June 30, 2015

MEMORANDUM

TO: Darryll Pines  
Dean, A. James Clark School of Engineering  

David Cronrath  
Dean, School of Architecture, Planning and Preservation  

FROM: Elizabeth Beise  
Associate Provost for Academic Planning and Programs  

SUBJECT: Proposal to Establish a Minor in Construction Project Management (PCC log no. 14060)

At its meeting on May 1, 2015, the Senate Committee on Programs, Curricula and Courses approved the proposal to establish the Minor in Construction Project Management. A copy of the approved proposal is attached.

The change is effective Fall 2015. Please ensure that the change is fully described in the Undergraduate Catalog and in all relevant descriptive materials.

MDC/Enclosure

cc: Gregory Miller, Chair, Senate PCC Committee  
Barbara Gill, Office of Student Financial Aid  
Reka Montfort, University Senate  
Erin Taylor, Division of Information Technology  
Pam Phillips, Institutional Research, Planning & Assessment  
Anne Turkos, University Archives  
Linda Yokoi, Office of the Registrar  
Cynthia Stevens, Office of Undergraduate Studies  
William Fourney, A. James Clark School of Engineering  
Donald Linebaugh, School of Architecture, Planning and Preservation  
Charles Schwartz, Department of Civil and Environmental Engineering
College/School: A. James Clark School of Engineering  
Please also add College/School Unit Code-First 8 digits: 01203200  
Unit Codes can be found at: https://hypprod.umd.edu/Html_Reports/units.htm

Department/Program: Civil & Environmental Engineering / Project Management Program  
Please also add Department/Program Unit Code-Last 7 digits: 1320701

Type of Action (choose one):  
☐ Curriculum change (including informal specializations) ☐ New academic degree/award program  
☐ Curriculum change for an LEP Program ☐ New Professional Studies award iteration  
☐ Renaming of program or formal Area of Concentration ☐ New Minor  
☐ Addition/deletion of formal Area of Concentration ☐ Request to create an online version of an existing program  
☐ Suspend/delete program  

Italics indicate that the proposed program action must be presented to the full University Senate for consideration.

Summary of Proposed Action:  
The A. James Clark School of Engineering CE&E/PM and the School of Architecture, Planning, & Preservation are requesting the establishment of an undergraduate Minor in Construction Project Management. This joint proposal reflects the commitment by the University in signing the MOU with the Colvin Family Foundation (3 March, 2015) to launch same by the fall of 2015. A series of workshops and meetings with representatives from the design and construction industry and the research by the Maryland Center for Construction Education & Innovation all point to the need in Maryland for academic program in construction management at the undergraduate level. A number of students from both schools already enter the workforce in the construction industry.

The curriculum for the Minor will include courses from both Architecture and Engineering that have been selected to give the students a fundamentally sound education relevant to construction management. The Minor will require five courses, four of them as core subjects and the fifth one drawn from a list of six electives. The minor will be co-directed.

Departmental/Unit Contact Person for Proposal: John Cable jicable@umd.edu or Michael Allen Ambrose ambrosem@umd.edu.

APPROVAL SIGNATURES - Please print name, sign, and date. Use additional lines for multi-unit programs.

1. Department Committee Chair: BAOXIA NI  04/01/2015
2. Department Chair: 04/01/2015
3. College/School PCC Chair: SONNA E. BACCI  04/13/15
4. Dean:  04/13/15
5. Dean of the Graduate School (if required):  
6. Chair, Senate PCC  
7. University Senate Chair (if required):  
8. Senior Vice President and Provost: ELIZABETH PEISE  06/30/2015
College/School: School of Architecture, Planning and Preservation
Please also add College/School Unit Code-First 8 digits: 01202600
Unit Codes can be found at: https://hvpprod.umd.edu/Html_Reports/units.htm

Department/Program: Architecture Program
Please also add Department/Program Unit Code-Last 7 digits: 1260105

Type of Action (choose one):
- Curriculum change (including informal specializations)
- New academic degree/award program
- Curriculum change for an LEP Program
- New Professional Studies award iteration
- Renaming of program or formal Area of Concentration
- New Minor
- Addition/deletion of formal Area of Concentration
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Departmental/Unit Contact Person for Proposal: John Cable jcable@umd.edu or Michael Allen Ambrose ambrosem@umd.edu

APPROVAL SIGNATURES - Please print name, sign, and date. Use additional lines for multi-unit programs.

1. Department Committee Chair Michael A. Ambrose 15 April 2015
2. Department Chair Brian Kelly 15 April 2015
3. College/School PCC Chair Michael A. Ambrose 15 April 2015
4. Dean David Cronrath 15 April 2015
5. Dean of the Graduate School (if required)
6. Chair, Senate PCC
7. University Senate Chair (if required)
8. Senior Vice President and Provost
Minor in Construction Project Management

University of Maryland, College Park

Contacts:

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Sponsoring Units:

A. James Clark School of Engineering

School of Architecture, Planning, & Preservation

April 09, 2015
The Need
In 2012 the Maryland Center for Construction Education and Innovation conducted a research study interviewing 126 industry leaders from across the state Eastern Shore, to Western MD and the Baltimore and Washington metro areas. These individuals represented $7.2 Billion in annual volume employing 13,700 state residents. The Maryland Construction Industry recruits 70% of their college graduates from out-of-state-schools because the schools in Maryland are not producing graduates that meet their demand. Policy recommendation #1 in the MCCEI study *The Critical Path* is “create or expand construction education programs at Maryland four-year institutions to meet the demands of Maryland Construction companies”.

Commitment
On 3 March, 2015 the university signed an MOU with the Colvin Family Foundation to develop an undergraduate minor in Real Estate and one in Construction Management. The foundation donated a gift toward that end. The name of the fund is the “Colvin Initiatives in Real Estate Development and Construction Management”. The university through the Office of the Provost matched the gift at a ratio of 1:2 (Provost: Gift). This is a significant commitment by the University of Maryland.

Rationale
Engineering and architecture students planning to pursue careers in construction have a distinct competitive advantage if, in addition to having subject matter expertise, technical skills, and people skills they have a working knowledge of the fundamentals of managing construction projects. Employers increasingly seek candidates whose career preparation includes an understanding of construction project management fundamentals.

Students with the Minor in CPM will be better positioned to begin their careers at a more advanced level than those who have no construction project management expertise.

Admission
The Minor in Construction Project Management is open to all undergraduate students in the A.J. Clark School of Engineering and the School of Architecture, Planning & Preservation that have earned at least 60 credit hours (junior standing) and have a Maryland GPA of 3.0 or higher. Individual courses may be taken as electives.

Students who wish to enroll may download the application from the link on the program website. Students will be required to obtain authorization from their academic advisor and submit the application along with an academic transcript and resume to CPM Minor advisor in
either the Architecture Program or the Project Management Program in the A. James Clark School of Engineering.

**Curriculum**
The curriculum for the Minor will include courses from both Architecture and Engineering that have been selected to give the students a fundamentally sound education relevant to construction project management. The Minor requires a minimum of five courses, three of which must be in addition to the requirements for their major. Four courses in the Minor are required and the fifth may be selected from a list of six electives. The minor also requires an approved summer internship in construction project management.

To be awarded the Minor, undergraduate students should complete the five courses in the minor, with a grade “C-” or higher and have a minimum 2.0 GPA for the Minor.

**Required Core Courses include:**
- ENCE 325 Introduction to Construction Project Management
- ENCE 423 Project Planning, Estimating, & Scheduling
- ENCE 424 Communications for Project Managers
- ENCE 426 Construction Documentation and BIM Applications in Engineering & Construction / or / ARCH 468 Building Information Modeling

**Elective Courses include:**
- ENCE 420 Selection & Utilization of Construction Equipment
- ENCE 421 Legal Aspects of Architecture & Engineering Practice
- ENCE 422 Project Cost Accounting & Economics
- ARCH 430 Measuring Sustainability in Architecture
- ARCH 462 Methods & Materials of Building Construction
- ARCH 467 Integrated Project Delivery

**Summer Internship**
Students enrolled in the CPM Minor are required to complete a summer internship (paid) that is facilitated by the Director of the Minor in cooperation with the local construction industry. There is no academic credit for the internship.

**Administration**
We anticipate that students from both Engineering and Architecture will eagerly take the Minor in Construction Project Management. In order to promote efficient and effective advising for the students, each school will have their own advisors that will have the authority to give students the BPO stamp to enroll in courses. Course enrollments will be monitored by the respective program directors to ensure adequate capacity for students in the Minor before
other students will be allowed to enroll. The Clark School will be responsible for awarding this
minor and for all candidate clearances. The advisor will also assist with placement for the
internships along with the Engineering Career Services.
Letter of Agreement for a Gift from the Colvin Family Foundation to The University of Maryland in Support of Initiatives at the Colvin Institute in the School of Architecture, Planning and Preservation

I. Purpose:

This document summarizes the Agreement reached between the Colvin Family Foundation and the University of Maryland, College Park (the Parties) to develop two undergraduate minors, one in real estate development and another in construction management, as described in section III below and to pursue the creation of an undergraduate degree in Real Estate Development. After appropriate program review in the third academic year of this agreement (FY 2017-18), and assuming sufficient student interest, funding, and required University and state approvals, the University of Maryland, College Park will proactively pursue the establishment of an undergraduate major in Real Estate Development that incorporates appropriate elements of the minors in real estate development and construction management.

The Colvin Family Foundation will provide up to $1,000,000 in spendable income over 48 months beginning in December 2015 to the Colvin Institute in support of this initiative. This gift will be matched by The University of Maryland, College Park Office of the Provost over the same time period at a ratio of approximately 1:2 (Provost: Gift), with the Office of the Provost providing approximately $500,000 in funding support. Accounting will be managed through the Office of the Provost.

Contingent on timely implementation of the program as per section III below and appropriate student interest and achievement, the Colvin Family Foundation will accept a proposal in 2017 from the University of Maryland to extend program support either via creation of an endowment or an additional pledge of annual funding.

II. Name of Fund:

The name of the program associated with this gift shall be: Colvin Initiatives in Real Estate Development and Construction Management.

III. Implementation and Timeline:

The School of Architecture, Planning and Preservation, and the A. James Clark School of Engineering will recommend to the Provost names of internal and external stakeholders to be convened for a dialog either in person or via webinar about desirable skill sets and knowledge to be acquired through each minor. Summaries of these discussions and resulting recommendations of course requirements will be provided to the Provost by April 2015 and will be used in the development of final course content for each minor.

It is anticipated that the minors will consist of some new courses specifically designed for these programs and some existing courses and electives. The course sequence and content will be the responsibility of the University and its faculty. Because these are professionally focused programs, the University will engage in continuing consultations with the practitioner.
community to ensure ongoing and evolving coordination with workplace needs and will work with practitioners to provide direct industry experience and internships to students wherever possible.

The Colvin Family Foundation will provide up to $1,000,000 to develop and support the two academic minors and proactively pursue the establishment of an undergraduate major in Real Estate Development that incorporates appropriate elements of the minors in real estate development and construction management as well as takes into account sufficient student interest, funding, and required University and state approvals. Funds will be released beginning in December 2015 based on actual program expenditures. The total annual expenditures for the calendar year including documented anticipated expenditures for November and December will be reported to the CFF by October 31 of each year, with the understanding that funds will be released by December of that same year.

Assuming expenditures reach these levels, the CFF will release funds up to the amounts noted below:

- $201,000 in December 2015
- $233,210 in December 2016
- $265,790 in December 2017
- $300,000 in December 2018

If actual expenditures are less than the amounts listed above, the CFF's remaining commitment can be extended to a subsequent year, to be paid out based on actual expenditures.

The University, through the office of the Provost, will match these additional Colvin Family Foundation gifts on approximately a 1:2 basis (Provost: Gift), again based on actual program expenditures.

Eligible expenditures include:

- Costs associated with course development or modification and delivery, including learning/teaching assistants at the undergraduate or graduate levels at the School of Architecture Planning and Preservation and the A. James Clark School of Engineering;
- The salary for the Colvin Institute Program Director for Undergraduate Minors, which may be drawn down upon this individual's hiring rather than be reimbursed;
- Fringe benefits paid to all individuals engaged in developing and delivering courses;
- Funds to provide out of the classroom experiences for the students, including capstone courses for seniors; and
- Costs associated with the development of the proposed major.

The Agreement associated with the execution of this LOA reached between the Parties includes the provisions below.
• The undergraduate and graduate Real Estate Development Programs in the Colvin Institute will promote continuous course review and improvement by assessing student-learning outcomes. Students will be exposed to learning modes that encourage creative problem solving, experiential learning and other modes suited to this field as determined by the faculty.
  o All the current Colvin Institute courses and those to be developed will be reviewed and modified periodically to enhance their entrepreneurial and experiential content and to ensure that course content remains consistent with industry needs.
  o The School of Architecture, Planning and Preservation will post all real estate development course syllabi, including graduate and undergraduate courses, on the web as they are developed and implemented beginning in June 2015 but no later than June 2016. The posting will where appropriate provide links to courses offered by other units. Where possible and appropriate the Colvin Institute’s role in supporting courses will be recognized on the webpages.

• The University endorses the currently approved option that high achieving UMCP undergraduates may complete up to nine graduate credits towards a combined bachelors/masters degree program, thus lowering the cost of post graduate education to incoming masters candidates. This option will be made available to qualified undergraduate candidates for the Real Estate Masters program by fall 2017.

• The Office of the Provost will manage the activities associated with this Agreement and will report annually on progress (courses approved and offered, enrollment, student responses to courses and other program elements) and expenditures to the Donor for all aspects of the agreement.

• The Program Director for the Undergraduate Minors in the Colvin Institute will manage the program, recruit students, advise and teach, as appropriate. He/she will report to the Dean of the School of Architecture, Planning and Preservation and will consult as appropriate with the Dean of the Clark School of Engineering or his/her designee, the Director for the Real Estate Development Program and the Associate Provost for Academic Affairs and Dean for Undergraduate Studies.

IV. Recognition:

The University of Maryland intends to honor this commitment through recognition in its honor roll of donors and other print and web publications. In all recognition material, the donors shall be referred to as:

The Colvin Family Foundation

In addition, this gift qualifies the donors for membership in the University of Maryland Colonnade Leadership Circle, which honors those alumni or friends of the University who make yearly contributions of $2,500 or more.
Accepted By:

John Colvin
The Colvin Family Foundation

Karen Colvin
The Colvin Family Foundation

Wallace D. Loh
President
University of Maryland

Mary Ann Rankin
Senior Vice President and Provost
University of Maryland

David Cronrath
Dean
School of Architecture, Planning and Preservation

Darryll J. Pines
Dean
A. James Clark School of Engineering

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Addendum

The course number for ARCH468 was changed to ARCH472 because course numbers ending in 8 or 9 must be repeatable.

November 5, 2015