

AGREEMENT BETWEEN

THE GROVE SCHOOL OF ENGINEERING AT THE CITY COLLEGE
OF THE CITY UNIVERSITY OF NEW YORK



AND

THE COLLEGE OF ENGINEERING
AT THE UNIVERSITY OF PUERTO RICO AT MAYAGÜEZ



I. Introduction:

The Grove School of Engineering at The City College of the City University of New York (CUNY) and the College of Engineering at the University of Puerto Rico at Mayagüez (UPRM) agree to establish collaborative PhD programs in Engineering. The PhD degree in Engineering at the City College of New York (CCNY) is being offered through the Graduate Center of CUNY, with options for specialization in Biomedical, Chemical, Civil, Electrical and Mechanical Engineering. The PhD degree in Engineering at the UPRM is currently offered in Civil Engineering (with specializations in Structures, Transportation, Environmental and Water Resources Engineering), Chemical Engineering, and Computing Information Sciences and Engineering (CISE).

The main goals of this collaboration are:

- 1) to encourage engineering students from UPRM to pursue graduate studies and careers in engineering research at CUNY;
- 2) to encourage engineering students from CUNY to pursue graduate studies and engineering research at UPRM, and
- 3) to provide a means for faculty from these universities to mentor PhD students in collaborative engineering research.

Since UPRM does not offer a PhD degree in Electrical or in Mechanical Engineering, and CUNY does not offer a PhD degree in CISE, this agreement provides a bridge for collaboration so a faculty may propose a research theme for doctoral research in a field not covered at his/her home university. In this particular situation, a UPRM student going to CUNY for a Ph.D. in Electrical or Mechanical Engineering in a project proposed by a UPRM faculty and accepted by a CUNY faculty, is expected to conduct most of the research at the UPRM campus working with UPRM faculty. Similarly, a CUNY student going to UPRM for a Ph.D. in CISE is expected to conduct most of the research at the CUNY campus working with CUNY faculty.

II. Faculty Participation:

- 1) The chair of the student's committee should be from the university granting the PhD degree.
- 2) A committee co-chair of the university not granting the degree will be named if research is carried in this other university. At most, one faculty member, each from CCNY and UPRM, can serve as co-Chair of the student's dissertation committee. Other faculty members may participate as committee members.
- 3) The co-chair faculties will work closely with the PhD student supervising his or her research.

- 4) Faculty members from one university participating in a committee at the other university must comply with the requirements of the host institution:
 - a. UPRM faculty members must become members of the Graduate Center/CUNY doctoral faculty in order to serve as either co-chairs or as members of the student's dissertation committee. To apply for doctoral faculty status at the Graduate Center/CUNY, UPRM faculty will submit a written statement of interest to the chair of the CCNY Department where the student will be studying, along with a current curriculum vitae. Doctoral faculty appointments are recommended by the chair of the department and approved by the executive committee of the doctoral program in engineering.
 - b. CUNY faculty members must be hired in UPRM under a temporary contract "Ad Honorem" in the department where the student will be studying in order to serve as either co-chairs or as members of the student's dissertation committee. CUNY faculty members will submit a written statement to the UPRM department where the student will be studying along with a current curriculum vitae and they will start the necessary process at UPRM.

- 5) The committee members must be willing to travel to either campus to participate in the student's oral PhD proposal examination, and PhD dissertation defense. Participation by video conference is acceptable if travel to either campus is not feasible.

III. Student Participation in the CUNY/UPRM program

It is envisioned that the student will come to CUNY early in the course of their PhD program to satisfy the CCNY residency requirement and to take courses in preparation for written PhD comprehensive exams. (These and other requirements are briefly described in Section IV.)

Students will be provided office and laboratory space while staying in either campus. They can also apply or be recommended for fellowships or grants to help them support the residency requirements while not in the campus of origin, in addition to and without affecting any grant received in the campus. Students entering the Collaborative Program to receive a PhD degree from UPRM, agree to return to UPRM after the completion of the one-year residency at CCNY and stay at UPRM for at least two years working as required for the PhD degree. Otherwise, the student will have to reimburse UPRM any tuition paid during his/her first year at CCNY.

UPRM students participating in this program, in addition to the registration and acceptance requirements mentioned in this section, must comply with the CUNY requirements as specified in § IV. Similarly, CUNY students participating in this program, in addition to the registration and acceptance requirements mentioned in this section, must comply with the UPRM requirements as specified in § V.

IV. Student Participation at CUNY:

1. Admission

Students participating in this program and willing to receive the PhD degree from CUNY should satisfy the CCNY residency requirement and take courses in preparation for written PhD comprehensive examinations at CUNY. These and other requirements of the PhD degree are described briefly below and in more detail in the CUNY Graduate Center Bulletin. Any ulterior change in these requirements must be accepted by both parties of this agreement.

In order to be admitted, students must have a bachelor's degree from an accredited university with a minimum GPA of 3.0 on a 4.0 scale. They must also submit the GRE results, at least two letters of recommendation from faculty members who are personally acquainted with the applicant's academic achievements, evidence of ability to conduct research, and payment of the application fee. The baccalaureate GPA requirement may be waived if the UPRM student has a Master of Science in Engineering from UPRM with a minimum GPA of 3.0 on a 4.0 scale. Students should indicate on their CUNY/Graduate Center application that they are applying to the CUNY/UPRM Engineering Collaborative PhD program.

2. PhD Degree Requirements at CUNY

To complete the PhD degree, students must fulfill the same Graduate Center and departmental requirements as other CUNY Engineering PhD candidates. The requirements are:

2.1 Credits:

At least 60 credits of approved graduate work (including 48 credits of coursework and 12 credits of research/dissertation) are required for the degree. A maximum of 30 graduate credits approved at UPRM with grade of B or higher, may be counted towards the degree at CUNY upon course evaluation by CUNY faculty. The remaining 30 credits required for the degree must be taken in residence at CUNY.

2.2 First Examination (Qualifying Exam):

Each student must pass a First Examination in his or her field. The examination shall be written and/or oral, and it may either be a one-day exam or it may be administered in parts over a more extended period. The committee responsible for setting and grading the examination shall include faculty from CUNY and UPRM. The final composition of the committee working with this examination will be established case by case. Students can take the examination at either institution. A student may continue in the doctoral program after completing 45 credits only if he or she has passed the First Examination, held according to CUNY regulations.

2.3 Second Examination:

A student must pass an oral PhD comprehensive examination conducted at the CUNY/CCNY campus. A student may be admitted to the Second Examination only upon recommendation of a faculty mentor. The examining committee shall consist of the mentor and at least three other faculty members selected from both campuses. The student must present a proposal for the PhD dissertation to the examining committee. All committee members must attend the Second Examination.

2.4 Advancement to Candidacy:

Before a student can be certified as a candidate for the doctoral degree, he or she must have completed the following requirements: 48 credits of graduate coursework with at least an overall B average; 12 credits of research/dissertation (the usual grade is SP, satisfactory progress); First and Second Examinations; Tool of Research; and any additional requirement officially established by the department.

2.5 Dissertation:

The student must complete a dissertation that embodies original research. The dissertation must be defended at an oral Final Examination on the CUNY/CCNY campus, and deposited in the CUNY/Graduate Center library before the degree is granted. The dissertation committee shall consist of at least five faculty members from both campuses including the mentor, who is the chair of the committee.

V. Student Participation at UPRM:

1. Admission

It is also envisioned that students will come to UPRM early in the course of their PhD program to satisfy the UPRM residency requirement and to take courses that will help them in their PhD research project and examinations. Students coming directly after their Bachelor's degree will need to satisfy a four semester residency requirement, while those coming after their Master's degree will need to satisfy a two semester residency requirement. In both cases, students must complete at least 60% of their PhD coursework at UPRM. These and other requirements for the PhD degree are described briefly below.

Students coming from CUNY/CCNY must submit to the UPRM's Office of Graduate Studies their admission application online at <http://grad.uprm.edu/soliadmi.htm>. In order to submit the application, the student must create an account online, fill in the required information and pay the application fee. The deadlines to apply for admission to Graduate Studies are February 15 (for the semester that starts in August), and September 15 (for the semester that starts in January). Late applications will be received for one month for the semester starting in August, and for three weeks for the semester starting in January. Some departments may still be able to review an application after these dates. To inquire about this possibility, the student or CUNY/UPRM faculty liaison must contact the department director or

coordinator of the graduate program. The CUNY student should indicate on their application that they are applying to the CUNY/UPRM Engineering Collaborative PhD program. In addition to completing the application, it is required that CUNY/CCNY send two official transcripts to the UPRM's Graduate Studies Office by regular mail, UPS, FedEx, or DHL.

Applicants must comply with the following institutional requirements in order to be accepted:

- Possess a baccalaureate or equivalent university degree. An official university certification must be submitted if the transcript does not indicate the degree received.
- Comply with one of the following grade point averages for undergraduate studies, in a scale where A = 4.00
 - Grade Point Average of at least 2.50
 - Specialty Average of at least 3.00
 - Average of at least 3.00 in the last four semesters of study (a minimum of sixty credits must have been approved during this time).

Compliance with the preceding requirements does not automatically grant admission. The Office of Graduate Studies will send the completed admission applications and related documents to the respective engineering department for evaluation by the departmental graduate committee ONLY if the student satisfies the minimum requirements for admission to graduate studies at UPRM, and the minimum requirements of the department that offers the PhD program. Some departments use additional criteria in evaluating applicants. Any additional or special requirement for each department is listed below:

UPRM's Special Admission Requirements

Depending on the program of study, a student is required to submit specific information later as part of the application process.

Civil Engineering

- No additional requirements.

Chemical Engineering

- No additional requirements.

Computing and Information Sciences and Engineering (CISE)

- General GRE Exam
- Technical essay that provides details about the student's interests, that develops a technical topic, and may cite literature.

After receiving the student's application from the Office of Graduate Studies, the departmental graduate committee will review the applicant's documents and submit its recommendation to the department director for approval or denial. Once a decision has been taken, the director will return the

applicant's documents to the Office of Graduate Studies and the student will be informed of the decision.

2. PhD Degree Requirements at UPRM

To complete the PhD degree, students must fulfill the requirements of the Office of Graduate Studies and their respective engineering program as other UPRM Engineering PhD candidates. The requirements are:

2.1 Credits:

The student must complete the minimum credits specified in his/her doctoral program. These credits are as follows:

Civil Engineering PhD Program

At least 72 credits of approved graduate work (including 57 credits of coursework and 15 credits of research/dissertation) are required for the degree. A maximum of 30 graduate credits approved at CUNY with grade of B or higher, may be counted towards the degree at UPRM upon course evaluation by UPRM faculty. The remaining 42 credits required for the degree must be taken in residence at UPRM.

Chemical Engineering PhD Program

At least 58 credits of approved graduate work (including 40 credits of coursework and 18 credits of research/dissertation) are required for the degree. A maximum of 21 graduate credits approved at CUNY with grade of B or higher, may be counted towards the degree at UPRM upon course evaluation by UPRM faculty. The remaining 37 credits required for the degree must be taken in residence at UPRM.

Computing Information Sciences and Engineering (CISE) PhD Program

At least 57 credits of approved graduate work (including 39 credits of coursework and 18 credits of research/dissertation) are required for the degree. A maximum of 24 graduate credits approved at CUNY with grade of B or higher, may be counted towards the degree at UPRM upon course evaluation by UPRM faculty. The remaining 33 credits required for the degree must be taken in residence at UPRM.

2.2 First Examination (Qualifying Exam):

Each student must pass a First Examination in his/her field. The examination shall be written and/or oral. The committee responsible for setting and grading the examination shall include faculty from UPRM and CUNY. The final composition of the committee working with this examination will be established case by case. Students can take the examination at either institution. A student may continue in the doctoral program only if he/she has passed the

First Examination, held according to UPRM regulations. The student can repeat the exam only once in case he/she has been unsuccessful.

2.3 Advancement to Candidacy:

The student must complete a written and/or oral exam in his/her field to evaluate their academic development and their ability to conduct an original research project after he/she completes the number of coursework credit hours of their program. For the oral part, the student must present his/her thesis proposal including their hypothesis, objectives, relevance of their research, procedure, and preliminary results, if they are available. The student can repeat the exam only once in case he/she has been unsuccessful.

2.4 Dissertation:

The student must present and defend a dissertation that embodies original research after completing the requirements mentioned before. The dissertation must be defended at an oral Final Examination on the UPRM campus, and deposited in the Office of Graduate Studies in the form of three copies before the degree is granted. The dissertation committee shall consist of at least five faculty members from both campuses including the mentor, who is the chair of the committee.

VI. Project Funding:

Funding to the student will be in the form of full fellowships, renewable according to the student's progress. The amount of the fellowship is determined by the faculty member providing the funding as per the requirements of the program. Individual faculty members are responsible for funding their travel between campuses. As a minimum, the student must travel to the corresponding campus to attend his/her comprehensive oral examination and the PhD dissertation defense. The faculty of origin is responsible for funding the student's stipend and travel for the oral exam and dissertation defense through research grants, student fellowships, or other means. This travel can be exempted if the graduate committee is satisfied with the level of interaction offered by the prevailing video conference technologies.

While in residence at CUNY/CCNY, the student may receive a stipend from UPRM, and vice versa. The students will not be encouraged to apply to this program without any financial support by a faculty member from either UPRM or CCNY. As always, all financial support for students and faculty is subject to the availability of funds.

The students are required to pay for health service fees while in residence at both campuses.

VII. Duration of agreement:

This agreement will be in effect a minimum of seven years beginning from the date it is signed by both parties. At the end of the seven years, this agreement will be reviewed and considered for renewal by both parties. In the event of premature cancellation of this agreement, every effort must be made to accommodate the completion of the degrees of the students in the program.

The undersigned approve this agreement on this ____ day of _____, 2007.

City University of New York

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