baden, Ph.D.; Michael Schmale, Ph.D.
Microbiology and Immunology/ Ophthalmology:	Richard Dix, Ph.D.
Molecular and Cellular Pharmacology:	John Bixby, Ph.D.; Richard J. Bookman, Ph.D.; Anthony Caswell, Ph.D.; Donna D. Flynn, Ph.D.; Richard H. Kramer, Ph.D.; Irene Litosch, Ph.D.; Charles Luetje, Ph.D.; James D. Potter, Ph.D.; Lincoln T. Potter, M.D.
Neurological Surgery:	Richard Bunge, M.D.; Christine K. Thomas, Ph.D.; Scott Whittemore, Ph.D.; Robert Yeziarski, Ph.D.
Neurology:	Robert Davidoff, M.D.; W. Dalton Dietrich, Ph.D.; Myron Ginsberg, M.D.; John Hackman, Ph.D.; Deborah Mash, Ph.D.; Myron Rosenthal, Ph.D.; Thomas Sick, Ph.D.; Brant Watson, Ph.D.
Otolaryngology:	Brenda Lonsbury-Martin, Ph.D.; Glen Martin, Ph.D.
Pathology:	Joseph Neary, Ph.D.; Michael Norenberg, M.D.
Physiology and Biophysics:	Ellen Barrett, Ph.D.; John Barrett, Ph.D.; Nirupa Chaudhari, Ph.D.; Gerhard Dahl, M.D.; Ian

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CAPSULE: Faculty Senate Legislation #96003(B) - Establishment of the Master of Science Degree in Neuroscience

RESPONSE BY THE PRESIDENT:

DATE: 5/24/96

APPROVED: [Signature]

OFFICE OR INDIVIDUAL TO IMPLEMENT OR PUBLISH: [Signature]

EFFECTIVE DATE OF LEGISLATION: _____

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED): _____



Faculty Senate Meeting

September 9, 1996

Chair's Remarks

The first Senate meeting of the 1996-97 fall semester was called to order at 3:15 p.m. by Chair David Wilson. He announced that Mr. James W. McLamore, former Chairman of the Board of Trustees, passed away during the summer. Professor Wilson said that Mr. McLamore was a fine leader of the Board of Trustees, a great supporter of the University, and a very generous member of the entire Miami community. He certainly will be greatly missed. A memorial service will be held for Mr. McLamore at the University in November.

Professor Wilson expressed his thanks to all the Senators for their willingness to participate and serve on the Senate. The Senators were then asked to identify themselves by name and the department they represent. The Chair stated several goals he hopes to accomplish for the coming year and invited the Senate to actively participate in achieving them. He also informed the Senate of his desire to enlarge the Advisory Council by adding the Committee on Welfare membership.

President's Remarks

President Foote commended the Senate for choosing Professor Wilson as Chair for the coming year and said he looked forward to working with him and the new Senate. The President made the following announcements: 1) his annual letter to the faculty is nearly complete; 2) the budget for last year balanced; 3) research funding increased; 4) philanthropy increased over the past year; 5) a new \$.5M fund for the Provost has been set aside for new technology and to encourage creative ideas; and 6) the establishment of a new research award to begin this year. Deans searches are being conducted for the College of Arts and Sciences, chaired by Dean Sam Yarger, and the GSIS search chaired by Dean Bill Hipp. He also informed the Senate that Vice Provost and Deputy Dean Robert Rubin, School of Medicine, is leaving the University after many years to become the head of the Lovelace Research Institute in Albuquerque, New Mexico. President Foote announced that the franchisees of Burger King, following the death of Mr. McLamore, have committed \$250,000 to the University toward the James McLamore Executive Education Center in the School of Business. That amount will be matched by Mr. David Edgerton, Mr. McLamore's partner and co-founder of Burger King. With the approval of the McLamore family, the University will raise additional funds for three McLamore Fellowships in the areas of

business, tropical science and landscape architecture. The President told the Senate that Mr. McLamore treasured the award established by the Senate in his name and that he appreciated the work of the faculty at the University. Other administrators retiring at the end of this academic year are Mr. Frank Rodgers, Director of Libraries, and Dr. William Butler, Vice President for Student Affairs for the past 32 years.

Professor Alexandrakis *moved* a resolution expressing the sentiments of the Senate on the loss of Mr. McLamore as a great supporter and leader of the University. The *motion carried unanimously*.

Approval of the Minutes

The minutes of April 29, 1996 were approved as submitted. Excused absences were approved for Professors Ceo, Hector, Lavernia, Lopez-Gottardi, Serafini, Shapshak, Waters and Whelan.

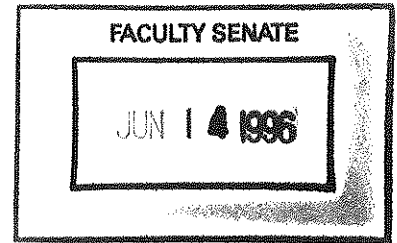
Master of Science Degree in Neuroscience (First Reading)

Professor Wilson explained that when the Ph.D. program in Neuroscience was approved in 1992, the Master of Science program should also have been presented for approval. A detailed proposal had been attached to the agenda for the Senators to review. Professor Kenneth Muller, Chair of the Neuroscience Program Steering Committee, was recognized and asked to comment on the proposed program. It was *moved* and seconded to approve the Master of Science Degree in Neuroscience. The *motion carried*. It was *moved* and seconded to waive the second reading of the item. The *motion carried*.

Name Change from the Department of Civil and Architectural Engineering

Professor Yacoub spoke about the rationale for changing the name of the Department of Civil and Architectural Engineering. In February 1996, the President signed Senate Legislation #95005 which established the Bachelor of Science in Environmental Engineering Degree program. The department is asking to change its name to incorporate the new program. The new name for the department would be the Department of Civil, Architectural and Environmental Engineering. It was *moved* and seconded to approve the name change. The *motion carried unanimously*.

The Senate moved into Executive Session to discuss the next agenda item.




CDFH:

MEMORANDUM

June 11, 1996

TO: Dr. Kamal Yacoub, Chair
Faculty Senate

FROM: Tarek M. Khalil, Dean 
The Graduate School

SUBJECT: Master of Science in Neuroscience

I am enclosing, for your approval, a copy of a Proposal for a Master of Science in Neuroscience submitted by Dr. Kenneth J. Muller, Chair of the Neuroscience Program and approved by the Medical School Council and the Dean of the School of Medicine. This proposal was approved by the Graduate Council and is submitted for Senate action.

TMK:nb

Enclosure

Proposal for a Master of Science in Neuroscience

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The organization of the Graduate Program in Neuroscience has not changed since it was made an independent degree-granting program nearly four years ago. The application for the program is therefore included as an appendix, as is a recent brochure describing the composition and research interests of the faculty, a list of our current students, sample curricula, and other relevant information. At present our students are supported in their first 1 to 2 years by 5 fellowships provided by the Dean of the School of Medicine and individual fellowship awards. Once students have arranged to work in the laboratory of a mentor, they are supported by the mentor after their first or second year. It is a goal of the program to obtain external funding, such as through an NIH training grant, but it is recognized that a successful record of training must be demonstrated before such support is likely to be received. We have now graduated our first 3 PhD's--Allan Levi, Thomas Morrissey and Lamy Shihabuddin.

The following pages describing **Requirements for a Master of Science in Neuroscience** are provided to satisfy a request by the Graduate Council that we detail our curriculum requirements, semester by semester, and list other requirements in tabular form with explanations. In particular, we specify a sample curriculum, the number of credits that shall be required of Master's candidates, the procedure for writing a Master's thesis, the composition of the committee, and the current composition of our faculty. Appendix materials, consisting of our brochure and the original program proposal, are also included. It is important to note that the University's requirements for the Master's Degree have been followed as we have compiled our proposal.

As Chairman of the Neuroscience Program Steering Committee, comprised of the elected representatives of the entire program faculty, I speak for the whole program in respectfully asking the Graduate Council and the Faculty Senate to accept our proposal. I plan to be available for any meetings I am requested to attend to answer questions you might have concerning the Program and its plans.

Kenneth J. Muller, Ph.D.
Professor of Physiology and Biophysics
Chairman, Neuroscience Program Steering Committee

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Typical Curriculum

Since it is anticipated that the Master's candidate would be expected to have successfully completed formal coursework required of Ph.D. students, the curriculum during the first 1½ years of study would be basically that of the Ph.D. students and is presented here:

First Year

(* = Core Neuroscience Course)

Semester	Credit	Description	Department and #
I (Fall)	3	*Molecular Biology	BMB 616L
	4	*Principles Membrane Phys. & Biophys.	MCP/PHS 641/642
	1	*Seminar	NEU 600
	0	*Ethics	NEU 680
	1	*Journal Club	
II (Spring)	3	*Neurophysiology	PHS 511
	3	*Neuroanatomy	CBA 505
	3	*Cell Biology	CBA 651
	0	*Seminar	NEU 600
	1	*Journal Club	
Summer	6	Lab Rotations	NEU 609

Second Year

III (Fall)	3	*Integrative Neuroscience	NEU/BIO 661
	6	Master's Thesis	NEU 710
	0	*Seminar	NEU 600
	1	*Journal Club	

IV (Spring)

Thesis

The Master's student will have completed a body of research during one of his or her laboratory rotations, enabling the student to write a Master's thesis. Three members of the program faculty, including the head of the laboratory in which the research was conducted and members of at least two departments, would comprise a **Thesis Committee** to supervise the research and examine the student. The committee is nominated by the Chairman of the Program Steering Committee and approved and appointed by the Graduate Dean once the student is admitted to candidacy.

The final examination would occur not less than two weeks after the student submitted a Master's thesis written to conform to the guidelines set forth in the *Graduate Bulletin*. Thus, 3 typewritten, unbound copies of the thesis, in approved form on proper paper must be deposited

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with the Office of the Graduate School on or before the date specified in the calendar published each session. Each thesis must be accompanied by a certificate of approval of oral defense of thesis signed by all members of the Committee.

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Dickerson, Ph.D.; Robert Keane, Ph.D.; Wallace Kerrick, Ph.D.; David Landowne, Ph.D.; Anne Luebke; Karl Magleby, Ph.D.; Brian Masters, Ph.D.; Kenneth Muller, Ph.D.; Wolfgang Nonner, M.D.; Stephen Roper, Ph.D.; George Turner, Ph.D.

Psychiatry:

Carl Eisdorfer, M.D., Ph.D.

Psychology:

Edward Green, Ph.D.; Philip McCabe, Ph.D.; Neil Schneiderman, Ph.D.