UNIVERSITY SENATE

AGENDA | NOVEMBER 14, 2018

2:00PM – 4:00PM | COLONY BALLROOM – STAMP STUDENT UNION

1. Call to Order

2. Report of the Chair

3. Resolution to Improve the Status of Shared Governance in the University System of Maryland (Senate Document #18-19-17) (Action)

4. PCC Proposal to Establish a Bachelor of Science in Neuroscience (Senate Document #18-19-13) (Action)

5. PCC Proposal to Establish a Bachelor of Science in Human Development (Senate Document #18-19-14) (Action)

6. PCC Proposal to Rename the Post-Baccalaureate Certificate in MSDE Administrator I to School Improvement Leadership (Senate Document #18-19-15) (Action)

7. Special Order of the Day
   Research Misconduct at the University of Maryland
   Jack Blanchard, Chair, Faculty Affairs Committee
   John Bertot, Associate Provost for Faculty Affairs

8. New Business

9. Adjournment

Resolution to improve the status of shared governance in the University System of Maryland (USM)

WHEREAS, The USM Board of Regents, hereafter referred to as the Board of Regents, has proven itself unresponsive to the concerns of students, faculty, and other Maryland citizens in its handling of the investigation into the death of Jordan McNair.

WHEREAS, Student and faculty concerns have gone unheard in personnel and policy decisions made by the University of Maryland College Park and USM as a whole.

Be it resolved that the University Senate:

1. Petitions the Maryland General Assembly to reconsider the way in which the USM Board of Regents is appointed and held accountable in order to make it more responsive to the concerns of students, faculty, staff, and all Marylanders. **[Approved by the Senate on 11/7/18]**
2. ~~Demands~~ **Requests** that seats on University of Maryland, College Park presidential search committees be allocated by the Chancellor in the same proportion as the University Senate, with regards to faculty, staff, and student constituencies. **[Will be considered by the Senate on 11/14/18]**
3. Advises that President Loh should honor his previous statement to retire in June of 2019. **[Approved by the Senate on 11/7/18]**

UNIVERSITY SENATE | TRANSMITTAL | #18-19-13
Senate Programs, Curricula, & Courses (PCC) Committee

PCC Proposal to Establish a Bachelor of Science in Neuroscience (PCC 18022)

PRESENTED BY	**Janna Bianchini, Chair, Senate Programs, Curricula, and Courses Committee**
REVIEW DATES	**SEC – October 29, 2018 | SENATE – November 7, 2018**
VOTING METHOD	**In a single vote**
RELEVANT POLICY/DOCUMENT	**NA**
NECESSARY APPROVALS	**Senate, President, University System of Maryland Board of Regents, and Maryland Higher Education Commission**

ISSUE

The Departments of Psychology and Biology, within the Colleges of Behavioral and Social Sciences (BSOS) and Computer, Mathematics, and Natural Sciences (CMNS), respectfully, propose to establish a Bachelor of Science degree program in Neuroscience. This new major will provide better academic opportunities for students in this well-defined but broad discipline than the university currently offers. Currently, neuroscience-related courses are primarily taught in the Biological Sciences (BSCI) and Psychology (PSYC) programs, both of which are already at or above capacity. Many major research universities already have neuroscience undergraduate majors. The goal is to create a sustainable, attractive, and intellectually cohesive STEM major that crosses the boundaries of existing academic units.

The Neuroscience major will offer rigorous training in the interdisciplinary study of brain and behavior. Neuroscience has been recognized as a cohesive academic discipline in the United States since the 1960's. Understanding the brain and nervous system requires integrative studies from many disciplines, such as anatomy, physiology, molecular biology and biochemistry, behavioral and cognitive sciences as well as computational methods.

The curriculum will consist of 76-80 credits organized into the following categories:

- 13 credits of neuroscience core courses (under a new course prefix NEUR)
- 47 credits of supporting courses in mathematics, statistics, biological sciences, chemistry, physics, psychology, along with UNIV100.
- 16-20 credits in one of two concentrations: (1) Molecular, Cellular, and Physiological or (2) Behavioral and Cognitive

Currently, students wishing to focus on neuroscience either major in PSYC or BSCI, which has a Physiology and Neurobiology specialization. The sponsoring units predict that 70% of students who select this new program would have previously selected BSCI or PSYC, and 30% will be new students who may not otherwise have enrolled at the University of Maryland.

The administrative structure for this program is designed to secure the departments and colleges involved as equally invested partners. An undergraduate director will be selected by a committee co-chaired by the BSOS and CMNS Associate Deans. The undergraduate director will report to the

CMNS Associate Dean for administrative purposes, but the academic, administrative, and financial decision-making will be collaborative between CMNS and BSOS. The BSCI undergraduate advising office will advise students initially, and when students enter their concentrations they will be advised by BSCI for the Molecular, Cellular, and Physiological concentration and PSYC for the Behavioral and Cognitive concentration.

The program aligns well with the existing multidisciplinary research and graduate training program in Neuroscience and Cognitive Science (NACS), which was established in 1996. In addition to academic department affiliations, instructional faculty in the NEUR program will have direct connection to the NACS program, the Maryland Neuroimaging Center, the Language Science Center, and the scientific components of the new Cole Field House project as well as a newly developing initiative in Brain & Behavior.

This proposal was approved by the Senate Programs, Curricula, and Courses committee on October 5, 2018.

RECOMMENDATION(S)

The Senate Committee on Programs, Curricula, and Courses recommends that the Senate approve this new degree program.

COMMITTEE WORK

The committee considered this proposal at its meeting on October 5, 2018. Katherine Russell, Associate Dean of BSOS, and Reid Compton, BSCI undergraduate director, presented the proposal. The proposal was unanimously approved by the committee.

ALTERNATIVES

The Senate could decline to approve this new degree program.

RISKS

If the Senate declines to approve this degree program, the university will lose an opportunity to offer prospective students a degree program that focuses on neuroscience coursework, much of which is already offered, and connects with the university's varied neuroscience research activities.

FINANCIAL IMPLICATIONS

Resources for the new program will be drawn from those currently used by the sponsoring colleges on neuroscience undergraduate education, reallocated funds from campus, and new resources to the university provided through state legislation, for which neuroscience is an identified priority area.

University of Maryland PCC Program/Curriculum/Unit Proposal

PCC Log No: 18022

Program: BS in Neuroscience

Department/Unit: PSYC & BIOL

College/School: College of Behavioral and Social Sciences; College of Computer, Mathematical, and Natural Sciences

Proposal Contact Person (with email): Katherine Russell (krussell@umd.edu); Robert Infantino (infantino@umd.edu)

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
- ☐ *Establish/Discontinue a formal Area of Concentration*
- ☐ Other:
- ☒ *Establish a new academic degree/certificate program*
- ☐ Create an online version of an existing program
- ☐ Establish a new minor
- ☐ *Suspend/Discontinue a degree/certificate program*
- ☐ Establish a new Master or Certificate of Professional Studies program
  - ☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

***Approval Signatures** - Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair [signature] 9/12/2018
2. Department Chair [signature]
3. College/School PCC Chair [signature] 9/18/18
4. Dean [signature] 9/18/18
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC Jamie Bianchini [signature] 10-5-18
7. University Senate Chair (if required) _____
8. Senior Vice President and Provost _____

BSOS

Instructions:

When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, and email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):

The Psychology Department (PSYC) in the College of Behavioral and Social Sciences (BSOS) and the Biology Department (BIOL) in the College of Computer Mathematical and Natural Sciences (CMNS) are jointly proposing a new undergraduate major (BS) in Neuroscience (NEUR).

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

University of Maryland PCC
Program/Curriculum/Unit Proposal

PCC Log No: 18022

Program: BS in Neuroscience

Department/Unit: PSYC & BIOL

College/School: College of Behavioral and Social Sciences; College of Computer, Mathematical, and Natural Sciences

Proposal Contact Person (with email): Katherine Russell (krussell@umd.edu); Robert Infantino (infantino@umd.edu)

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
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Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - *Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair Reid Compton 9/13/2018
2. Department Chair 9/14/18
3. College/School PCC Chair 9/18/2018
4. Dean 9/18/2018
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC _____
7. University Senate Chair (if required) _____
8. Senior Vice President and Provost _____

CMNS

Instructions:
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, **and** email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):

The Psychology Department (PSYC) in the College of Behavioral and Social Sciences (BSOS) and the Biology Department (BIOL) in the College of Computer Mathematical and Natural Sciences (CMNS) are jointly proposing a new undergraduate major (BS) in Neuroscience (NEUR).

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

Program: Bachelor of Science in Neuroscience

Date of Proposal: September 21, 2018 (rev 9/28/18)

Start Term for New Program: Fall 2019 or later

A new degree program proposal will need to be approved not just by campus but also by the University System of Maryland (USM) Board of Regents and the Maryland Higher Education Commission (MHEC). New certificate programs need to be approved by the USM Chancellor and MHEC. The following prompts are based on academic policies for programs and reflect campus requirements and MHEC requirements. The prompts also include questions frequently asked by review committees. See http://mhec.maryland.gov/institutions_training/Pages/acadaff/AcadProgInstitApprovals/NewAcademicProgramProposals.aspx for more information about MHEC requirements. Please feel free to add additional information at the end of this document or in a separate appendix.

Mission and Purpose

1. Describe the program and explain how it fits the institutional mission statement and planning priorities. The University Mission Statement and Strategic Plan can be found on this site: https://www.umd.edu/history-and-mission.

The Colleges of Behavioral and Social Sciences (BSOS) and Computer Mathematics and Natural Sciences (CMNS) are jointly proposing a **new undergraduate major (BS) in Neuroscience (NEUR)**. This new major will address a critical need to manage current undergraduate enrollments in this well-defined but broad discipline. Currently, Neuroscience-related courses are primarily taught in BSCI and PSYC, with additional relevant courses and research in other units across campus. Most major research universities already have neuroscience undergraduate majors. The goal is to create a sustainable, attractive, and intellectually cohesive STEM major in neuroscience for the campus that crosses the boundaries of existing academic units. It will also serve as a model for other interdisciplinary majors at UMCP in the future.

The neuroscience major will: (1) recruit talented undergraduate students to the University of Maryland that are interested in pursuing a neuroscience major; (2) better serve students who are interested in the broad field of neuroscience and currently must choose either a Biological Sciences or Psychology major; (3) offer an additional undergraduate major for students interested in research careers, medicine, and allied health professions; (4) redistribute some students away from the very large Biological Sciences and Psychology majors, thereby increasing the quality of the student experience for all.

Program Characteristics

2. Provide the catalog description of the proposed program. As part of the description, please indicate any areas of concentration or specializations that will be offered.

The Neuroscience major will offer rigorous training in the interdisciplinary study of brain and behavior. Students will complete a required set of NEUR courses as well as a supporting sequence of coursework in mathematics, biology, chemistry, physics, and psychology. Students will then choose an upper-level specialization and coursework in (1) cellular, molecular, and physiological neuroscience or (2) behavioral and cognitive neuroscience. The Neuroscience major prepares students for a broad range of career paths including: scientific research, medicine, clinical psychology, allied health professions, or science-related government, nonprofit, or private sector employment.

3. What are the educational objectives of the program?

Learning Outcomes for the Neuroscience major are listed below.

4. Describe any selective admissions policy or special criteria for students selecting this program.

Neuroscience will be a Limited Enrollment Program (LEP) similar to the current LEP criteria for the BSCI major.* The Gateway/Benchmark courses will be:

- Completion of MATH 135 or 140 with a minimum grade of C-
- Completion of BSCI 170/171 (formerly BSCI 105) with a minimum grade of C-
- Completion of CHEM 131/132 and CHEM 231/232 with a minimum grade of C-
- A minimum grade point average of 2.0 in all courses is required at the 45-credit benchmark review for first-time freshmen.
- A minimum grade point average of 2.7 in all courses taken at the University of Maryland and all other institutions is required for internal and external transfer to the Neuroscience major.

**The majority of students who consider the neuroscience major will also be considering the BSCI major. Therefore the LEP proposal for the Neuroscience major will mirror the BSCI LEP per http://lep.umd.edu/.*

5. Indicate the course requirements with course numbers, titles and credits. If applicable, indicate if any course will also count for a general education requirement. In an appendix, provide the course catalog information (credits, description, prerequisites, etc.) for all of the courses. Note that suffixed "selected" or "special" topics courses should be avoided. If suffixed-selected or special topics courses are offered regularly in the new program, you should make the courses permanent.

Also, please review the basic requirements of degree programs or certificate programs to ensure that they meet the minimum policy requirements.

Please note: new courses or modifications to courses need to be submitted through the Testudo Curriculum Management system and will need to follow the normal VPAC course proposal review process. You may submit individual course changes to VPAC concurrently with the PCC proposal; however, the course changes may be held depending on the outcome of the PCC proposal.

Summary of Neuroscience Major Requirements

1. **NEUR Required Courses (13 credits)**
2. **Required Supporting Courses (47 credits)**
3. **Concentration Courses (16-20 credits)** - Concentration courses may be added as additional courses become available. There is particular interest in adding courses from a broad range of disciplines beyond just in CMNS and BSOS. Some possible future collaborators include EDUC, ENGR, PLCY, and SPHL.

NEUR Required Courses (13 credits)			
3	NEUR 200	Introduction to Neuroscience **(General Education: NS)**	New Course
3	NEUR 305	Neuroscience Fundamentals I	New Course
3	NEUR 306	Neuroscience Fundamentals II	New Course
4	NEUR 405	Neurobiology Lab	New Course

Required Supporting Courses (47 credits)			
4	MATH 135 or 140	Discrete Math or Calculus I	LEP Benchmark and Gateway Course
4	MATH 136 or 141	Calculus (136) or Calculus II	
3	STATISTICS	BIOM301, EPIB300, PSYC200, STAT400, or STAT464	
4	BSCI 170/171	Principles of Molecular and Cellular Biology with Lab	LEP Benchmark and Gateway Course
4	BSCI 160/161	Principles of Ecology and Evolution with Lab	
4	CHEM 131/132	Fundamentals of General Chemistry with Lab	LEP Benchmark and Gateway Course
4	CHEM 231/232	Organic Chemistry I with Lab	LEP Benchmark and Gateway Course
4	CHEM 241/242	Organic Chemistry II with Lab	
4	CHEM 271/272	General Chemistry and Energetics with General Bioanalytical Chemistry Lab	
4	PHYS 131/141	Fundamentals of Physics for Life Sciences I or Principles of Physics I with Lab	
4	PHYS 132/142	Fundamentals of Physics for Life Sciences II or Principles of Physics II with Lab	
3	PSYC100	Introduction to Psychology	

1	UNIV100 (or equivalent)	Introduction to the University	

Concentration Courses (16-20 credits)		
• Complete at least 5 courses , including at least 3 courses from within one concentration and at least 1 lab course. • Up to 3 pre-approved Neuroscience Research credits can be applied to the major. • 4 pre-approved NEUR479 credits in the same faculty research laboratory can satisfy the lab requirement		
Molecular, Cellular, and Physiological Concentration*	**Behavioral & Cognitive Concentration***	**Prerequisites**
NEUR379 (1-3 cr) - Neuroscience Research: Molecular and Cellular	NEUR379 (1-3 cr) - Neuroscience Research: Behavioral and Cognitive	NEUR306 and permission of dept.
NEUR479 (1-4 cr) - Neuroscience Research Lab BSCI399(H, L) may be substituted with permission	NEUR479 (1-4 cr) - Neuroscience Research Lab BSCI399(H, L) may be substituted with permission	NEUR306 and NEUR379 and permission of dept.
BCHM463 Biochemistry of Physiology		CHEM271/272 or CHEM276/277
BSCI222 Principles of Genetics NOTE: Students may not use both ANSC327 and BSCI222 toward filling Neuroscience concentration requirements	BSCI222 Principles of Genetics	CHEM131/132, BSCI170/171; and either BSCI160/161 or another CHEM
BSCI330 Cell Biology & Physiology with Lab	BSCI330 Cell Biology & Physiology with Lab	CHEM131/132 and BSCI170/171
BSCI339D Biology of Chemosensory Systems		NEUR306 or BSCI353
BSCI339F Neurophysiology of Cells and Circuits		NEUR306 or BSCI353
	BSCI360 Principles of Animal Behavior	BSCI160/161, BSCI170/171, and BSCI222
	BSCI401 Animal Communication	BSCI160/161, and PHYS (1 semester); Recomm:

		animal behavior or biopsychology
BSCI402 Genomics of Sensory Systems		BSCI222
BSCI403 Biology of Vision		BSCI207
BSCI410 Molecular Genetics		BSCI222 and CHEM231/232
BSCI415 Molecular Genetics Lab		BSCI410
BSCI430 Developmental Biology		BSCI222 and BSCI330
BSCI440 Mammalian Physiology and BSCI 441 Mammalian Physiology Lab		BSCI330 and CHEM231/232
BSCI446 Neural Systems	BSCI446 Neural Systems	NEUR306 or BSCI353
BSCI452 Diseases of the Nervous System		NEUR306 or (BSCI353 & BSCI330)
Special Topics Courses (BSCI338 or 339) when specifically approved for the major/specialization. Check with your advisor.		
KNES370 Motor Development		
	KNES385 Motor Control and Learning	
KNES462 Neural Basis of Human Movement		
	KNES498C Exercise and Brain Health	KNES350
	PHIL209N Know Thyself: Wisdom Through Cognitive Science	
	PHIL366 Introduction to Philosophy of Mind	
	PSYC302 Fundamentals of Learning and Behavior	PSYC100 and BSCI170/171
	PSYC341 Introduction to Memory and Cognition	PSYC200 and (PSYC300 or NEUR306)
	PSYC402 Neural Systems and Behavior	PSYC301 or NEUR305

	PSYC403 Animal Behavior	PSYC301 or NEUR305
PSYC404 Introduction to Psychopharmacology	PSYC404 Introduction to Psychopharmacology	pending
	PSYC406 Neuroethology	pending
	PSYC407 Behavioral Neurobiology Laboratory	NEUR405 or (PSYC300 and PSYC301)
	PSYC413 Developmental Cognitive/Social Neuroscience	PSYC301 or NEUR305
	PSYC414 Science of Sleep and Biological Rhythms	NEUR306 or (PSYC100 and PSYC301)
	PSYC442 Psychology of Language	pending
	PSYC455 Cognitive Development	PSYC355 & (PSYC300 or NEUR306)
	PSYC489G Hormones & Behavior	NEUR306 or NEUR301

*Courses may be occasionally added or removed from this list. Not all courses may be available each semester.

6. Summarize the factors that were considered in developing the proposed curriculum (such as recommendations of advisory or other groups, articulated workforce needs, standards set by disciplinary associations or specialized-accrediting groups, etc.).

Neuroscience has been recognized as a cohesive academic discipline in the United States since the 1960's. The national Society for Neuroscience was formed in 1969 and had its first conference in 1971 with 1500 attendees and now regularly includes more than 30,000 colleagues from more than 80 countries. Understanding the brain and nervous system requires integrative studies from many disciplines such as anatomy, physiology, molecular biology and biochemistry, behavioral and cognitive science as well as computational methods. Advancements in the fields of molecular biology and biochemistry, behavioral and cognitive science as well as improved computational methods have led to the formation of new graduate programs and eventually new undergraduate programs. Many peer institutions, including all but two Big 10 Universities (Illinois and Maryland), developed thriving neuroscience undergraduate majors decades ago. Some examples of universities with vibrant undergraduate neuroscience programs include Duke University, Johns Hopkins University, University of Michigan, and The Ohio State University.

At the University of Maryland, the Neuroscience and Cognitive Sciences (NACS) Ph.D. program was established in 1996 followed by an undergraduate minor in neurosciences in 2006. In 2018, there is more undergraduate interest in neuroscience and stronger campus investment in neuroscience-related education and research than ever before. The Brain & Behavior Initiative, the Maryland Neuroimaging Center, the Language Science Center, and the scientific components of the Cole Field House Project are important evidence of neuroscience as a strong focus of campus research and educational strength.

Neuroscientist and BSOS Dean Gregory Ball assembled and chaired the committee that assembled the academic curriculum for this new major. The committee consisted primarily of neuroscience faculty at University of Maryland, along with knowledgeable academic administrators. This committee considered the course structure and content of a number of other neuroscience undergraduate programs. The curriculum that is assembled here is comparable in course scope, depth, course requirements to institutional peers.

7. Sample plan. Provide a term by term sample plan that shows how a hypothetical student would progress through the program to completion. It should be clear the length of time it will take for a typical student to graduate. For undergraduate programs, this should be the *four-year plan*.

Neuroscience Major Sample 4-Year Plan

First Semester			Second Semester	
MATH135 or 140 (FSAR/MA)	4		MATH136 or 141	4
BSCI160 & 161 (DSNL)	4		BSCI170 & 171	4
CHEM131 & 132 (DSNL)	4		CHEM231 & 232	4
ENGL101 (FSAW)	3		PSYC100 (DSHS)	3
UNIV100	1			
Total	16		Total	15
Third Semester			**Fourth Semester**	
NEUR200 (DSNS)	3		NEUR305	3
CHEM241 & 242	4		CHEM271 & 272	4
Gen Ed (FSOC)	4		Approved Statistics	3
Gen Ed (DSHU)	3		Gen Ed (DSHS)	3
			Gen Ed (DSHU)	3
Total	14		Total	16
Fifth Semester			**Sixth Semester**	
NEUR306	3		NEUR Concentration	3–4
PHYS131	4		ENGL39X (FSPW)	3
NEUR Concentration	3		PHYS132	4
Gen Ed (SCIS)	3		Gen Ed (DVUP)	3
Elective	3			
Total	16		Total	13–14
Seventh Semester			**Eighth Semester**	
NEUR Concentration	4		NEUR Concentration	3
NEUR405	4		NEUR Concentration	3
Gen Ed (DSSP)	3		Gen Ed (DVXX)	3
Gen Ed SCIS)	3–4		Gen Ed DSSP)	3
Elective	0–1		Elective	3
Total	15		Total	15

NOTE: All students must complete an Oral Communication (OC) course as part of the Gen Ed requirements. If I-Series (IS), Understanding Plural Societies (UP) and Cultural Competence (CC) courses double count with Gen Ed Distributive Studies requirements, the number of Gen Ed courses can be reduced by 3-4 courses. Note that freshman with AP credit for calculus and biology can enroll in NEUR200 in freshman year with no major restriction.

8. Indicate whether the program will be offered in a non-standard delivery format, such as online delivery, off-campus, or through non-standard terms. Please note that MHEC requires a separate proposal for online or off-campus delivery. If the program will be offered in non-standard terms, describe the term structure and whether the Office of the Registrar and the Office of International Scholar and Student Services have been notified and support the proposal.

The Neuroscience major will be offered on the standard on-campus undergraduate schedule. Although there may be some blended and occasional online courses in the summer/winter terms, the major will be predominantly a full-time undergraduate brick and mortar major that can be completed on a regular fall/spring schedule.

9. For Master's degree programs, describe the thesis requirement and/or the non-thesis requirement.

NA

10. List the intended student learning outcomes. In an appendix, provide the plan for assessing these outcomes.

Intended Learning Outcomes for the Neuroscience major are listed below. An overview of which outcomes will be assessed in which major courses can be found **Appendix B**

1. Develop a **knowledge base** in the field of neuroscience and supporting disciplines
    a. Understand the fundamental principles of neuroscience across all levels of analysis – molecular/cellular, circuits, systems, and behavior
    b. Understand the principles of evolution, especially as they apply to the nervous system and behavior
    c. Develop additional expertise and depth of knowledge in at least one area of neuroscience (molecular/cellular, circuits, systems, and behavior)
    d. Be able to address a question in neuroscience by integrating information from multiple levels of analysis

2. Understand the current techniques and strategies in **neuroscience research**,
    a. Understand the theory and practice of important current neuroscience research techniques, along with their strengths and limitations
    b. Acquire laboratory experience through neuroscience courses or research
    c. Develop skills in data analysis using relevant quantitative and programming methods
    d. Obtain training to work comfortably and successfully within a research team or equivalent experience

3. Develop competence in **scientific reasoning and critical thinking**

a. Be able to critically evaluate scientific literature, including assessment of the problems addressed, methodology used (including statistical analyses), and conclusions drawn
b. Demonstrate skill in innovative and integrative thinking and problem-solving
c. Demonstrate skill in experimental design and interpretation

4. Develop effective **professional communication** skills
   a. Demonstrate proficiency in clear, concise, and graceful writing
   b. Demonstrate proficiency with oral communication in a range of professional situations
   c. Demonstrate proficiency in graphical presentation of information integrated into both written and oral presentations

5. Understand the role of neuroscience in **social and cultural contexts** as well as the influences of social and cultural context on neuroscience
   a. Understand the influences, current and potential, of neuroscience on other fields such as medicine, education, the arts, and the social sciences
   b. Recognize the relationships between scientific research and the culture(s) in which it is embedded
   c. Understand and follow ethical practices in academic study, scientific research, and professional life

6. Develop an appreciation of possible **career paths** available to students proficient in neuroscience
   a. Understand the activities, opportunities, and responsibilities of the individual scientist within the scientific community
   b. Recognize the range of career opportunities outside academia
   c. Develop and, as far as possible, implement plans for career development

11. Identify specific actions and strategies that will be utilized to recruit and retain a diverse student body.

The Psychology Department and College of Behavioral and Social Sciences have ongoing strategies to recruit and retain underrepresented minority students, including the BSOS Advising Minority Retention Group, the BSOS College Summer Research Initiative, and the ongoing agenda of the Psychology Department Diversity Committee that focuses on undergraduate diversity and inclusion.

The utmost attention will be paid to ensure that both faculty and staff advisor hires for the NEUR major include individuals who represent, and have experience working with, students from diverse backgrounds.

Relationship to Other Units or Institutions

12. If a required or recommended course is offered by another department, discuss how the additional students will not unduly burden that department's faculty and resources. Discuss any other potential impacts on another department, such as academic content that may significantly overlap with existing programs. Use space below for any comments, otherwise add supporting correspondence as an appendix.

BSCI and PSYC courses listed for the NEUR concentrations will be available to NEUR majors, in addition to BSCI and PSYC majors. It is predicted that 70% of NEUR majors would have previously selected BSCI or PSYC majors and 30% of the NEUR majors will be new students who may not otherwise have enrolled at University of Maryland. This will result in a net 30% increase in demand for these courses. Courses in any prefixes other than BSCI and PSYC that are listed as options in the curriculum will be pre-approved by the offering departments prior to being listed. The appendix contains letters of support from the courses outside of CMNS and BSOS listed in this proposal.

13. Accreditation and Licensure. Will program need to be accredited? If so, indicate the accrediting agency. Also, indicate if students will expect to be licensed or certified in order to engage in or be successful in the program's target occupation.

An undergraduate major in neuroscience will not require accreditation.

14. Describe any cooperative arrangements with other institutions or organizations that will be important for the success of this program.

NEUR Administrative Structure

The Neuroscience major will only be successful if the partnering academic units have sustainable incentives to remain fully invested in the undergraduate program. Thus, an administrative structure is required that secures the Departments of Biology and Psychology as well as CMNS and BSOS Colleges as equally invested partners in the neuroscience major. It will also be important to ensure stable collaborations with NACS and BBI to establish stable faculty teaching and faculty-mentored undergraduate research.

NEUR Undergraduate Director

One faculty member (TTK or PTK) will be appointed as the NEUR Undergraduate Director. This position will be selected/hired by a committee co-chaired by the Associate Deans for Undergraduate Education in CMNS and BSOS. The NEUR Undergraduate Director will report to the Associate Dean for Undergraduate Education in CMNS for administrative purposes. However, academic, administrative, and financial decision-making will be collaborative between CMNS and BSOS.

Academic & Career Advising

The academic and career advising for NEUR majors will be structured to take advantage of the interdisciplinary expertise of faculty and staff across multiple units while still offering students easy access to advising resources. The NEUR undergraduate team will include: the NEUR Undergraduate Director (0.5 FTE), the NEUR Academic Advisor (1.0 FTE) in the CMNS Office of Student Services, and NEUR Academic Advisor in the PSYC Advising Office (1.0 FTE). The two NEUR advisors and the NEUR Undergraduate Director will work closely together to ensure consistency in offerings, policy, and communications for NEUR majors.

The initial college-level academic advising home for ALL new NEUR majors will be the CMNS Office of Student Services through the Biological Sciences Undergraduate Program. LEP admission, Orientation, 1st semester onboarding, UNIV100, and Benchmark-I checks will be conducted by BSCI/CMNS. A separate LEP proposal will be submitted.

After successfully completing the introductory NEUR coursework, NEUR majors will select one of two concentrations. At that point, academic advising will broaden as follows.

NEUR - Molecular, Cellular, and Physiological Concentration - BIOL/CMNS will be the academic advising department/college for students who choose the Molecular, Cellular, and Physiological concentration in the NEUR major. Students in this concentration will graduate with a Neuroscience Major in the Biology Department in the CMNS College. Students will be cleared for graduation and considered alumni of BIOL/CMNS.

NEUR - Behavioral and Cognitive Concentration - PSYC/BSOS will be the academic advising department/college for students who choose the Behavioral and Cognitive concentration in the NEUR major. Students in this concentration will graduate with a Neuroscience Major in the Psychology Department in the College of BSOS. Students will be cleared for graduation and considered alumni of PSYC/BSOS.

The NEUR Undergraduate Director will ensure that the NEUR majors in both concentrations have a curriculum and academic/career advising that is helpful and consistent. The NEUR Undergraduate Director will work closely with the two NEUR advisors to ensure that all NEUR majors are able to connect with faculty mentors,

manage undergraduate research, ensure scheduling of seats/classes for upper-level coursework, move seamlessly between opportunities, research, and courses across multiple units, and clear students for graduation in their concentration.

NEUR Required Courses

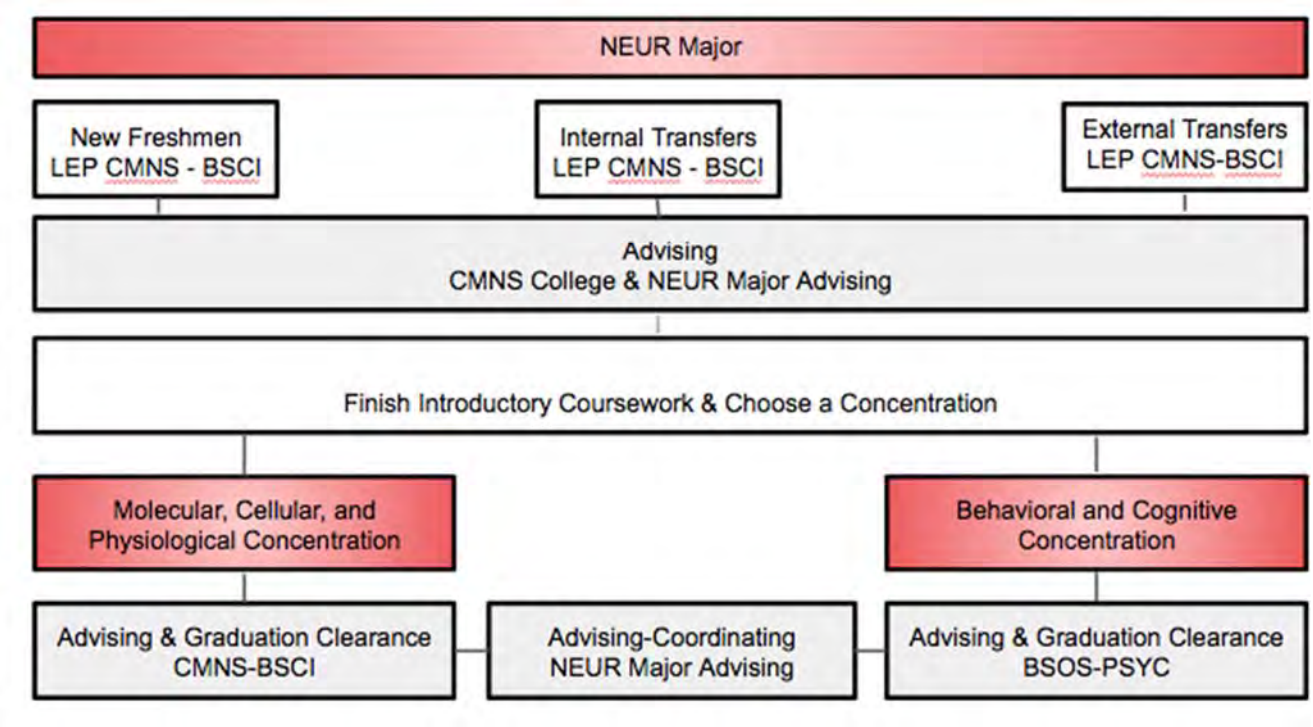
In the steady state, each of the required NEUR courses will be the assigned on a long-term basis to BSCI/BIOL or PSYC. The course assignments have not yet been made. Since each NEUR course will be offered every semester and multiple sections of each course will be required, having one departmental home for each required course will ensure that the content, quality, and seats are continually reviewed and renewed.

NEUR Budget Administration

Since the NEUR major will be an interdisciplinary program, the CMNS/BSOS Deans will jointly oversee the budget administration for the NEUR major, ensuring that adequate courses/seats are available, that faculty resources are dedicated to the undergraduate teaching and research opportunities related to the NEUR major, and that adequate academic and career advising resources are maintained for the major. The day-to-day planning and budget oversight will be managed by the NEUR Undergraduate Director.

In the initial budget, resources required for renovation costs, faculty (TTK & PTK) hires, and staff hires in support of the NEUR major will be negotiated between the Provost and the Deans for CMNS and BSOS.

The budget for operating an undergraduate major is normally integrated into departmental and college operations as part of their core mission. Because the NEUR major will cross academic units, an annual operating budget for NEUR major will be established in a cost-share agreement between the Provost and the Deans in CMNS and BSOS. The initial agreement will last for a 5-year period and will be renewed at least every 5 years. The agreement will be reconsidered in year 4 for the next 5-year cycle. In this way, the NEUR major budget and staffing of PTK faculty will be stable for 5-year intervals, which is also the expected contract length for senior-level PTK faculty who will carry the heaviest teaching load in the NEUR major.



Faculty and Organization

15. Faculty and organization. Who will provide academic direction and oversight for the program? As an appendix, please indicate the faculty involved in the program. Include their titles, credentials, and courses they may teach for the program.

NEUR Undergraduate Committee

A NEUR undergraduate committee will be comprised of at least 6 faculty members (TTK and PTK). The committee will provide academic oversight for the major, serve as the departmental PCC Committee for the NEUR major, and oversee the annual learning outcomes assessment for the major. The composition of the committee will include: Biology-2, Psychology-2, NACS Director-1, and will be chaired by the NEUR Undergraduate Director-1. The NEUR undergraduate committee will provide academic oversight for the major, serve as the departmental PCC Committee for the NEUR major, and oversee the annual learning outcomes assessment for the major. The NEUR advisors may regularly attend these meetings at the discretion of the Undergraduate Director.

Both the PSYC and BIOL Departments, then the CMNS and BSOS Colleges, will approve the initial NEUR major curriculum. Subsequent revisions to the NEUR curriculum will be approved by the NEUR Undergraduate Committee, the PSYC & BIOL Departments, and by the BSOS and CMNS College PCC Committees. Departmental members of the NEUR Undergraduate Committee are nominated for renewable 2-year terms by their Department Chairs and approved by the BSOS and CMNS Deans. TTK and PTK faculty with expertise in Neuroscience will have teaching and research mentoring in the NEUR undergraduate major included in their hiring agreements and in their performance evaluations.

NEUR Annual Report & Meeting

Given the interdisciplinary nature of the major and the multiple units engaged, the NEUR Undergraduate Director will be charged with preparing a brief annual report due to the BSOS & CMNS Associate Deans on June 30th. The report should include a review of learning outcomes results, enrollment trends, graduating student outcomes, updates on collaborations, opportunities, and challenges for the program. The NEUR Undergraduate Director will also initiate a meeting of the Undergraduate Committee with the BSOS & CMNS Deans (and/or Associate Deans) each September to present the annual report and discuss the current and future directions of the major.

The NEUR major should be hard funded and folded solidly into the core mission of the Biology and Psychology Departments as well as the CMNS and BSOS Colleges, just as the current BSCI and PSYC majors are now. The NEUR Undergraduate Director should not be in the position of defending the program's base budget to the two home departments on an annual basis to either the chairs or the deans.

Resource Needs and Sources

16. Each new program is required to have a library assessment in order to determine any new library resources that may be required. Please contact your departmental/programmatic library liaison or Daniel Mack at dmack@umd.edu, Associate Dean of Collections, to request a library assessment that will be added as an appendix.

See Appendix C for Library Collections Assessment

17. Discuss the adequacy of physical facilities, infrastructure and instructional equipment.

There are two physical facilities needs for the NEUR major- the NEUR Undergraduate Advising Offices and renovations of two existing teaching labs (one in BIOL and one in PSYC) to prepare them for the new NEUR405 lab course.

(1) **NEUR Advising Offices** will be integrated into BSCI and PSYC. Both units may need additional office space to accommodate NEUR majors advisors and an undergraduate director. A physical space for the NEUR major advising would be ideal, but the pros and cons of a separate space rather than expanding the advising resources in both BSCI-Student Services and PSYC-Student Services has not yet been resolved.

(2) **NEUR Teaching Lab Renovations** - Two adjacent existing neuroscience teaching labs on the ground floor of the Biology-Psychology Building will need renovation in order to meet the teaching needs of the new major, specifically to teach the NEUR405 lab course for all majors. Currently, there are two courses (BSCI454 and PSYC401) that have overlapping content and are taught in two separate labs. Both labs are in need of renovation in order to harmonize the curriculum across the two courses and increase the capacity of the course. With the proposed enrollment of 500 in the NEUR major, plus continuing demand from BSCI and PSYC majors for the course, approximately 150 seats per semester will need to be offered, which is a 30% increase in the total number of seats currently offered in BSCI454 and PSYC401 combined. Some teaching sustainability will be introduced by consolidating into one course and one curriculum in that a common syllabus will increase the ability of the departments to assign faculty to teach the course. However, increased demand will require a net increase in investment for the course overall, even with the consolidation.

18. Discuss the instructional resources (faculty, staff, and teaching assistants) that will be needed to cover new courses or needed additional sections of existing courses to be taught. Indicate the source of resources for covering these costs.

The new instructional resources required for the NEUR major are summarized below. Note that although some courses/seats, research mentoring, and advising will come from existing BSCI/BIOL and PSYC faculty/staff, both existing majors (BSCI and PSYC) are very large and already stretched very thin in both teaching and advising resources.

TTK Faculty Hires – A minimum of two new TTK faculty hires (one in Biology & one in Psychology) will provide sustainable faculty leadership for the NEUR courses & undergraduate research programs. Each TTK faculty member will teach at least one NEUR course each academic year and will mentor undergraduate NEUR researchers.

PTK Faculty hires – A minimum of two new full-time PTK faculty hires (one in Biology & one in Psychology) will teach 3-3 loads. One of the PTK faculty hires will serve as course director and lab supervisor of NEUR405. It is fully expected that TTK faculty will teach NEUR405 on a regular basis, but a PTK faculty member who can provide consistency and leadership for the course each semester will be important in ensuring that multiple sections across space and time are consistent, assessed, and renewed on a regular basis. The second PTK faculty member will serve as course director for NEUR200 and will have additional administrative duties, including procuring undergraduate research opportunities as well as matching, tracking, and recording student research participation for academic credit.

Note that it will be absolutely critical that research active TTK faculty (both the two hired as part of this initiative and others) take leadership roles in the NEUR Undergraduate Committee, course oversight, and mentored undergraduate research. However, in our recent experience, it is virtually impossible to expect a research active TTK faculty member to either run an undergraduate program or serve as course director for a larger undergraduate course that is offered each fall, spring, and summer.

Graduate Teaching Assistants - In the steady state, an additional 12 full (20 hour/week) GA positions will support teaching in the NEUR major. The teaching assignments will include serving as TA's in the required NEUR200 (2), NEUR305 (2), NEUR306 (2), and serving as lab section leaders in NEUR405 (3), and across the additional MATH/BSCI/CHEM/PHYS sections (3) needed to support increased enrollment for NEUR majors.

19. Discuss the administrative and advising resources that will be needed for the program. Indicate the source of resources for covering these costs.

Academic Advisor (1.0 FTE) - A full-time Academic Advisor for the NEUR major will work with CMNS and manage onboarding of NEUR majors in close collaboration with the CMNS Student Services Office. This advisor will also support the students who choose the Molecular, Cellular, and Physiological Concentration.

Academic Advisor (1.0 FTE) - A full-time Academic Advisor for NEUR will work primarily with the students who choose the Behavioral and Cognitive Concentration.

Undergraduate Director - One faculty member (TTK or PTK) will receive a 12-month administrative supplement and summer salary.

20. Use the Maryland Higher Education Commission (MHEC) commission financial tables to describe the program's financial plan for the next five years: https://docs.google.com/spreadsheets/d/1V6iSZG05edMitWP6CAOXjCoGO58Gf6VXxPaacKfrhZ4/edit#gid=0. Add these tables as attachments.

The proposed budget for the NEUR major is outlined in an attachment.

Implications for the State (Additional Information Required by MHEC and the Board of Regents)

If the proposed program is for a Post-Baccalaureate Certificate that is derived entirely from existing courses within an existing Master's degree program, then you **only** need to respond to prompts 21 (on market demand) and 24 (curriculum of current master's degree program).

21. Explain how there is a compelling regional or statewide need for the program. Argument for need may be based on the need for the advancement of knowledge and/or societal needs, including the need for "expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education." Also, explain how need is consistent with the Maryland State Plan for Postsecondary Education.

See sections 1 and 2 above.

22. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program. Possible sources of information include industry or disciplinary studies on job market, the USBLS Occupational Outlook Handbook, or Maryland state Occupational and Industry Projections over the next five years. Also, provide information on the existing supply of graduates in similar programs in the state (use MHEC's Office of Research and Policy Analysis webpage for Annual Reports on Enrollment by Program) and discuss how future demand for graduates will exceed the existing supply. As part of this analysis, indicate the anticipated number of students your program will graduate per year at steady state.

See sections 1 and 2 above.

Neuroscience offers a strong and broad scientific background for students interested in a wide variety of careers ranging from medicine, allied health sciences, scientific research, medical technology, technology-related business, health or technology policy, public service and non-profit sector, government service, health insurance, public health, social services, psychological services, and others. The closest degrees currently offered at the University of Maryland are BSCI and PSYC majors. According to the NACE graduation survey, PSYC majors at the University of Maryland are placed in employment or graduate school within 6 months of

graduation at a rate of 93% (2016). CMNS currently places 92% of students in a similar time frame. NEUR majors are predicted to be placed at a similar or higher rate than current PSYC and BSCI majors.

The projected size of the Neuroscience major in the steady state is approximately 500 students. This number is a conservative estimate based on the enrollments of establishd NEUR majors at peer institutions. For example, the University of Michigan's neuroscience major has 500 majors. The Ohio State University has 1000 neuroscience majors. The current Physiology & Neurobiology track in Biological Sciences at the University of Maryland has 650 majors.

The new Neuroscience major is projected to grow over a 2 or 3-year period to a steady state of approximately 500 students. We predict that 50% (250) of NEUR students would have previously selected BSCI as a major, 20% (100) would have selected PSYC, and 30% (150) of the students would not have previously enrolled at Maryland.

New NEUR Courses Required for All Majors - Projected Sections and Seats

	Fall	Spring	Similar Existing	Faculty Teaching
NEUR200	2 sections of 100 seats, lecture & discussion	2 sections of 100 seats, lecture & discussion	None	4 sections per year, 1 course director
NEUR305	2 sections of 200 (250 NEUR majors), lecture only	2 sections of 200 (250 NEUR majors), lecture only	BSCI353 (330 seats per year now); PSYC301 (300 seats per year)	4 sections per year
NEUR306	2 sections of 200 (250 NEUR majors), lecture only	2 sections of 200 (250 NEUR majors), lecture only	None	4 sections per year
NEUR405	1 lecture, 8 labs of 160	1 lecture, 8 labs of 160	BSCI454 (140 seats per year); PSYC401 (30 seats per year)	2 sections per year, 1 lab director

23. Identify similar programs in the state. Discuss any differences between the proposed program and existing programs. Explain how your program will not result in an unreasonable duplication of an existing program (you can base this argument on program differences or market demand for graduates). The MHEC website can be used to find academic programs operating in the state: http://mhec.maryland.gov/institutions_training/pages/HEPrograms.aspx.

According to the MHEC website, the only two undergraduate degrees in neuroscience in the State of Maryland are at Johns Hopkins University and Notre Dame College of Maryland. Although the University of Maryland competes with Johns Hopkins University for a very small number of the most academically talented freshmen who are Maryland residents, the institutions and programs will not be duplicative or especially competitive. Notre Dame College of Maryland is a very small women's college and not directly competitive with a large public flagship. Rather, the University of Maryland is more likely to compete with other Big 10 flagships and

large public universities for neuroscience majors, especially but not limited to the University of Michigan, Penn State, and The Ohio State University.

24. Discuss the possible impact on Historically Black Institutions (HBIs) in the state. Will the program affect any existing programs at Maryland HBIs? Will the program impact the uniqueness or identity of a Maryland HBI?

No HBCIs in Maryland currently offer bachelor's degrees in neuroscience.

25. For new Post-Baccalaureate Certificates derived from existing master's programs only, include the complete curriculum of the existing master's program.

NA

Appendices

Appendix A Neuroscience (NEUR) Courses

Appendix B Learning Outcomes Assessment Plan for NEUR Major

Appendix C Library Collections Assessment

Appendix D Proposed Expenses

Appendix E Letters of Support & Permission to List Courses

Appendix A
Neuroscience (NEUR) Courses

The following new courses will be proposed as part of the NEUR major.

NEUR200 (3 cr) Introduction to Neuroscience (DSNS)
Prerequisite: BSCI170/171 with C- or higher
Recommended: MATH135 or 140 with C or higher
Explores the anatomical and physiological systems that underlie animal behavior. Provides an introduction to the field of behavioral neuroscience.

NEUR 305 (3 cr) Neuroscience Fundamentals I
Prerequisite: MATH135 or 140 with C- or higher; NEUR200 with C- or higher
Principles of the nervous system and neural circuits.

NEUR306 (3 cr) Neuroscience Fundamentals II
Prerequisite: NEUR305 with a C- or higher
Principles of molecular and cellular neuroscience.

NEUR405 (4 cr) Neurobiology Lab
Prerequisite: NEUR306 with a C- or higher & permission of department
Laboratory course exploring the principles of nervous system function, ranging from molecular and cellular basis of neuron function through nervous system integration. Experiments use living invertebrates and cold-blooded vertebrates.

NEUR379 (1-4 cr) Introductory Neuroscience Undergraduate Research
Prerequisite: NEUR305 with a C- or higher & permission of department

NEUR479 (1-4 cr) Advanced Neuroscience Undergraduate Research
Prerequisite: NEUR306 with a C- or higher & permission of department

Appendix B
Learning Outcomes Assessment Plan for NEUR Major

The learning outcomes listed in Section 10 will be assessed on a 4 year cycle per current campus undergraduate assessment guidelines. Knowledge base and techniques will be the first two outcomes assessed. The assessment plan will focus on the required courses only during the first 4 year cycle.

Learning Outcomes In NEUR Major Required & Supporting Courses

Learning outcomes (black X indicates emphasis) (red X indicates major emphasis)		Required Courses				
		Supporting courses	NEUR 200	NEUR 305	NEUR 306	NEUR 405
		BIOL, CHEM, PHYS, MATH	Gateway	Neuro fundamentals cellular	Neuro fundamentals systems/cognitive	Neurobiology lab
Knowledge base						
	Neuroscience breadth		X	X	X	X
	Evolution	X				
	Neuroscience depth					
	Integrating knowledge		X	X	X	X
Techniques						
	Current techniques	X	X	X	X	X
	Lab experience	X				X
	Data analysis	X				X
Critical thinking						
	Evaluate literature			X	X	
	Problem solving	X				X
	Experimental design	X		X	X	X
Communication						
	Written	X				X
	Verbal	X				X
	Graphical	X				X
Cultural relationships						
	Neuroscience contributions		X	X	X	
	Cultural effects	X	X	X	X	
	Ethical practices					X
Professional development						
	Scientific community	X	X	X	X	X
	Career paths		X	X	X	X
	Personal plan					

Learning Outcomes In NEUR Major Concentration Courses

Learning outcomes (Each X indicates emphasis)		Concentration Courses (representative courses)																					Learning outcomes (Each X indicates emphasis)	
		NEUR 378 NEUR 479	BSCI 338F	PSYC 302 PSYC 341	BSCI 370	BSCI 491	PSYC 402 BSCI 453	BSCI 402 BSCI 403 BSCI 339D	PSYC 403 BSCI 353	PSYC 404	BSCI 404	PSYC 406 BSCI 446	BSCI 410 BSCI 415	PSYC 411	PSYC 413 PSYC 455 BSCI 430	PSYC 414	BSCI 426	BSCI 440 BSCI 441	BSCI 442	PSYC 489G	PSYC 468P BIOL 500	LING 440	PHIL 260 PHIL 362		
		Neuroscience research	Neural circuits	Cognitive neuro	Evolution	Animal communication	Advanced neuro	Sensory neural	Animal behavior	Neuro-pharmacology	Cellular biophysics	Neuroethology	Molecular genetics	Functional imaging	Neural development	Biological rhythms/Sleep	Membrane biophysics	Mammalian physiology	Psychology of Language	Hormones	Ethics	Language and cognition	Philosophy of neuro		
Knowledge base																								**Knowledge base**
	Neuroscience breadth			X		X			X			X			X	X		X				X	X	Neuroscience breadth
	Evolution				X	X			X			X												Evolution
	Neuroscience depth	X	X				X	X	X	X	X	X	X		X	X	X		X	X		X		Neuroscience depth
	Integrating knowledge	X	X			X		X	X		X	X			X	X	X	X	X			X	X	Integrating knowledge
Techniques																								**Techniques**
	Current techniques	X		X		X	X	X	X	X		X	X	X	X	X		X	X	X		X		Current techniques
	Lab experience	X																X						Lab experience
	Data analysis	X												X				X						Data analysis
Critical thinking																								**Critical thinking**
	Evaluate literature	X	X		X	X		X		X	X	X		X	X	X	X		X	X		X	X	Evaluate literature
	Problem solving	X	X					X		X		X		X	X	X		X	X	X		X		Problem solving
	Experimental design	X	X	X				X	X	X					X	X		X		X				Experimental design
Communication																								**Communication**
	Written	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X		X	X	Written
	Verbal	X	X			X						X			X	X		X	X			X	X	Verbal
	Graphical	X														X		X	X					Graphical
Cultural relationships																								**Cultural relations/hips**
	Neuroscience contributions		X	X		X	X	X	X	X		X	X	X	X	X			X	X		X	X	Neuroscience contributions
	Cultural effects															X			X		X	X	X	Cultural effects
	Ethical practices	X							X	X						X		X			X		X	Ethical practices
Professional development																								**Professional development**
	Scientific community	X	X	X		X	X	X	X			X			X	X					X			Scientific community
	Career paths	X												X				X						Career paths
	Personal plan	X																						Personal plan

Appendix C
Library Collections Assessment

DATE: 01/18/2018

TO: Katherine Russell
Associate Dean, College of Behavioral and Social Sciences

FROM: On behalf of the University of Maryland Libraries:
Jordan Sly, Anthropology, Psychology, and Special Populations Librarian
Svetla Baykoucheva, Chemistry and Life Sciences Librarian
Maggie Saponaro, Head of Collection Development
Daniel Mack, Associate Dean, Collection Strategies & Services

RE: Library Collection Assessment

We are providing this assessment in response to a proposal by the colleges of Behavioral and Social Sciences as well as of Computer, Mathematical and Natural Sciences to create a new undergraduate major in Neuroscience. These colleges have requested that the University of Maryland Libraries assessed the available library resources in this area, to determine how well the Libraries could support the curriculum of this proposed program.

Serial Publications

The University of Maryland Libraries currently subscribe to a large number of scholarly journals—almost all in online format— that focus on neuroscience and closely related fields.

The Libraries subscribe to several of the top-ranked journals (by impact factor) that are listed in the neuroscience category of *Journal Citation Reports*[1] and using the SCJ ranking system[2]. These journals include the top ten highest ranked journals, all of which are available online through the UMD Libraries:

- Nature Reviews Neuroscience (**SCJ**, *H index*=337 **JCR**, impact factor, 28.880)[3]
- Nature Neuroscience (**SCJ**, *H*=347 **JCR**, 17.839)
- Annual Review of Neuroscience (**SCJ**, *H*=209 **JCR**, 15.630)

[1] Top journals by impact factor: https://jcr.incites.thomsonreuters.com/JCRJournalHomeAction.action?SID=A2-mx2BUGIIK70tCYKq91lJFop4zmg69sBqxxd-18x2d5o7f0ECHKifXs0XqhOfBNgx3Dx3Dcnx2FdFfSjTS1s356x2Bx2FEmJrwx3Dx3D-YwBaX6hN5JZpnPCj2lZNMAx3Dx3D-jywguyb6iMRLFJm7wHskHQx3Dx3D&SrcApp=IC2LS&Init=Yes Journal Citation Reports (**JCR**) is a tool for evaluating scholarly journals. It computes these evaluations from the relative number of citations compiled in the Science Citation Index and Social Sciences Citation Index database tools, https://jcr.incites.thomsonreuters.com/JCRJournalHomeAction.action?#.

[2] SCIMAGO (SCJ) Listing of top journals for Neuroscience, http://www.scimagojr.com/journalrank.php?area=2800

[3] Ranking and impact review information available through SJR, http://www.scimagojr.com/. Information about their ranking equations available here, http://www.scimagojr.com/SCImagoJournalRank.pdf and a key for understanding their icon and display system, http://www.scimagojr.com/help.php#rank_journals

- Trends in Cognitive Science (**SCJ**, *H*=247 **JCR**, 15.402)
- Behavioral and Brain Sciences (**SCJ**, *H*=137 **JCR**, 14.200)
- Neuron (**SCJ**, *H*=396 **JCR**, 14.024)
- Progress in Neurobiology (**SCJ**, *H*=199 **JCR**, 13.217)
- Molecular Psychiatry (**SCJ**, *H*=180 **JCR**, 13.204)
- Acta Neuropathologica (**SCJ**, *H*=129 **JCR**, 12.213)
- Biological Psychiatry (**SCJ**, *H*=273 **JCR**, 11.412)

Databases

Through our database subscription packages, we have access to much of the current research in this field. For articles in journals to which we do not have access researchers and students will likely have access to this material via our Interlibrary Loan and our Big Ten Academic Alliance partnerships at no cost to the researcher.

The Libraries' *Database Finder* (http://www.lib.umd.edu/dbfinder) resource offers online access to databases that provide indexing and access to scholarly journal articles and other information sources. Many of these databases cover subject areas that would be relevant to this proposed program. In particular, below is a listing of databases that would be useful in the field of neuroscience at the undergraduate level:

- Science Direct
- Neuroscience Information Framework
- Springer Link
- Web of Science
- EBSCO databases
- Nature Archives
- PubMed
- PubChem
- Reaxys
- American Chemical Society
- BIOSIS Preview
- BioMed Central
- Biological Sciences Database
- Medline Plus
- PsycINFO
- Psychology and Behavioral Sciences

- SciFinder
- ChemSpider

Additionally, multidisciplinary databases such as *Academic Search Complete* (accessible through EBSCO) and, occasionally, JSTOR (depending on the nature of the project) will have material relevant to neuroscience students.

In many cases, these indexes offer full text copies of the relevant journal articles. In those instances, in which the journal articles are available only in print format, the Libraries can make copies available to students through the Libraries' Scan & Deliver Program (http://www.lib.umd.edu/access/scan-deliver) or via Interlibrary Loan (Please see below for more information about these services).

Monographs

The Libraries regularly acquire scholarly monographs in neuroscience and related fields. Monographs that are not already part of the collection can be purchased upon request, if funds are available. Currently, the print holdings in the area of neuroscience are located in McKeldin Library.

Given the nature of the discipline and the courses planned for this new major, it is likely that most library research for this program will rely upon journals and up-to-date scholarly communications. However, monographs will continue to be purchased in both physical and electronic format to support the dynamic and multidisciplinary needs of this program.

A search of the University of Maryland Libraries' WorldCat UMD catalog was conducted, using a variety of relevant subject terms. This investigation yielded sizable lists of citations of books that we own. For example, a search for the term "Neural Plasticity" within our book holdings and access availabilities (physical and e-books as well as those available through Interlibrary Loan and U-Borrow) yields a high level (800+) of relevant and recent (published within the past five years) results. A search of the same material and parameters for the term "Neuroimmunology" brought nearly 90 targeted results. A search for "digital phenotyping AND genomics AND mood disorders"—a narrow search informed by a recent article by Harrison, Geddes, and Turnbridge (2017) yielded an appropriate number of results and included results in both genomic research and research into bi-polar disorder indicating our holdings in the wider fields covered in this brief search. Finally, the high number of general resources available through the libraries by searching terms like "neuroscience," "behavioral neuroscience," and "biopsychology" and other related general terms indicates that undergraduates will be supported by our current and future holdings.

Scan & Deliver and Interlibrary Loan

These services offer online delivery of bibliographic materials that otherwise would not be available online. As a result, remote users who take online courses may find these services to be helpful. Scan & Deliver and Interlibrary Loan are available free of charge.

The Scan & Deliver service scans and delivers journal articles and book chapters within three business days of the request--provided that the items are available in print on the UM Libraries' shelves or in microform. In the

event that the requested article or chapter is not available on campus, Scan & Deliver will automatically refer the request to Interlibrary Loan (ILL). Interlibrary Loan is a service that enables borrowers to obtain online articles and book chapters from materials not held in the University System of Maryland.

Additional Materials and Resources

In addition to serials, monographs, and databases that are available through the University Libraries, students enrolled in the proposed program will have access to a wide range of media, datasets, software, and technology. Library Media Services (http://www.lib.umd.edu/lms) houses media in a variety of formats that can be utilized both on-site and via ELMS course media. Datasets and support materials are available through the Psychology Subject Guide (http://lib.guides.umd.edu/Psychology) and statistical consulting and additional research support is available through the Research Commons (http://www.lib.umd.edu/rc).Technology support and services are available through the Terrapin Learning Commons (http://www.lib.umd.edu/tlc) .

The subject specialist librarian/s for the discipline listed below also serve as an important resource for the proposed programs.

Jordan S. Sly (Psychology Liaison Librarian)
https://www.lib.umd.edu/directory/staff/jsly

Svetla Baykoucheva, (Chemistry and Life Sciences Librarian)
https://www.lib.umd.edu/directory/staff/sbaykouc

Nedelina Tchangalova (Public health Librarian)
https://www.lib.umd.edu/directory/staff/nedelina

Other Research Collections

Because of the University's unique physical location near Washington D.C., Baltimore and Annapolis, University of Maryland students and faculty have access to some of the finest libraries, archives and research centers in the country that are vitally important for researchers in neuroscience. These include the resources provided by National Library of Medicine, Johns Hopkins University, Georgetown University and Medical Center, and the University of Maryland Baltimore. It should be mentioned that there is an increasing number of open-access journals and other free online resources that will provide valuable information to students and researchers in this field.

Conclusion

With our substantial journal electronic and print holdings and index databases, as well as additional support services and resources, the University of Maryland Libraries have the necessary resources to support teaching and learning in neuroscience. Additionally, the Scan & Deliver, U-Borrow, and Interlibrary Loan services make materials that are not available online available to remote users enrolled in online courses. In conclusion, this assessment demonstrates that the University of Maryland Libraries will be able to meet the curricular and research needs of the proposed BS major in neuroscience.

Appendix D
Proposed Expenses

The Provost and CMNS/BSOS Deans will agree to a plan to reconcile available resources to projected expenses prior to finalizing a start date for the major.

EXPENDITURES FOR NEUROSCIENCE MAJOR IN YEARS 1-5						
Expenditure Categories	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	
1. TTK Faculty (b+c below)	$399,000	$410,970	$423,299	$435,998	$449,078	
a. #FTE	2.0	2.0	2.0	2.0	2.0	2 TTK Faculty Hires - one in Biology, one in Psychology; Start-up
b. Total Salary	$300,000	$309,000	$318,270	$327,818	$337,653	
c. Total Benefits	$99,000	$101,970	$105,029	$108,180	$111,425	
1. PTK Faculty (b+c below)	$266,000	$273,980	$282,199	$290,665	$299,385	2 PTK Faculty Hires - one in Biology, one in Psychology
a. #FTE	2.0	2.0	2.0	2.0	2.0	
b. Total Salary	$200,000	$206,000	$212,180	$218,545	$225,102	
c. Total Benefits	$66,000	$67,980	$70,019	$72,120	$74,284	
1. Graduate Teaching Assistants (b+c below)	$95,760	$98,633	$203,184	$313,919	$323,336	
a. #FTE	4.0	4.0	8.0	12.0	12.0	TA lines are for NEUR, and required MATH, CHEM, PHYS courses
b. Total Salary	$72,000	$74,160	$152,770	$236,029	$243,110	
c. Total Benefits	$23,760	$24,473	$50,414	$77,890	$80,226	
2. Admin. Staff (b+c below)	$232,750	$239,733	$246,924	$254,332	$261,962	
a. #FTE	2.5	2.5	2.5	2.5	2.5	UG Director 0.5 FTE, Academic Advisor 1.0 FTE CMNS, Academic Advisor 1.0 FTE PSYC
b. Total Salary	$175,000	$180,250	$185,658	$191,227	$196,964	
c. Total Benefits	$57,750	$59,483	$61,267	$63,105	$64,998	
3. Total Support Staff (b+c below)	$33,250	$34,248	$35,275	$36,333	$37,423	
a. #FTE	0.5	0.5	0.5	0.5	0.5	
b. Total Salary	$25,000	$25,750	$26,523	$27,318	$28,138	
c. Total Benefits	$8,250	$8,498	$8,752	$9,015	$9,285	
4. Equipment	$25,000	$25,000	$25,000	$25,000	$25,000	NEUR Fac/Advisor Computers, Furniture, Website, Marketing/Communications (year 1-2); UG student employees (years 3-5)
5. Library	$5,000	$5,000	$5,000	$5,000	$5,000	Estiimate - Library Costs in Prep. (Dec 2017)
6. New or Renovated Space	$0	$500,000	$0	$0	$0	Renovation of 2 NEUR Teaching Labs (one in BIOL, one in PSYC)
7. Other Expenses: Operational Expenses	$103,536	$103,536	$207,072	$310,608	$310,608	(average of In-State & Out-of-State rates)
TOTAL (Add 1 - 7)	**$1,160,296**	**$1,691,099**	**$1,427,953**	**$1,671,855**	**$1,711,793**	
resources - expenditures						

These budget estimates are resources and expenditures to the University overall, and not to the program or unit. Do not include revenue-sharing agreements between units, between unit and college, or with the university (e.g., for entrepreneurial programs) as an expenditure.

	benefits	0.33
	inflation	1.03

Other expenses might include Space rental (if offsite), advertising/recruitment, course development, travel. Please specify in a footnote.

If new or renovated space is required beyond what is allocated to the College, this should be negotiated with the Office of the Provost prior to proposal submission.

Required four NEUR major courses will need be offered every semester and in multiple large sections. Although existing Biology and Psychology faculty can teach a small number of the NEUR sections, the majority of the new required NEUR courses will be taught be new faculty hires.

Two TTK faculty hires will teach at least one undergraduate NEUR course per year, will host undergraduate researchers in their labs, and will serve as members of the NEUR major undergraduate committee. This will be included in their offer letters and be part of their TTK teaching portfolios. If additional TTK faculty are hired as part of the BBI initiative, including NEUR undergraduate teaching and research mentoring as part of their hiring expectations will be negotiated.

Two PTK faculty will teach 3-3 loads in the NEUR major, including taking leadership roles in specific NEUR courses and ensuring a common syllabus and regular assessment for each NEUR required course. The two PTK faculty will also serve on the NEUR major undergraduate committee. This will be included in their offer letters and be part of their PTK teaching portfolios. Administrative duties as part of the NEUR major will be in included in the PTK contracts for both.

2017-2018 PCC New Degree or Certificate Program Proposal

Appendix E
Letters of Support & Permission to List Courses

UNIVERSITY OF MARYLAND

Michael Dougherty, Chair
Department of Psychology
College Park, Maryland 20742-4411
301.405.5862 FAX 301.314.9566

April 4, 2018

RE: Neuroscience (NEUR) Major

Dear Dean Ball,

On behalf of the Department of Psychology, I am pleased to offer our enthusiastic support for the proposed undergraduate major in Neuroscience, and to confirm our commitment to the proposed curriculum described in the proposal. The neuroscience proposal was reviewed separately by the executive committee and the undergraduate studies committee, as well as by the entire faculty. Strong support for the proposed major was expressed in each of these contexts, with the department voting overwhelmingly (34 – 1) in support of the proposal.

In discussing the proposal with faculty two major considerations came up that I wish to share with you. First, the department feels that there is a need to ensure adequate advising to neuroscience students in the Behavioral and Cognitive Neuroscience track. As you know, Psychology is one of the largest majors on campus, and as such our departmental advising staff is already stretched to the limits. The addition of new advisees through the NEUR major would further strain these already limited resources. We therefore appreciate the inclusion of additional advising staff in the budget for the psychology department. This is a much needed resource for ensuring that NEUR majors receive strong advising and without there being a concomitant negative impact on PSYC majors.

Second, the department felt strongly that in order to create a truly exceptional educational program, adequate resources needed to be provided to support the increased teaching demands in Behavioral and Cognitive Neuroscience within Psychology. The proposed PTK and T/TT hires for Psychology included in the proposal are essential resources for Psychology to participate in this major. Without a sustained commitment to our hard budget, Psychology would be unable to participate.

In closing, I want to reiterate our enthusiastic support for this excellent proposal. I also want to thank you for your hard work in bringing this new major to fruition.

Sincerely,

Michael Dougherty

Michael Dougherty
Chair, Department of Psychology
University of Maryland

Cc: Dr. Katherine Russell, Associate Dean for Undergraduate Studies, BSOS

Katherine Ford Russell <krussell@umd.edu>

UNIVERSITY OF MARYLAND

Neuroscience Major & PHIL courses

Samuel J. Kerstein <kerstein@umd.edu> Wed, Aug 8, 2018 at 11:25 AM To: Katherine Ford Russell <krussell@umd.edu>

Hi Katherine,
I've heard back from my colleagues. PHIL 209N is an I-course, and it will be taught regularly (once an academic year). Neuroscience majors would, of course, be welcome to take it. But, as many I-courses do, it fills up quickly. PHIL 280 has not been taught in the past several years. It featured in a previous general education regime, and there are no immediate plans to revive it. But there is a course that is taught regularly that might fit in well with the Neuroscience major: Phil 366, "Introduction to Philosophy of Mind." I've attached the syllabus in case you'd like to take a look. Neuroscience majors would be welcome to take it.
Best, Sam

Samuel Kerstein, Professor and Chair, Dept. of Philosophy University of Maryland, 1125 Skinner Building 4300 Chapel Lane, College Park, MD 20742

kerstein@umd.edu; 301-405-3119
http://faculty.philosophy.umd.edu/SKerstein/

Neuroscience and KNES Courses

---------- Forwarded message ---------
From: **Colleen M. Farmer** <cfarmer@umd.edu>
Date: Wed, Aug 29, 2018 at 10:16 AM
Subject: NEUR PCC Proposal
To: Katherine Ford Russell <krussell@umd.edu>
Cc: Bradley D. Hatfield <bhatfiel@umd.edu>, Stephen M. Roth <sroth1@umd.edu>

Dear Katherine,

The KNES Department agrees to the NEUR PCC proposal listing the following KNES courses as possible electives for the new NEUR major.

Once the NEUR major gets underway KNES/SPHL can work with NEUR on available seats in these courses on a semester-by-semester basis. We cannot commit to seat availability in any given semester or course until closer to the time.

KNES370- Motor Development
KNES385- Motor Control and Learning
KNES462- Neural Basis of Human Movement
KNES498C - Exercise and Brain Health

We are pleased to be a part of the program and wish you the best.

Coke Farmer

PCC Proposal to Establish a Bachelor of Science in Human Development (PCC 18023)

PRESENTED BY	**Janna Bianchini, Chair, Senate Programs, Curricula, and Courses Committee**
REVIEW DATES	**SEC – October 29, 2018 | SENATE – November 7, 2018**
VOTING METHOD	**In a single vote**
RELEVANT POLICY/DOCUMENT	**NA**
NECESSARY APPROVALS	**Senate, President, University System of Maryland Board of Regents, and Maryland Higher Education Commission**

ISSUE

The Department of Human Development and Quantitative Methodology (HDQM) within the College of Education (EDUC) proposes to establish a Bachelor of Science degree program in Human Development. The undergraduate major in Human Development is designed to support student learning about the mechanisms of growth and change across the life span. With areas of focus in developmental science, educational psychology, and statistical methodology, Human Development majors will explore the biological, social, emotional, and cognitive processes of learning and development from conception to old age in diverse social and cultural contexts. Introductory and advanced course work, as well as laboratory research apprenticeships or field experiences, are essential components of the program.

The curriculum will consist of 45 credits organized into the following categories:

- 9 credits of introductory/gateway courses
- 6 credits of statistics and methods courses
- 9 credits of core Human Development courses at the 400 level
- 12 credits of restricted electives
- 3 credits of a pro-seminar
- 6 credits of field experience

Along with a comprehensive knowledge base in human development, students will develop critical thinking and scientific literacy skills, communication and writing skills, and an understanding and appreciation of ethical and social responsibility. Students will also learn to apply their knowledge and skills to their own professional goals. Those who complete the program will be able to take their human development degree in a variety of directions, including health, law, education, public policy, psychology, neuroscience, communication, and marketing. Graduates will be particularly well-suited for careers in educational and social science research and development; social service positions in governmental, NGO's, non-profit and for-profit domains; and instructional (non-certification positions) and administrative roles in educational and childcare organizations.

HDQM Faculty are recognized nationally and internationally for their specific expertise and hold leadership positions in premiere professional organizations. The department's graduate program in Human Development has been offered for decades and is consistently among the highest ranked programs in the nation. The college and department have sufficient resources to provide advising, administration, and instruction for the program. The department's wealth of undergraduate course offerings developed for the minor in Human Development, for the Early Childhood Education certification program, and in service to other programs in the college will be expanded to provide the curriculum.

This proposal was approved by the Senate Programs, Curricula, and Courses committee on October 5, 2018.

RECOMMENDATION(S)

The Senate Committee on Programs, Curricula, and Courses recommends that the Senate approve this new degree program.

COMMITTEE WORK

The committee considered this proposal at its meeting on October 5, 2018. D.J. Bolger, Associate Professor in Human Development and Quantitative Methodology, presented the proposal. The proposal was unanimously approved by the committee.

ALTERNATIVES

The Senate could decline to approve this new degree program.

RISKS

If the Senate declines to approve this degree program, the university will lose an opportunity to utilize existing faculty, course, and administrative resources to provide undergraduates with a degree program in human development, the study of development over the lifespan, an academic discipline currently not offered among undergraduate degree programs at the university.

FINANCIAL IMPLICATIONS

There are no significant financial implications with this proposal for campus as the courses and advising resources already exist within the department and college.

University of Maryland PCC
Program/Curriculum/Unit Proposal

PCC Log No: 18023

Program: Undergraduate Major in Human Development

Department/Unit: Human Development & Quantitative Methodology

College/School: College of Education

Proposal Contact Person (with email): Donald Bolger (djbolger@umd.edu)

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
- ☐ *Establish/Discontinue a formal Area of Concentration*
- ☐ Other:
- ☒ *Establish a new academic degree/certificate program*
- ☐ Create an online version of an existing program
- ☐ Establish a new minor
- ☐ *Suspend/Discontinue a degree/certificate program*
- ☐ Establish a new Master or Certificate of Professional Studies program
  - ☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - *Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair Brenda Jones Harden 9/12/18
2. Department Chair Kelly Sue Mix 9-12-18
3. College/School PCC Chair DENIS SULLIVAN Denis Sullivan 9-20-18
4. Dean Jennifer King Rice Jennifer King Rice 9/21/18
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC Jenna Bianchini 10-5-18
7. University Senate Chair (if required) _____
8. Senior Vice President and Provost _____

Instructions:
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, **and** email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):
The current proposal seeks to establish an undergraduate major in Human Development housed within the Department of Human Development and Quantitative Methodology in the College of Education. The proposed program would be unique, in that there are no other undergraduate degree granting programs in Human Development at a public university in Maryland. The undergraduate major in Human Development is a 45-credit program designed to support student learning about the mechanisms of growth and change across the life span. With areas of focus in developmental science, educational psychology, and statistical methodology, HD Majors will explore the biological, social, emotional, and cognitive processes of learning and development from conception to old age in diverse social and cultural contexts. Students in the HD major will participate in an integrated set of educational experiences to acquire a comprehensive body of interdisciplinary scholarly knowledge in human development, educational psychology, and research methodology.

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

2017-2018 PCC New Degree or Certificate Program Proposal

In order to complete this form, you will need to copy this template to your own document, then complete, print, and submit this proposal with the PCC Cover Sheet

Program: Bachelors of Science in Human Development

Date of Proposal: March 2018

Start Term for New Program: August 2019

A new degree program proposal will need to be approved not just by campus but also by the University System of Maryland (USM) Board of Regents and the Maryland Higher Education Commission (MHEC). New certificate programs need to be approved by the USM Chancellor and MHEC. The following prompts are based on academic policies for programs and reflect campus requirements and MHEC requirements. The prompts also include questions frequently asked by review committees. See http://mhec.maryland.gov/institutions_training/Pages/acadaff/AcadProgInstitApprovals/NewAcademicProgramProposals.aspx for more information about MHEC requirements. Please feel free to add additional information at the end of this document or in a separate appendix.

Mission and Purpose

1. Describe the program and explain how it fits the institutional mission statement and planning priorities. The University Mission Statement and Strategic Plan can be found on this site: https://www.umd.edu/history-and-mission.

The Department of Human Development and Quantitative Methodology proposes an undergraduate major in Human Development. The proposed major would join the major in Early Childhood Education/Early Childhood Special Education (EC/ECSE) (co-sponsored by the Department of Counseling, Higher Education and Special Education) already housed in the Department, as well as a minor in Human Development. The Department (HDQM) graduates approximately 35 EC/ECSE majors, and enroll about 200 undergraduates with a minor in Human Development each year. The proposed HD major would graduate 50 students per year, bringing the total number of undergraduate degrees granted per year to approximately 85.

The proposed program would be unique, in that there are no other undergraduate degree granting programs in Human Development at a public university in Maryland[1].

The undergraduate major in Human Development is designed to support student learning about the mechanisms of growth and change across the life span. With areas of focus in developmental science, educational psychology, and statistical methodology, HD Majors will explore the biological, social, emotional, and cognitive processes of learning and development from conception to old age in diverse social and cultural contexts. Students in the HD major will participate in an integrated set of educational experiences to acquire a comprehensive body of interdisciplinary scholarly knowledge in human development, educational psychology, and research methodology. Introductory and advanced coursework, including laboratory research apprenticeships and/ or field experiences are essential components of the proposed curriculum and meet the current Mission and Strategic Goals of the University of Maryland.

[1] Washington College (a small, private liberal arts college on the Eastern Shore) does offer an undergraduate degree in Human Development; however, this program is focused on elementary education (with or without teacher certification).

Note that the range of topics covered in the proposed HD major has some overlap with the range of topics covered in the undergraduate majors in Family Science and Psychology. But the overlap is not complete, and the relative emphasis of the three majors is different. For example, while all three majors include individual development over the lifespan, individual development is the central focus of the HD major and students will go into much greater depth and detail of individual development than in either the Psychology or Family Sciences major. In contrast, whereas families are considered within the HD major as a context for human development, families are the central focus of the major in Family Science and students undoubtedly go into much greater depth about families than would be possible in the HD major. Similarly, whereas topics like abnormal psychology may be included in HD coursework, the major will not offer as much depth as one could gain in the Psychology major. Second, the level of analysis differs across the three majors. In HD, the mission is to teach students about theoretical models that describe developmental change. These models are often abstract and broadly applicable across specific developmental patterns. For example, the same mechanism might explain how infants learn new words and how high school students learn algebra. Here the interest is in the theoretical model more than any particular developmental problem. In contrast, the FMSC major includes theory but also covers more applied topics, such as family law and family economics. The Psychology major is also highly theoretical with a clinical component, but the topics covered in a psychology major are less focused on developmental change and include a broader range of populations, behaviors, and contexts.

Graduates of the UMCP HD undergraduate major will be well prepared with the knowledge base and skills to pursue, often with additional graduate education, subsequent careers in a variety of occupations in medicine, law, psychology, rehabilitation, behavioral health, education, social services, public policy, communication and marketing. This is because theories of developmental change can help practitioners interpret behavior in these contexts and understand why various interventions may be helpful. Students in the HD program will be well suited for careers in research and development enterprises in education (Educational Testing Service, Children's Television Workshop, Edutopia, etc.), and the behavioral and social sciences (e.g. Westat, American Institutes for Research, etc.); social service agencies in governmental, NGO's, non-profit and for-profit domains; educational institutions (non-certification positions); and offices of Head Start and childcare programs. Graduates of the proposed program would also be well-prepared to apply to graduate programs in Human Development, Educational Psychology and Learning Sciences, Psychology, Neuroscience, and Medicine.

There is some overlap between these occupations and those suited to both Family Science and Psychology majors. Nonetheless, the three disciplines train students with differing backgrounds and skill sets, each of which provides a different lens through which one may approach a common set of issues.

These career paths align exceptionally well with the economic base in the State. Maryland is home to many research and development companies, as well as governmental, NGO's and non-profit agencies with a focus on the behavioral and social sciences and education. An undergraduate degree in Human Development provides a widely accepted pathway into entry-level positions in these settings with many opportunities for subsequent advancement. A review of job opportunities for a recent week on one nationally advertised web-based employment site (http://www.indeed.com) revealed over 500 entry level positions in the behavioral and social sciences in Maryland alone. A more focused review of four selected research and development corporations specializing in educational, behavioral and social science research (Westat, Abt Associates, Mathematica Policy Research, American Institutes for Research), identified numerous entry level opportunities for individuals with undergraduate degrees in Human Development, Psychology, and Education. Initial pay and growth statistics in this field are discussed in Section 21, however, the high demand for individuals with strong

backgrounds in Human Development it has been noted in multiple media venues across the country. A recent piece from Inside Higher Education[2] discusses a new policy in Washington D.C. that all Early Childhood Professionals in the district have formal training in Child Development:

> "We know the economy has changed, and by 2020, 75 percent of jobs in the District [Washington D.C.] will require some postsecondary credential," said Elizabeth Groginsky, assistant superintendent of early learning for the nation's capital. "We're keeping up with the research, and having a policy that shows brain development in young children is incredible … Teachers will need this knowledge and skill base to work with this population."

Our faculty have a successful record of placing our undergraduate research assistants into highly competitive internships at institutions such as NIH, Children's National Medical Center, Kennedy Krieger, and top R1 universities, which have served as gateways to doctoral programs at the leading institutions around the country. Moreover, HD graduates with a background not only in human development and educational psychology but also in measurement, statistics and assessment, may contribute to the design of new methodologies that address educational, youth, and family policy in local, state, and national initiatives.

Whereas the proposed program draws from branches of developmental science and educational psychology and is rooted in the basic and applied sciences that support and serve programs in Family Science, the major in Human Development provides a unique, fundamental program of study on the development of the individual from birth to death and the biological, social, and cultural factors that impact learning and growth. The establishment of the proposed HD program would place the University of Maryland at the cutting edge of the field with a handful of nationally recognized institutions such as Penn State University, University of Minnesota's Institute of Child Development, the University of Texas at Austin, University of California - Davis, Boston College, Northwestern and Vanderbilt University which have established similar or related majors in the developmental and learning sciences.

The unique nature of the faculty that comprise the Department of HDQM enables us to provide a robust and in-depth perspective on learning and development setting us apart from our peer institutions. Our nationally and internationally recognized faculty are teaching a growing number of undergraduate students who require a foundational knowledge of development and learning. Our Developmental Science program has been ranked fourth in the nation in a recent review and our Educational Psychology area has repeatedly ranked in the top 5 over the past 15 years in the *US News and World Reports*. Many of these students come from K-12 teacher preparation programs and other human service fields such as Psychology, Family Science, Hearing and Speech, Kinesiology, and Pre-med program with the recognition that this basic knowledge is essential to their careers. This clamoring for the core knowledge that our courses provide is reflected in the popularity of the Human Development minor currently at 200 students (detailed below in section 21).

The undergraduate HD program meets the strategic mission of UMD through its focus on the connection between the acquisition of fundamental knowledge and the application of this knowledge to practice. Through internships with various organizations (e.g., governmental agencies, NGOs, social service providers, research hospitals, R&D companies, etc.), students will gain practical application and fulfill the national and state level goals of career focused education. The proposed program will extend our national and international influence as it serves as a keystone for the next generation of researchers, policy makers, and professionals in the fields of learning and development.

[2] www.insidehighered.com/news/2017/04/11/degree-requirements-child-care-workers-may-improve-industry-raise-concerns-low

Program Characteristics

2. Provide the catalog description of the proposed program. As part of the description, please indicate any areas of concentration or specializations that will be offered.

The field of Human Development is concerned with mechanisms of growth and change across the life course. Thus, HD Majors will explore the biological, social, emotional, and cognitive processes of development from conception to old age in diverse social and cultural contexts. Students in the HD Major will participate in an integrated set of educational experiences to acquire a comprehensive body of interdisciplinary scholarly knowledge in human development, learning, and research methodology. Introductory and advanced course work, as well as laboratory research apprenticeships or field experiences are essential components of the proposed curriculum.

3. What are the educational objectives of the program?

In preparation for the career paths outlined above, the program will train students with the objective of developing comprehensive skills in the following key areas:

1. Establish a knowledge base of human development across the lifespan ranging from a cognitive, social-emotional, and physiological perspective including the influences of the environmental, historical, and cultural contexts.
2. Develop skills of scientific inquiry and critical thinking.
3. Foster an awareness of the diversity of cultures, contexts, and abilities within which humans develop and how these differences impact development across the lifespan.
4. Achieve mastery in the art of communication related to scientific inquiry and theoretical analysis with a critical awareness of the variety of audiences with whom they may be interacting. Whereas writing is a necessary and critical focus, modes of communication also include oral communication and the use of social media.
5. Prepare to enter the workforce. Whereas the previous goals provide the foundation necessary for the 21st Century workforce in child development, a substantial focus will be preparation for employment in a variety of public and private sectors generated through internships and externships.

4. Describe any selective admissions policy or special criteria for students selecting this program.

The HD Major requires successful completion of 45 credits of coursework, including 9 credits of gateway courses, 6 credits of statistics and research methods, 9 credits of core courses, 12 credits of elective coursework, 3 credits of a capstone seminar, and at least 6 credits of higher-level internship experience or elective coursework. Students are encouraged to apply as entering freshman or sophomores, but can readily accommodate transfers from community colleges. We will use the mandatory advising process to ensure that students have passed the lower level "gateway" coursework before registering for upper-level coursework.

5. Indicate the course requirements with course numbers, titles and credits. If applicable, indicate if any course will also count for a general education requirement. In an appendix, provide the course

catalog information (credits, description, prerequisites, etc.) for all of the courses. Note that suffixed "selected" or "special" topics courses should be avoided. If suffixed-selected or special topics courses are offered regularly in the new program, you should make the courses permanent. Also, please review the basic requirements of degree programs or certificate programs to ensure that they meet the minimum policy requirements.

Please note: new courses or modifications to courses need to be submitted through the Testudo Curriculum Management system and will need to follow the normal VPAC course proposal review process. You may submit individual course changes to VPAC concurrently with the PCC proposal; however, the course changes may be held depending on the outcome of the PCC proposal.

*Courses that will need to be created are indicated with an asterisk.

Course	Cr.	Gen-Ed	Prerequisite(s)
Three gateway courses (9 credits)			
***EDHD 2AA** – *The Study of Human Development: Paradigms and Perspectives*	3		
EDHD 201 – *Learning How to Learn*	3	HS	
EDHD 320 – *Human Development through the Lifespan*	3	HS	
Two statistics and methods courses (6 credits)			
EDHD 306 – *Undergraduate Research Methods*	3	AR	
EDMS 451 – *Introduction to Educational Statistics*	3	AR	
Three of the following five core courses (9 credits)			
EDHD 412 – *Infant Development*	3	HS	
EDHD 411 – *Child Growth and Development*	3	HS	
EDHD 413 – *Adolescent Development*	3	HS	
EDHD 440 – *Adult Development*	3	HS	

EDHD 460 – *Educational Psychology*	3	HS	
Four of the following elective courses (12 credits)			
EDHD 230 – *Human Development and Societal Institutions*	3	HS/UP	
EDHD 231 – *Inside 21st Century Creativity: How Creative Ideas, Concepts, and Products are Generated*	3	HS/IS	
EDHD 310 – *Your Brain on Education: The Neuroscience of Learning and Development*	3	HS/IS	**Prerequisite:** PSYC100
EDHD 420 – *Cognitive Development and Learning*	3		**Prerequisite:** EDHD320, EDHD411, PSYC341, or PSYC355; or permission of EDUC-Human Development and Quantitative Methodology department.
EDHD 425 – *Language Development and Reading Acquisition*	3		
EDHD 426 – *Cognition and Motivation in Reading*	3		
EDHD 430 – *Adolescent Violence*	3		**Prerequisite:** PSYC100; or permission of EDUC-Human Development and Quantitative Methodology department.
EDHD 445 – *Guidance and Young Children*	3		
EDHD 414 – *Development of the Scientific Mind Across the Lifespan*	3		
EDHD 402 – *Social Development*	3		**Recommended:** EDHD411
EDHD 421 – *Peer Relations*	3		

*EDMS 4DD/623 – *Applied Measurement: Issues and Practices*	3		
In the final year: To complete 3 credits of pro-seminar and 6 credits of internship/field experience			
*EDHD 4AA – *Pro-seminar in Human Development*	3		
EDHD 489 – *Field Experiences in Education*	3 (x2)		

Any core course listed above for which core course credit was not given may serve as an elective. This set of courses should be chosen to align with the student's individual program goals and could include extra-departmental course offerings to be found in Appendix A.

Students may, at the invitation of individual faculty, substitute EDHD 498 (1-3 credits), for three of the required 12 credit elective component. For situations in which students wish to pursue a double major, FMSC Majors may substitute FMSC302 for EDHD306, and PSYC Majors may substitute PSYC300 for EDHD306 and PSYC200 for EDMS451 in the HD major.

Students may elect to substitute 6 credits of upper (400 level) electives in place of the internship experience, although internship experience is strongly recommended.

6. Summarize the factors that were considered in developing the proposed curriculum (such as recommendations of advisory or other groups, articulated workforce needs, standards set by disciplinary associations or specialized-accrediting groups, etc.).

The curriculum builds upon existing undergraduate courses that are part of the HD minor, courses taught as part of the General Education curriculum, and courses that service programs both within the College of Education (e.g. Elementary and Secondary Education) as well as programs in other Colleges (e.g. Criminal Justice, Hearing and Speech, etc.).

7. Sample plan. Provide a term by term sample plan that shows how a hypothetical student would progress through the program to completion. It should be clear the length of time it will take for a typical student to graduate. For undergraduate programs, this should be the *four-year plan*.

Sample 4-Year Plan

NOTE: This is a proposed plan and the College of Education does not guarantee that these courses will be offered in the designated semester. A minimum of 120 credits are required for a degree in addition to satisfactory completion all course and other degree requirements. The total number of credits actually earned

for the degree may exceed 120 depending on the number of "elective" and "double count" courses taken. Consult the *Schedule of Classes* for class availability and meeting times.

FRESHMAN:

Fall Semester:	***Cr.***	***Spring Semester:***	***Cr.***
ENGL 101 (AW)	3	**EDHD201** (HS)	3
MATH 110 or Higher (MA)	3	HUMANITIES (HU)	3
NATURAL SCIENCE WITH LAB Biological (NL)	4	**EDHD231** (HS and IS)	3
PSYC 100 (NS)	3	**EDHD230** (HS and UP)	3
UNIV 100 (Optional)	1	ORAL COMMUNICATION (OC)	3
Total Credits	**14**	*Total Credits*	**15**

SOPHOMORE: *Apply to Professional Program between 45 and 60 credits*

Fall Semester:	***Cr.***	***Spring Semester:***	***Cr.***
EDHD2AA	3	**EDHD310** (IS)	3
SCHOLARSHIP IN PRACTICE (SP)	3	GEN ELECTIVE	3
EDHD320 (HS)	3	GEN ELECTIVE	3
HUMANITIES (HU)	3	DV UP or CC	3
GEN ELECTIVE	3	SCHOLARSHIP IN PRACTICE (SP)	3
Total Credits	**15**	*Total Credits*	**15**

JUNIOR YEAR:

Fall Semester:	***Cr.***	***Spring Semester:***	***Cr.***
PROFESSIONAL WRITING (PW)	3	EDHD306	3
EDMS451 (AR)	3	EDHD CORE	3

EDHD CORE	3	EDHD CORE	3
EDHD CORE	3	GEN ELECTIVE	3
GEN ELECTIVE	3	GEN ELECTIVE	3
Total Credits	**15**	*Total Credits*	**15**

SENIOR YEAR

Fall Semester:	***Cr.***	***Spring Semester:***	***Cr.***
EDHD ELECTIVE	3	EDHD ELECTIVE	3
EDHD ELECTIVE	3	EDHD ELECTIVE	3
PRO-SEMINAR	3	INTERNSHIP/FIELD EXPERIENCE	6
GEN ELECTIVE	3	GEN ELECTIVE	3
GEN ELECTIVE	3	GEN ELECTIVE	1
Total Credits	**15**	*Total Credits*	**16**

Updated 9/17 **TOTAL: 120 credits**

** All students must complete two Distributive Studies courses that are approved for **I-series courses**. Students must complete **Understanding Plural Society** and **Cultural Competence** courses that may also fulfill a Distributive Studies category.*

8. Indicate whether the program will be offered in a non-standard delivery format, such as online delivery, off-campus, or through non-standard terms. Please note that MHEC requires a separate proposal for online or off-campus delivery. If the program will be offered in non-standard terms, describe the term structure and whether the Office of the Registrar and the Office of International Scholar and Student Services have been notified and support the proposal.

N/A

9. For Master's degree programs, describe the thesis requirement and/or the non-thesis requirement.

N/A

10. List the intended student learning outcomes. In an appendix, provide the plan for assessing these outcomes.

The tables below list the intended student learning outcomes, organized by 5 overarching goals. Appendix A provides a detailed plan for how these outcomes will be emphasized by and assessed in the program.

Goal 1: Develop a comprehensive knowledge base in human development Students will:
1A. Understand central questions in the field of human development and the major theoretical approaches to them
1B. Describe the sequence of typical development and the underlying processes in the domains of cognitive, linguistic, social, and emotional development
1C. Recognize the importance of biology and environment, including context and culture on children's development and learning
1D. Understand how human development influences educational practice, and how different educational approaches affect learning and development
1E. Appreciate how theory and scientific research are addressed in applied in issues relating to children, family, education, and public policy

Goal 2: Develop core critical thinking and scientific literacy skills Students will:
2A. Formulate answerable questions about important issues in learning and development, as well as generate and evaluate methods for answering those questions

2B. Critically evaluate and reason about empirical evidence relevant to important issues in learning and development, and make informed arguments and decisions on the basis of empirical evidence
2C. Critically evaluate current policies and clinical/educational approaches that address important societal issues on the basis of evidence
2D. Apply these critical thinking and scientific literacy skills across a wide range and intersection of disciplines in development and education, in both research and applied settings

Goal 3: Develop understanding of and value ethical and social responsibility Students will:
3A. Understand and apply ethical standards in research and practice in human development
3B. Show awareness of the diversity of race, cultures, and contexts in which humans develop and grow
3C. Apply evidence from human development research to improve policy and practice that fosters ethical and social responsibility and promotes social justice

Goal 4: Develop key skills for communication and writing Students will:
4A. Clearly summarize, assess, and cite empirical evidence and theoretical perspectives, including describing methodology, results, limitations, and implications for a broader audience

4B. Formulate clear written arguments and substantively defend them with empirical evidence
4C. Present clear evidence-based arguments orally in ways that facilitate communication across a range of academic and non-academic audiences

Goal 5: Develop key professional skills Students will:
5A. Apply both specific knowledge in human development as well as general critical thinking, scientific literacy, and communication skills to career goals
5B. Organize, execute, and manage complex, multi-step research and writing projects
5C. Develop meaningful, purposeful, and realistic career goals for professional life post-graduation

11. Identify specific actions and strategies that will be utilized to recruit and retain a diverse student body.

It is important to note that the design of the program and its curriculum is guided by the department's innate commitment to diversity, equity, and fairness. By its very nature, Human Development theory and research requires experts and their students to examine diverse patterns of growth and development across social, cognitive, emotional, and physical domains throughout the lifespan. The influence of culture, race, ethnicity, and individual differences that promote or restrict access to various kinds of opportunities, power, and resources within societies impacts the ways in which our research is conducted, including the research questions that are asked, the methods used to explore those questions, data collection practices, the statistical analyses used to interpret the data, and the conclusions that are drawn with regard to findings. In other words, the field itself is to a large extent defined by its focus on human diversity. In alignment with that fundamental disciplinary underpinning, the department is dedicated to fulfilling the University's admission mission philosophy of "admitting and enrolling the most talented, diverse and interesting class possible" (University of

Maryland, 2013).

Once admitted, specific retention efforts will be employed to ensure the success of all students in the program. The department will:

- Employ a strong, faculty directed advising model, in which students will be supported to examine their individual career and life goals and to design and succeed in a composite of required and elective courses that best facilitate those outcomes;
- Ensure that all courses address theory and research which examine central issues related to the (a) influence of diversity on growth and development and (b) practical implications for application of course content in diverse professional work-related and educational settings;
- Assist students in identifying and securing the most personally relevant and meaningful internship and service learning placements;
- Assist students in the design and implementation of a) an internship experience, or b) a faculty-advised Capstone Project or Honors Thesis (Appendix B), either of which will be strongly related to students' individual career goals and the work that is being completed in the end of program internship.

Learning outcomes associated with these projects will measure students' understanding of the needs of target populations of varying age, gender, race, and ethnicity. The student will need to demonstrate that he/she understands the importance of differentiated service delivery and how that can be influenced by individual differences with regard to culture, development, motivation to achieve, or other ecological parameters.

The driving force in this department is one of inclusion and diversity and the teaching and scholarship from the faculty are world renown for their focus on culture, context, and the impact on human development. Retention of our students, specifically those of underrepresented minority backgrounds, will happen through the organization of student groups and honor societies both lead by the students as well as those with dynamic interaction with the faculty. Such organizations include an undergraduate student organization (UGSO), an HD Honor Society, as well as participating department and college led groups (e.g. Center for Child Relationships and Culture; Center for Language and Literacy; etc.). Because a large portion of the routine course advising occurs through the College's Office of Student Services, the efforts of the Departmental advising staff (the Program Director and GA) will focus sharply on enrollment, retention, time to graduation, and career guidance for students of underrepresented groups.

Relationship to Other Units or Institutions

12. If a required or recommended course is offered by another department, discuss how the additional students will not unduly burden that department's faculty and resources. Discuss any other potential impacts on another department, such as academic content that may significantly overlap with existing programs. Use space below for any comments, otherwise add supporting correspondence as an appendix.

The proposed program in Human Development is unique in its focus on social, emotional, and cognitive mechanisms of development of the individual, and its implications for learning particularly in the context of education. However, as noted above, it overlaps somewhat with content of the majors in Psychology and Family Science. Specifically, both of these majors include topics related to child development, individual development, and lifespan development, which are clearly central to the study of human development. Because of this overlap, one concern might be a negative impact on enrollments in those majors. We can estimate the number of students who might shift by examining the enrollments in the current minor in Human

Development. The 2017-18 enrollment in the HD minor was roughly 200 undergraduates, across a range of majors. Of these 200 students, 62 (31%) have a primary major in Psychology and 28 (14%) have a primary major in Family Science. It is possible that, given the option to major in Human Development and minor in Psychology or Family Science, some of these students may shift. However, these numbers are relatively small compared to the total enrollments in these majors (Psychology: n = 950; Family Science n = 350), so it is unlikely that the major in Human Development will substantially impact these programs.

Through our relationships with programs in Psychology and Family Science, we have consulted on sets of courses that may be fundamentally equivalent or may substitute for such courses within the program including core and elective courses (See Appendix A). This continued interaction is meant to reduce the burden on students for duplicating coursework particularly for those seeking to major in more than one program. This spirit of engagement will reduce competition between programs and enable our departments to support one another's academic missions through flexibility in course requirements, course enrollments, and course offerings.

See letters from Psychology and Family Science in Appendix .

13. Accreditation and Licensure. Will program need to be accredited? If so, indicate the accrediting agency. Also, indicate if students will expect to be licensed or certified in order to engage in or be successful in the program's target occupation.

The program does not involve professional accreditation or certification. Students will not be expected to be licensed or certified to be successful in their careers following this Major.

14. Describe any cooperative arrangements with other institutions or organizations that will be important for the success of this program.

Internships and research experiences are important, and students have the option of participating in external career and research experiences. As in programs such as Family Science, finding and organizing these placements will generally be the responsibility of students, but will be facilitated and supported by the program director and/or other faculty. Cooperative arrangements with agencies, businesses, and research institutions in the area will emerge organically rather than having a formal placement process in place. There are two reasons for this. First, HDQM majors will likely be interested in a variety of experiences, and this will allow them to craft unique experiences that fit their interests, with the support of our faculty and their connections. Second, many students will likely choose to complete an internship in a research lab in our department or elsewhere campus instead of an off-campus internship. Finally, some students may choose to take additional advanced elective coursework in lieu of an internship. This model allows for maximum flexibility.

Moreover, this experience of finding a career path and seeking employment (or internship experience) will be a fundamental part of the students' experience in the program. Through the Capstone Seminar course taking place in the spring of their junior year, students will walk through career plans, draft resumes, address

professional standards and behavior, discuss ethical issues, and both draft internship plans/contracts with the goal of carryout out those internships in the Summer/Fall of their senior year.

External placements. The greatest need in this area will be for high quality internship and service learning placements. The Department intends to work closely with the University Career Center & The President's Promise (https://careers.umd.edu/) to ensure that our students have access to opportunities in the field. In addition, we will continue to work with the Office of Leadership and Community Service-Learning in the Adele H. Stamp Student Union - Center for Campus Life for support toward more service learning and leadership experiences for our students. The office has worked with our faculty through workshops and individual consultation to facilitate the integration of experiential learning into course designs. The office also maintains a comprehensive database of community organizations that can be accessed in the design of internship and service learning opportunities (http://thestamp.umd.edu/leadership_community_service-learning/service_opportunities).

Current laboratory facilities. Currently, the department houses 16 faculty research labs, which serve the needs of approximately 110 students. HDQM faculty already advise many undergraduate students on campus in other majors who seek out HDQM faculty to work in their labs.

The Center for Young Children (CYC). The CYC is administratively housed within the Department of Human Development and Quantitative Methodology. This facility is designed to support the observation of children in their daily school activities and currently serves as an important resource for students in Human Development courses. We are anticipating an increase in the need for observational experiences as a function of admitting students to the Major and will work internally to facilitate those opportunities.

Faculty and Organization

15. Faculty and organization. Who will provide academic direction and oversight for the program? As an appendix, please indicate the faculty involved in the program. Include their titles, credentials, and courses they may teach for the program.

The program will be housed in the Department of Human Development and Quantitative Methodology, College of Education. HDQM Faculty are recognized nationally and internationally for their specific expertise and hold leadership positions in premiere professional organizations. Faculty routinely present at national and international conferences, and publish theoretical and empirical research articles in high impact peer-reviewed journals. Many of the faculty hold Fellow status in associations such as the American Psychological Association, the American Psychological Society, and the American Educational Research Association, and most serve, or have served, as consulting, associate, or principal editors of leading journals in the field, including the American Educational Research Journal, Contemporary Educational Psychology, Developmental Psychology, Child Development, the Journal of Applied Developmental Psychology, Adolescence, Human Development, Journal of Research in Adolescence, International Journal of Behavioural Development, Psychological Methods, Multivariate Behavioral Research, Journal of Educational and Behavioral Statistics, Educational and Psychological Measurement, Journal of Educational Measurement, and many others.

HDQM faculty conduct research across the lifespan in a broad range of important areas in Human Development and many are leading experts in quantitative methodology. The Developmental Science faculty, who were recently ranked 4th in the nation[3],train students in areas of social, cognitive, emotional, self and biological domains of human development. In the Educational Psychology program, faculty focus on the cognitive, motivational, and sociocultural aspects of learning and development that take place in educational contexts. Early Childhood Faculty study the development and education of young children. The Measurement, Statistics, and Evaluation faculty study the principles of measurement, applied statistics, and evaluation of institutional and organizational programs and are considered one of the best quantitative methods faculty in the nation. Students enrolled in the HD Undergraduate Major will receive the highest quality instruction by faculty who are uniquely positioned to teach human development and quantitative research methodology. A total of 22 HDQM tenured/pre-tenured and clinical faculty have the responsibility for curriculum and programmatic decisions. A full list of faculty and their credentials along with biographical sketches can be found in Appendix C.

Resource Needs and Sources

16. Each new program is required to have a library assessment in order to determine any new library resources that may be required. Please contact your departmental/programmatic library liaison or Daniel Mack at dmack@umd.edu, Associate Dean of Collections, to request a library assessment that will be added as an appendix.

Students in the Major will need to complete a variety of course and programmatic assessments requiring them to read, understand, and translate Human Development empirical research into principles of practice in a variety of professional settings. The existing databases in the Hornbake and McKeldin Libraries should support the completion of the majority of these assignments. The McKeldin Research Port includes databases that are typically the source of reference for peer-reviewed journal articles, book chapters, and monographs/reports used by faculty and graduate students in the field; those databases include Psycinfo, ERIC, Education Research Complete, Medline, and many others. Access to other information resources, e.g. translation services, videos, audiotapes, film editing services, etc. may also be required. Access to additional library resources at DC Metropolitan area institutions, in national and/or international databases, the National Institutes of Health, etc. can be arranged with the help of faculty. Please see Letter from University of Maryland Libraries, which includes a formal evaluation by the Hornbake and McKeldin Library staff.

17. Discuss the adequacy of physical facilities, infrastructure and instructional equipment.

The facilities that are already in existence are adequate to handle the demands of the proposed major and the course offerings within the program. There are few new courses proposed and the space needed for additional personnel is minimal.

[3] http://u.osu.edu/adventuresinhdfs/the-hdfs-report-claire-kamp-dushs-ranking-of-hdfs-programs-in-north-america/

18. Discuss the instructional resources (faculty, staff, and teaching assistants) that will be needed to cover new courses or needed additional sections of existing courses to be taught. Indicate the source of resources for covering these costs.

Assignment of faculty to courses. HDQM standard procedure for assignment of faculty to courses will be followed. For every course scheduling round, the Director of Academic Services and Outreach (DASO) will assess, along with the Program Director and Director of the Office of Student Services (OSS) in the College, student need for various courses in the undergraduate Major program. A proposal for undergraduate course offerings will be shared by the DASO with the Department Chair, along with recommendations for faculty course assignments that are in alignment with the faculty's expertise, students' current programmatic needs, and departmental administrative concerns such as faculty buyout, sabbatical, and course overload considerations. Final approval of all undergraduate course schedules will be the responsibility of the Department Chair.

Because the vast majority of these courses are currently being taught with relatively low enrollments, there is not expected to be a large increase in the number of section offerings of the courses. As there is room within the department's FTE loads and course offerings, the new EDHD2AA will be taught by current faculty on-load. In addition the department has hired a full-time lecturer and will be seeking to hire a full-time program director with funds made available from the Dean's office and the department's fund balance. The PD will be responsible for several gateway courses and the Capstone Seminar (EDHD390) as well as be responsible for the Internship Experience courses (EDHD497/498).

19. Discuss the administrative and advising resources that will be needed for the program. Indicate the source of resources for covering these costs.

Student advising. Student advising will proceed as a dual process, shared by the HD Program Director, the program Graduate Assistant, and the OSS in the College of Education. All students entering the program will be required to meet with a Department advisor for academic advising and program planning. This academic advising is required to help a student outline his/her educational and career goals and research objectives as clearly as possible, and identify the courses and internship experiences available within the program that best align with those objectives. This beginning faculty/student advising relationship is expected to be ongoing throughout the student's time in the program so that appropriate adjustments can be made to the student's program plan if they are indicated. Students will be given the opportunity to meet with an academic advisor each semester during their time in the program. The second level of advising will be that provided by the OSS, in collaboration with Department faculty advisors. OSS has advised the department that their unit will provide technical and procedural support to both faculty and students with regard to orientation, Freshman Follow-up Review, and strict adherence to University policy with regard to review of benchmark requirements for graduation, and other program completion requisites such as general education requirements. The advising structure for the program is as follows:

Tier 1: Program Director

A full-time professional track faculty member will be hired in HDQM to serve as Program Director, and have overall responsibility for all academic and administrative aspects of the program. Specifically, the Program Director will supervise all activities related to:

· Course management and approval;
· Initiation and maintenance of recruitment efforts about the program to Campus and the broader community;
· Ongoing advising of interested or enrolled students regarding career trajectories and appropriate course selections + fulfillment of requirements;
· Management of all internship placements, contracts, and course credit;
· Design of program evaluation, collection of evaluation data, and maintenance of evaluation database.
· Oversight of the content of the program website.

In addition, this person will be expected to teach the Capstone Seminar (EDHD390) course that will prepare students for their career paths and internship experiences as well as teaching in gateway courses as needed.

Tier 2: HD Graduate Assistant

The Program Director will be assisted in program maintenance activities by one full-time Graduate Assistant. This graduate assistant will be primarily responsible for some portion of the academic advising in the program, managing the service-learning and internship components of the program, as well as assisting the Program Director with initiation and maintenance of relationships with UM Alumni who may be interested in providing these opportunities.

Tier 3: Office of Student Services (OSS), College of Education

The OSS in the CoE will join department advisors in a dual advising model. OSS will provide student services related to CoE orientation programs and recruitment resources. This office will also provide technical advising for students with regard to benchmark oversight by conducting two specific kinds of progress reviews: (a) a Freshman Follow-up Performance Review with student feedback where indicated; (b) 45, 60, and 90 credit reviews for timely progress toward general education and other graduation requirements. In addition, OSS will also provide support to the home academic unit (HD) with regard to transfer of credit from other institutions, course equivalencies for International Study Abroad, service-learning or internship credits, graduation clearance procedures, and other University policies regarding undergraduate education.

Tier 4: Office of Undergraduate Admissions

The Program will require the support of the Office of Undergraduate Admissions. All freshman applicants will apply to the program per the standard application procedures outlined by the University.

Funding for the Program Director and the Graduate Assistant will come from support from the Dean's office in addition to the available fund balance of the department. The department has recently hired a full-time lecturer to increase our undergraduate offerings in light of the impending major.

20. Use the Maryland Higher Education Commission (MHEC) commission financial tables to describe the program's financial plan for the next five years: https://docs.google.com/spreadsheets/d/1V6iSZG05edMitWP6CAOXjCoGO58Gf6VXxPaacKfrhZ4/edit#gid=0. Add these tables as attachments.

TABLE 1: RESOURCES

Resources Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1.Reallocated Funds*	$341,121	$418,050	$499,341	$512,521	$526,097
2. Tuition/Fee Revenue (c+g below)	$ -	$ -	$ -	$ -	$ -
a. #FT Students	35	70	105	105	105
b. Annual Tuition/Fee Rate	$ 13,575	$ 13,982	$14,402	$14,834	$15,279
c. Annual FT Revenue (a x b)	$ -	$ -	$ -	$ -	$ -
d. # PT Students	5	10	20	20	20
e. Credit Hour Rate	$565.40	$582.36	$599.83	$617.83	$636.36
f. Annual Credit Hours	16	16	16	16	16
g. Total Part Time Revenue (d x e x f)	$ -	$ -	$ -	$ -	$ -
3. Grants, Contracts, & Other External Sources	$ -	$ -	$ -	$ -	$ -
4. Other Sources	$ -	$ -	$ -	$ -	$ -
TOTAL (Add 1 - 4)	**$341,121**	**$418,050**	**$499,341**	**$512,521**	**$526,097**

*Reallocated funds have come from the Dean's office of the College of Education for the Program Director and FT lecturer. In addition, the department is hiring two TT lines this year with another expected in the following years to replace retiring faculty. In addition, current TT faculty and Graduate Student TAs will shift teaching toward Gateway and Core courses as well as popular electives. These courses will also be offered more regularly during Summer and Winter sessions leading to increased revenue for the program.

TABLE 2: EXPENDITURES

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b+c below)	$133,000	$205,485	$282,199	$290,665	$299,385
a. #FTE	1.0	1.5	2.0	2.0	2.0
b. Total Salary	$100,000	$154,500	$212,180	$218,545	$225,102
c. Total Benefits	$33,000	$50,985	$70,019	$72,120	$74,284
2. Admin. Staff (b+c below)	$99,750	$102,743	$105,825	$109,000	$112,270
a. #FTE	1.0	1.0	1.0	1.0	1.0
b. Total Salary	$75,000	$77,250	$79,568	$81,955	$84,413
c. Total Benefits	$24,750	$25,493	$26,257	$27,045	$27,856
3. Total Support Staff (b+c below)	$0	$0	$0	$0	$0
a. #FTE	0.0	0.0	0.0	0.0	0.0
b. Total Salary	$0	$0	$0	$0	$0
c. Total Benefits	$0	$0	$0	$0	$0
4. Graduate Assistants (b+c)	$48,371	$49,822	$51,317	$52,857	$54,442
a. #FTE	1.0	1.0	1.0	1.0	1.0
b. Stipend	$23,431	$24,134	$24,858	$25,604	$26,372
c. Tuition Remission	$17,208	$17,724	$18,256	$18,804	$19,368
d. Benefits	$7,732	$7,964	$8,203	$8,449	$8,703
5. Equipment	$5,000	$5,000	$5,000	$5,000	$5,000
6. Library	$5,000	$5,000	$5,000	$5,000	$5,000
7. New or Renovated Space	$0	$0	$0	$0	$0
8. Other Expenses: Operational Expenses	$50,000	$50,000	$50,000	$50,000	$50,000
TOTAL (Add 1 - 8)	**$341,121**	**$418,050**	**$499,341**	**$512,521**	**$526,097**
resources - expenditures	$0	$0	$0	$0	$0

Implications for the State (Additional Information Required by MHEC and the Board of Regents)

If the proposed program is for a Post-Baccalaureate Certificate that is derived entirely from existing courses within an existing Master's degree program, then you **only** need to respond to prompts 21 (on market demand) and 24 (curriculum of current master's degree program).

21. Explain how there is a compelling regional or statewide need for the program. Argument for need may be based on the need for the advancement of knowledge and/or societal needs, including the need for "expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education." Also, explain how need is consistent with the Maryland State Plan for Postsecondary Education.

Discussion of societal needs and advancement of knowledge in Human Development is well-addressed in section 1. An undergraduate degree in Human Development (HD) is excellent preparation for graduate and professional schools and prepares students for a variety of professional work opportunities. Graduates may pursue careers in medicine, law, psychology, rehabilitation, behavioral health, education, social services, public policy, communication and marketing. Graduates would be well-prepared to enter graduate school with strong undergraduate preparation in laboratory science. Students coming out of undergraduate programs in Human Development on average will earn between $32,000-$42,000 starting salary, however, most students in such programs go on to earn advanced degrees[4]. Growth in the field of jobs for professionals with childcare/preschool administration backgrounds is expected to grow by 23.5% over the next 10 years[5]. For instance, newly passed regulations in Washington D.C. require that all lead childcare teachers have at least an associates degree and all directors have at least a bachelors degree by 2020[6]. From a recent piece from Inside Higher Education[7]:

> "We know the economy has changed, and by 2020, 75 percent of jobs in the District will require some postsecondary credential," said Elizabeth Groginsky, assistant superintendent of early learning for the nation's capital. "We're keeping up with the research, and having a policy that shows brain development in young children is incredible … Teachers will need this knowledge and skill base to work with this population."

In short, there is a great need for individuals who understand child development to manage and lead organizations across the sector including educational/daycare, foster and adoptions, parental interventions and strategies, family outreach, and health research. It is imperative that these opportunities are filled by individuals with diverse backgrounds who will be able to engage with and understand the multitude of factors systemic to the communities from which they emerged. Thus, the need for a highly diverse workforce demands that we ensure a highly diverse student body.

The major in HD will make use of multiple means for delivering instruction, in keeping with the State and University's values. Our pedagogical approach will enable us to meet the "Maryland Ready" goals of: 1) a quality and effective program with the majority of our undergraduate courses being taught by full-time faculty in the department, 2) access, affordability, and completion by enabling multiple means of content delivery, which include online course offerings, hybrid courses, and hands on laboratory and internship experiences; 3) diversity by increasing the ways to meet the needs of an economically and regionally diverse student body particularly those non-traditional students who are working to support their education; and 4) economic growth

[4] www.collegefactual.com/majors/family-consumer-human-sciences/human-development-family-studies
[5] www.studentscholarships.org/salary/522/education_administrators_preschool_and_child_care_center_program.php
[6] osse.dc.gov/publication/final-rulemaking-licensing-child-development-facilities
[7] www.insidehighered.com/news/2017/04/11/degree-requirements-child-care-workers-may-improve-industry-raise-concerns-low

and vitality by increasing the labor force of highly trained and well-educated child development and elder-care specialists that are needed to support future generations in meeting their potential and to meet the social, emotional, and psychological needs of the "baby-boomer" generation. Our approach provides opportunities for students to engage with the course content in out-of-classroom experiences, which is central to the goals and outcomes of the major by spending less time in the lecture hall and more time in the field per se. This approach will also enhance the visibility of the program and confront the demands for more mobile and in-vivo learning experiences.

22. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program. Possible sources of information include industry or disciplinary studies on job market, the USBLS Occupational Outlook Handbook, or Maryland state Occupational and Industry Projections over the next five years. Also, provide information on the existing supply of graduates in similar programs in the state (use MHEC's Office of Research and Policy Analysis webpage for Annual Reports on Enrollment by Program) and discuss how future demand for graduates will exceed the existing supply. As part of this analysis, indicate the anticipated number of students your program will graduate per year at steady state.

Student Audience and Enrollment Estimates

An undergraduate major in Human Development is predicted to be a popular option among the student body at the University of Maryland based upon the popularity of our undergraduate minor and related majors in Psychology and Family Science as well as the continued success of programs at rival institutions across the country. Students enrolled in our minor and undergraduate courses have consistently inquired about further study including the desire to develop an Honors program in the near future.

Human development minor. The undergraduate minor in Human Development is a popular program which currently serves 200 students from across campus. Students in the Human Development Minor were recently questioned for their views on the possibility of an undergraduate Major. The majority of survey respondents indicated that if there had been an undergraduate Major in HD when they entered the University that this would have been of interest to them. Based on this, assuming we enrolled all 300 applicants and some of these chose to major in HD instead of taking the minor, we estimate a total enrollment in the major of 200 students.

We may also obtain enrollment estimates by comparison to our peer institutions. There are roughly 140[8] bachelor degree programs of Human Development across the country consisting of roughly 14,000 undergraduate students[9] in the U.S. Student enrollment in Human Development Majors at regional and peer institutions indicates that the major is a popular choice for students. For example, Penn State University has a program in Human Development and Family Science, which has a total of 350 declared majors. At Boston College, Applied Psychology and Human Development is the 8th most popular undergraduate major (out of more than 50), with 403 out of 9,110 undergraduates enrolled as of Fall 2012. At UC Davis, Human Development is the 15th most popular major (out of more than 100), with 504 out 25,759 undergraduates enrolled as of Fall 2012. The University of Texas at Austin actually has *two* popular human development programs. The UT major in Applied Learning and Development in the College of Education had 1,003 students enrolled as of Fall 2011, while the major in Human Development and Family Sciences in the School of Human

[8] https://bigfuture.collegeboard.org/college-search?major=710_Human%20Development%20and%20Family%20Studies
[9] https://www.collegefactual.com/majors/family-consumer-human-sciences/human-development-family-studies/

Ecology had 454 students. Finally, at the University of Wisconsin – Madison, 187 undergraduates are currently enrolled in the Human Development and Family Studies major. Based on the enrollments in these competitor institutions, it is possible our enrollments will exceed 200 majors.

According to the **USBLS** **Occupational Outlook Handbook**, jobs in Community and Social Service Occupations are expected to grow 14% in the next 10 years, faster than average. Relevant jobs listed under this category include: health educators and community health workers, marriage and family therapists, and social workers. This is confirmed by data compiled by The College Board. In addition, jobs in Life, Physical and Social Science Occupations are also expected to grow 10% in the next 10 years, faster than average. Relevant jobs listed under this category include: psychologists, sociologists, and survey researchers. Whereas these jobs entail some post-baccalaureate training, the HD major provides the appropriate undergraduate background to advance to the appropriate graduate training programs.

According to the **Maryland state** **Occupational and Industry Projections**, relevant jobs for HD graduates include Social Science Research Assistants, Survey Researchers, Early Childhood Education Professionals (non-certified), School Counseling, Schoool Psychologists and Social Workers, and Health care social workers. In the next 2 years, these jobs are projected to grow by an additional 236 positions in the state of Maryland alone.

According to **MHEC's Office of Research and Policy Analysis** **webpage** **for Annual Reports on Enrollment by Program,** we found 0 Human Development majors at Washington College in 2016, suggesting this major is a new major for students starting in 2017. Bowie State University has approximately 100 students enrolled in its Child and Adolescent Studies program (99 in 2016) which translates to 25-33 students graduating each year (Bowie State students can declare a major when enrolling at the university or at the end of their sophomore year.).

23. Identify similar programs in the state. Discuss any differences between the proposed program and existing programs. Explain how your program will not result in an unreasonable duplication of an existing program (you can base this argument on program differences or market demand for graduates). The MHEC website can be used to find academic programs operating in the state: http://mhec.maryland.gov/institutions_training/pages/HEPrograms.aspx.

Washington College offers a Human Development major toward a BA degree but this major has a slightly different emphasis than the proposed UMD HD major. First, Washington College's Human Development major is a self-described liberal arts major, with a focus on prospective elementary school teachers. Thus, this major has two tracks: it can be combined with Elementary Ed certification or not. With the certification focus, the major is quite different from the HD major proposed as the majority of required courses are focused on elementary education. The non-certification track requires 4 core courses along with a capstone experience and these courses are somewhat similar to courses in the HD major although the UMD HD major requires substantially more development courses as well as a statistics course. Washington College's non-certification Human Development major includes elective courses in Anthropology, Sociology, and Psychology whereas the proposed HD major's courses are predominantly in development.

Towson University has a Department of Family Studies and Community Development which mirrors more closely UMD's Department of Family Science. Within this department there are two programs: "Family and

Human Services" and "Family Science". The former program having a more applied focus on "family life methodology, theories of family functioning, dynamics within families and interaction between families and the larger social context." Despite the statement that the program focuses on the "study and application of individual and family development across the lifespan", the coursework and emphasis listed is clearly on the family (https://www.towson.edu/cla/departments/familystudies/documents/comparison_of_2_majors.pdf). The latter program is more research focused with specific emphasis on "the study of families and relationships in the context of contemporary society." Given the the major in HD at the University of Maryland is focused more specifically at the social, emotional, cognitive (and neural) development of the individual child and adult, it would no more be seen as a competitor to the two programs at Towson in Family Science as our own major in Family Science.

There are other colleges and universities with similar programs (see Section 24 on HBIs).

24. Discuss the possible impact on Historically Black Institutions (HBIs) in the state. Will the program affect any existing programs at Maryland HBIs? Will the program impact the uniqueness or identity of a Maryland HBI?

The proposed HD major will not impact the identities of any of the four Maryland HBIs, as the similar programs offered by each of these universities are common across many colleges and universities and are not linked to the HBI identity.

Coppin State University, UMD Eastern Shore, and Morgan State University do not offer a program similar to the proposed HD major. Both Morgan and Coppin offer bachelor's degrees in Elementary Education and Psychology. The Elementary Education major focuses on training prospective elementary school teachers and the Psychology major aligns with the current UMD Psychology major more than the proposed HD major. UMD Eastern Shore offers a Child Development major which focuses solely on child development; the addition of a HD major should not impact enrollment into this program.

Bowie State University has a Child & Adolescent Studies major which is the program most similar to the proposed HD major. Despite the similarity in some of the required courses, the program at Bowie State does not include adult development and it emphasizes clinical experience as opposed to research experience. Students interested in studying a wider age range or in a more intensive research experience will be attracted to the HD major at UMD. It is possible that a very small number of students who would normally enroll at Bowie State may decide to enroll at UMD instead. Given the small percentage of students who are deciding between Bowie State and UMD and the small percentage UMD students who would major in HD, we believe there will only be 0-1 students affected by the proposed HD program. Thus, we do not anticipate the proposed HD major to affect enrollment at Bowie State University.

25. For new Post-Baccalaureate Certificates derived from existing master's programs only, include the complete curriculum of the existing master's program.

Appendix A

Extra-Departmental Electives

FMSC Majors may substitute FMSC302 for EDHD306.
PSYC Majors may substitute PSYC300 for EDHD306 and PSYC200 for EDMS451.

PSYCHOLOGY ELECTIVES
PSYC 200 Statistics
PSYC 206 Developmental Biopsychology
PSYC 221 Social Psychology
PSYC 300 Methods
PSYC 301 Biological Basis
PSYC 318 Community Interventions
PSYC 319 Community Interventions
PSYC 330 Child Psychopathology
PSYC 332 Human Sexuality
PSYC 334 Interpersonal Relationships
PSYC 336 Women
PSYC 337 Community Psychology
PSYC 341 Memory and Cognition
PSYC 353 Adult Psychopathology
PSYC 402 Neural Systems and Behavior
PSYC 436 Clinical Psychology

SOCIOLOGY ELECTIVES
SOCY 227 Deviance
SOCY 230 Social Psychology
SOCY 241 Inequality
SOCY 325 Gender
SOCY 412 Demography
SOCY 424 Race Relations
SOCY 430 Social Structure and Identity
SOCY 440 Self-Concept
SOCY 442 Family and Social Class
SOCY 443 Family and Society
SOCY 444 Sociology of Children
SOCY 467 Sociology of Education

FAMILY SCIENCE ELECTIVES
FMSC 105 Individuals in Families
FMSC 290 Family Economics *Restricted to FMSC majors and non-majors with less than or equal to 60 credits*
FMSC 330 Family Theories and Patterns
FMSC 332 Children in Families
FMSC 430 Gender Issues in Families

FMSC 431 Family Crises and Intervention
FMSC 452 Family Policy Analysis
FMSC 460 Violence in Families
FMSC 480 Work and Family Issues
FMSC 497 The Child and the Law

ELECTIVES APPROVED BY PROGRAM ADVISOR FROM THE FOLLOWING DEPARTMENTS TO SATISFY INDIVIDUAL SUTDENTS' PROGRAM GOALS:
AASP – African American Studies
AAST - Asian American Studies
AMST – American Studies
ANTH - Anthropology
BMGT – Business and Management
CCJS – Criminology and Criminal Justice
ECON - Economics
GVPT – Government and Politics
HESP – Hearing and Speech Sciences
HLTH - Health
LING - Linguistics
RELS – Religious Studies
SLLC – School of Languages Literatures and Cultures
SPHL – Public Health
STAT – Statistics and Probability
WMST – Women's Studies

Appendix B: Assessment of Student Learning Outcomes

Appendix X: Targeting and Assessment of Student Learning Outcomes

Goal 1: Develop a comprehensive knowledge base in human development

	1A. Understand central questions in the field of human development and the major theoretical approaches to them	1B. Describe the sequence of typical development and the underlying processes in the domains of cognitive, linguistic, social, and emotional development	1C. Recognize the importance of biology and environment, including context and culture on children's development and learning	1D. Understand how human development influences educational practice, and how different educational approaches affect learning and development	1E. Appreciate how theory and scientific research are addressed in applied in issues relating to children, family, education, and public policy
Course(s) Targeting Sub-goal	EDHD 2AA – Study of Human Development: Paradigms & Perspect. EDHD 390 – Career Paths in Human Development EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology	EDHD 320 – Human Development through the Lifespan EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology	EDHD 201 – Learning How to Learn EDHD 230 – Human Development and Societal Institutions EDHD 310 – Your Brain on Education: The Neuroscience of Learning & Devel. EDHD 320 – Human Development through the Lifespan EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology	EDHD 201 – Learning How to Learn EDHD 230 – Human Development and Societal Institutions EDHD 390 – Career Paths in Human Development EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology	EDHD 2AA – Study of Human Development: Paradigms & Perspect. EDHD 201 – Learning How to Learn EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology
How Sub-goal is Assessed	• Written Assignments • Exams	• Written Assignments • Oral Presentations	• Written Assignments • Exams	• Written Assignments • Exams	• Written Assignments • Exams

Goal 2: Develop core critical thinking and scientific literacy skills

	2A. Formulate answerable questions about important issues in learning and development, as well as generate and evaluate methods for answering those questions	2B. Critically evaluate and reason about empirical evidence relevant to important issues in learning and development, and make informed arguments and decisions on the basis of empirical evidence	2C. Critically evaluate current policies and clinical/educational approaches that address important societal issues on the basis of evidence	2D. Apply these critical thinking and scientific literacy skills across a wide range and intersection of disciplines in development and education, in both research and applied settings
Course(s) Targeting Sub-goal	EDHD 306 – Research Methods EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 426 – Cognition and Motivation in Reading	EDHD 201 – Learning How to Learn EDHD 390 – Career Paths in Human Development EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology	EDHD 201 – Learning How to Learn EDHD 230 – Human Development and Societal Institutions EDHD 390 – Career Paths in Human Development EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 414 – Development of the Scientific Mind Across the Lifespan EDHD 460 – Educational Psychology	EDHD 201 – Learning How to Learn EDHD 306 – Research Methods EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 414 – Development of the Scientific Mind Across the Lifespan EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology
How Sub-goal is Assessed	• Exams • Written Assignments • Case Study Presentation	• Written Assignments • Exams	• Written Assignments • Group Presentations • Group Debates	• Written Assignments • Group Presentations • Group Debates

Goal 3: Develop understanding of and value ethical and social responsibility

	3A. Understand and apply ethical standards in research and practice in human development	3B. Show awareness of the diversity of race, cultures, and contexts in which humans develop and grow	3C. Apply evidence from human development research to improve policy and practice that fosters ethical and social responsibility and promotes social justice
Course(s) Targeting Sub-goal	EDHD 4AA – Pro-seminar in Human Development EDHD 390 – Career Paths in Human Development EDHD 402 – Social Development EDHD 425 – Language Development and Reading Acquisition	EDHD 230 – Human Development and Societal Institutions EDHD 231 – Inside 21st Century Creativity EDHD 402 – Social Development EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 414 – Development of the Scientific Mind Across the Lifespan EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 460 – Educational Psychology	EDHD 230 – Human Development and Societal Institutions EDHD 402 – Social Development EDHD 411 – Child Growth and Development EDHD 414 – Development of the Scientific Mind Across the Lifespan EDHD 425 – Language Development and Reading Acquisition
How Sub-goal is Assessed	• Written Assignments • Exams • Case Study	• Exams • Written Assignments • Group Presentations	• Exams • Written Assignments • Group Debates

Goal 4: Develop key skills for communication and writing

	4A. Clearly summarize, assess, and cite empirical evidence and theoretical perspectives, including describing methodology, results, limitations, and implications for a broader audience	4B. Formulate clear written arguments and substantively defend them with empirical evidence	4C. Present clear evidence-based arguments orally in ways that facilitate communication across a range of academic and non-academic audiences
Course(s) Targeting Sub-goal	EDHD 201 — Learning How to Learn EDHD 231 – Inside 21st Century Creativity EDHD 310 – Your Brain on Education: The Neuroscience of Learning and Development EDHD 402 – Social Development EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 414 – Development of the Scientific Mind Across the Lifespan EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 426 – Cognition and Motivation in Reading EDHD 460 – Educational Psychology	EDHD 201 – Learning How to Learn EDHD 231 – Inside 21st Century Creativity EDHD 310 – Your Brain on Education: The Neuroscience of Learning and Development EDHD 390 – Career Paths in Human Development EDHD 402 – Social Development EDHD 411 – Child Growth and Development EDHD 413 – Adolescent Development EDHD 414 – Development of the Scientific Mind Across the Lifespan EDHD 420 – Cognitive Development and Learning EDHD 425 – Language Development and Reading Acquisition EDHD 426 – Cognition and Motivation in Reading EDHD 460 – Educational Psychology	EDHD 201 – Learning How to Learn EDHD 231 – Inside 21st Century Creativity EDHD 310 – Your Brain on Education: The Neuroscience of Learning and Development EDHD 402 – Social Development EDHD 413 – Adolescent Development EDHD 425 – Language Development and Reading Acquisition EDHD 426 – Cognition and Motivation in Reading EDHD 460 – Educational Psychology
How Sub-goal is Assessed	• Final Project Multimedia Presentations • Group Presentations • Written Assignments	• Written Assignments • Exams • Group Presentations	• Final Project Multimedia Presentations • Group Presentations • Case Study Presentation

Goal 5: Develop key professional skills

	5A. Apply both specific knowledge in human development as well as general critical thinking, scientific literacy, and communication skills to career goals	5B. Organize, execute, and manage complex, multi-step research and writing projects	5C. Develop meaningful, purposeful, and realistic career goals for professional life post-graduation
Course(s) Targeting Sub-goal	EDHD 4AA – Pro-seminar in Human Development EDHD 390 – Career Paths in Human Development EDHD 426 – Cognition and Motivation in Reading	EDHD 306 – Research Methods EDHD 390 – Career Paths in Human Development EDHD 411 – Child Growth and Development EDHD 425 – Language Development and Reading Acquisition EDHD 426 – Cognition and Motivation in Reading EDHD 460 – Educational Psychology	EDHD 4AA – Pro-seminar in Human Development EDHD 390 – Career Paths in Human Development
How Sub-goal is Assessed	• Written Assignments • Exams	• Written Assignments	• Written Assignments

Appendix C: Faculty Bios

Faculty Info	Faculty Bio
Alexander, Patricia Ph. D. University of Maryland, College Park Professor; Educational Psychology Specialization palexand@umd.edu (301) 405-2821	A former middle-school teacher, Dr. Alexander received her reading specialist degree from James Madison University in 1979 and her Ph.D. in reading from the University of Maryland in 1981. Her research focuses on literacy and reading comprehension, learning and academic development, critical and relational reasoning, epistemic beliefs, and expertise. After completing her Ph.D., she joined the faculty at Texas A&M University before returning to UMD as a professor in 1995. Her honors include the Oscar S. Causey Award for outstanding contributions to literacy research from the National Reading Conference (2001), the E. L. Thorndike Award for Career Achievement in Educational Psychology from APA Division 15 (2006), and the Sylvia Scribner Career Award from AERA Division C (2007). She has also received university-level honors for both her teaching and her research. Recently named as one of the most influential educational psychologists of the past decade (Patterson-Hazly & Kiewra, 2012), Dr. Alexander has served as President of Division 15 (Educational Psychology) of the APA, Vice-President of Division C (Learning and Instruction) of AERA, and Past-President of the Southwest Educational Research Association. Since receiving her Ph.D., Dr. Alexander has published over 270 articles, books, or chapters in the area of learning and instruction. She has also presented over 400 invited addresses or papers at national and international conferences. She currently serves as the senior editor of Contemporary Educational Psychology, was past editor of Instructional Science and Associate Editor of American Educational Research Journal-Teaching, Learning, and Human Development, and presently serves on over 10 editorial boards including those for Learning and Instruction, Educational Psychologist, and the Journal of Educational Psychology.
Bolger, Donald Ph. D. University of Pittsburgh Associate Professor; Developmental Science Program & Educational Psychology Specialization djbolger@umd.edu (301) 405-9103	Donald J. Bolger, Assistant Professor of Human Development & Quantitative Methodology, studies how the brain learns to read and what are the cognitive and neural bases of reading and language ability and disability. The core of his laboratory's research focus is on these key issues of reading from neurobiological, cognitive, developmental and educational perspectives. Reading is a complex cognitive skill that requires that small complex visual forms (letters) be accurately recognized and integrated with linguistic information from sound and meaning with the ultimate purpose of achieving comprehension. Thus, typical and atypical reading and language ability may be reflected in quite heterogeneous patterns of cortical activation stemming from visual, auditory or supramodal processing regions. Dr. Bolger employs multiple methods in structural and functional MRI to understand the dynamics of cortical networks in skilled and disabled readers, including functional connectivity analyses and diffusion imaging. Dr. Bolger's lab is increasingly focusing on how the effects of intervention are reflected in cortex, specifically using executive function and working memory training paradigms. From school-based and cross-sectional paradigms to online adult training tasks, our work combines innovative and complex methodologies the combine MRI with event-related potentials (ERP) to understand development and learning. Dr. Bolger is an affiliate of the Center for Advanced Study of Language (casl.umd.edu) and a founding member of the Maryland Neuroimaging Center

	(mnc.umd.edu).
Butler, Lucas Ph.D. Stanford University Assistant Professor; Developmental Science Program lpbutler@umd.edu (301) 314-1815	Dr. Butler's research program explores the nuanced interplay between two critical components of early learning: the capacity to learn important information about the world by making inductive inferences on the basis of limited evidence, and the ability to flexibly and selectively learn from others. By investigating this interplay across several important areas of learning—causal reasoning, inductive generalization, categorization, and normative judgment—as well as over the course of development, he is working to generate broad conclusions about how early cognitive development is fundamentally shaped both by the social context in which it occurs, and by children's developing social cognitive capacities. Prior to joining the department, Dr. Butler completed his Ph.D. in Psychology from Stanford University, and was an Alexander von Humboldt Postdoctoral Fellow at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany.
Cabrera, Natasha Ph. D. University of Denver Professor; Developmental Science Program ncabrera@umd.edu (301) 405-2827	Natasha Cabrera Natasha Cabrera received her Ph.D. in Educational and Developmental Psychology from the University of Denver and her MA degree from the University of Toronto. Dr. Cabrera joined the University of Maryland faculty in 2002 and arrived with several years of experience as an SRCD Executive Branch Fellow with the National Institute of Child Health and Human Development (NICHD). Her current research topics include: father–child and mother–child relationships, predictors of adaptive and maladaptive parenting, children's social and emotional development in different types of families and cultural /ethnic groups, and, the mechanisms that link early experience to children's later cognitive and social development. She has published in peer–reviewed journals on policy, methodology, theory and the implications of minority fathers' and mothers' parenting on children's cognitive and social development. She is the co-editor of the Handbook of Father Involvement: Multidisciplinary Perspectives, second edition (2012), and two co-edited volumes entitled Latina/o Child Psychology and Mental Health (2011). She won the National Council and Family Relations award for Best Research Article regarding men in families in 2009.
Dunbar, Kevin Ph. D. University of Toronto Professor; Developmental Science Program & Educational Psychology Specialization kndunbar@umd.edu (301) 405-7233	Kevin Niall Dunbar is Professor of Human Development and Quantitative Methodology at the University of Maryland College Park. He received his Bachelor's and Master's degrees from the National University of Ireland (Dublin) and his PhD from the University of Toronto. Professor Dunbar conducts research on the ways that children, students, artists and scientists think, reason, create and understand the world. He has investigated, children's learning, undergraduate student learning, and scientists creating new ideas –he has even investigated politicians! He focuses on reasoning strategies involved in analogy, causality, creativity, concept discovery and how these strategies are used by children, students, and scientists. He uses three converging methodologies to explore scientific, artistic, and critical thinking. First, he conducts naturalistic observations of scientists in their labs, students in undergraduate laboratory classes, and visitors to museums (usually families). Second, he conducts experiments with students generating theories, creating new concepts, conducting experiments, and interpreting new information. Third, he conducts neuroimaging research on students as they learn about Physics, Chemistry and Biology, as well as creating new ideas

	using analogy and causal thinking. Here, the goal is to discover optimal ways of presenting new concepts so that students can overcome blocks to learning. Specific topics of his research have been the roles of unexpected results in fostering discovery and invention, Gender in the scientific laboratory, and the roles of analogy and causal thinking in discovery and invention. Professor Dunbar has published in the fields of Education, Experimental Psychology, Cognitive Psychology, and Educational Neuroscience. In addition to publications in academic forums, his work has been featured in the New Yorker, WIRED magazine, Time ideas, Slate, and the Washington Post. He regularly speaks in North America, Asia, and Europe on the topics of Creativity, Analogy, and the effects of learning on the brain, and how to improve critical, creative, and scientific thinking across the lifespan.
Fox, Nathan Ph. D. Harvard University Distinguished University Professor; Developmental Science Program fox@umd.edu (301) 405-2816	Infant and Child Temperament; Development of emotion and emotion regulation; Human Developmental Neuroscience; Development of social cognition; Infant social cognition. Areas of Student Supervision: Infant cognitive/social development; Developmental Psychopathology; Human Developmental Neuroscience.
Hancock, Gregory Ph. D. University of Washington Professor; Measurement, Statistics and Evaluation UM Distinguished Scholar-Teacher ghancock@umd.edu (301) 405-3621	structural equation models; latent growth models; latent variable experimental design and analysis
Harring, Jeff Ph.D. University of Minnesota Associate Professor; Measurement, Statistics and Evaluation harring@umd.edu (301) 405-3630	Dr. Harring is Associate Professor of Measurement, Statistics, and Evaluation (EDMS) in the Department of Human Development and Quantitative Methodology at the University of Maryland. Prior to joining the the EDMS faculty in the fall of 2006, Dr. Harring received a M.S. degree in Statistics in 2004, and completed his Ph.D. in the Quantitative Methods Program within Educational Psychology in 2005--both degrees coming from the University of Minnesota. Before that, Dr. Harring taught high school mathematics for 12 years. Dr. Harring teaches a variety of graduate-level quantitative methods courses including: General Linear Models I & II, Statistical Analysis of Longitudinal Data, Statistical Computing and Monte Carlo Simulation, Multivariate Data Analaysis and Finite Mixture Models in Measurement and Statistics. Dr. Harring's research interests focus on applications of (i) statistical models for repeated measures data, (ii) linear and nonlinear structural equation models, (iii) multilevel models and (iv) statistical computing.

Jiao, Hong Ph.D. Florida State University Associate Professor; Measurement, Statistics and Evaluation hjiao@umd.edu (301) 405-3627	I am an Associate Professor in Measurement, Statistics and Evaluation in the Department of Human Development and Quantitative Methodology at the University of Maryland. I joined the faculty of EDMS in Fall 2007 after working as a psychometrician on K-12 state assessment programs for about four years.
Jones-Harden, Brenda Ph.D. Yale University Associate Professor; Developmental Science Program bjharden@umd.edu (301) 405-2580	development of maltreated foster, prenatally drug-exposed, and other children at-risk; prevention science and program evaluation
Killen, Melanie Ph.D. University of California, Berkeley Professor; Developmental Science Program mkillen@umd.edu (301) 405-3176	Melanie Killen is Professor of Human Development and Quantitative Methodology, Professor of Psychology (Affiliate), and the Associate Director for the Center for Children, Relationships, and Culture at the University of Maryland. She has received funding from the National Institute of Child Health and Human Development (NICHD), and the National Science Foundation (NSF) for her research on children's and adolescents' development. She was awarded the Distinguished Scholar-Teacher Award by the Provost from the University of Maryland for 2008-2009, and the Graduate Mentor of the Year Award as well as the Undergraduate Mentor of the Year Award from the Graduate School at the University of Maryland. Dr. Killen is the author of Children and Social Exclusion: Morality, Prejudice and Group Identity (2011) and co-editor of Social Development in Childhood and Adolescence: A Contemporary Reader (2011), and she has co–edited 6 books, including serving as the Editor of the Handbook on Moral Development (2006; 2014), and has published 2 monographs. She has published over 150 empirical journal articles and book chapters, and her book on morality in everyday life won the outstanding book award from the American Educational Research Association. Dr. Killen served as an expert witness in a school desegregation case, and helped prepare two Supreme Court briefs regarding the impact of school desegregation on children's social development. She has also served as a consultant for a federal initiative on interventions designed to reduce prejudice and to promote inclusion in U.S. elementary schools. Dr. Killen serves on the expert advisory panel for the new National Children's Museum in Washington, D.C., and her research has been profiled in The New York Times, The Washington Post, The Baltimore Examiner, The American Scientist, The Chronicle of Higher Education, American School Board Journal, Teaching Tolerance Magazine, ABCNews.com, Newsweek.com, Parenting, Parent–Wise Magazine, Redbook, Baby Journal, as well as featured on CNN AC360 with Anderson Cooper and Soledad O'Brien for a show on children and

	racial bias, which won an Emmy Award. Dr. Killen's research areas of expertise include children's and adolescents' social and moral reasoning, peer relationships, inclusion and exclusion, intergroup relationships and attitudes, prejudice and bias, gender roles, social development, social competence, theory of mind, and the role of school environments on child and adolescent development.
Klein, Elisa Ph.D. The Pennsylvania State University Associate Professor; Developmental Science Program elklein@umd.edu (301) 405-3122	Dr. Elisa Klein is an associate professor in the Department of Human Development and Quantitative Methodology, where she conducts research in child social policy, teacher education and young children's understanding of their early school experiences, and teaches graduate and undergraduate courses in child development and early education. Society for Research in Child Development and American Association for the Advancement of Science Policy Fellow. Executive branch AAAS policy fellows work in various federal agencies to learn about the federal policy making and the role of science in the policy-making process. Additionally, they and provide scientific expertise to policy makers throughout government. In 2009- 2010 Dr. Klein was an American Association for the Advancement of Science and Society for Research in Child Development Executive Branch Science and Technology Policy Fellow. Executive branch AAAS policy fellows work in various federal agencies to learn about the federal policy making and the role of science in the policy-making process. Additionally, they and provide scientific expertise to policy makers throughout government. While a Fellow, Dr. Klein worked in the Office of Behavioral and Social Sciences Research, in the Office of the Director at the National Institutes of Health in Bethesda, MD. She was also a Visiting Scientist and Child Development Research Fellow in the Research, Demonstration and Evaluation Branch (now part of Office of Planning, Research and Evaluation) of the Administration on Children and Families in the U.S. Department of Health and Human Services during an earlier leave from her academic position. Dr. Klein was the director of the University of Maryland's first child care research and demonstration program, the Center for Young Children. Prior to her positions at Maryland, she was a faculty member at The Ohio State University, Columbus. She has worked extensively with the Maryland State Department of Education in the development of early childhood policies such as universal preschool education, and has been a consultant to many local, non–profit, and governmental agencies, including Head Start, The Children's Defense Fund, the Department of Education, NIH and the National Science Foundation, on a variety of issues related to young children's development and education. Dr. Klein received her B.A. in Psychology with Honors from Kalamazoo College, and her M.S. and Ph.D. in Human Development from The Pennsylvania State University
Lissitz, Bob Ph.D. Syracuse University Professor; Measurement, Statistics and Evaluation rlissitz@umd.edu	I am a professor of Education in the College of Education at the University of Maryland and Director of the Maryland Assessment Research Center for Education Success (MARCES). I got my degree from Syracuse University's psychology department with a specialization in measurement and statistics and the equivalent of an undergraduate major in mathematics. I took a one year post-doc at the Psychometric Laboratory in Chapel Hill and then took an academic position with the University of Georgia's psychology department. After 8 years and promotion to associate professor, I moved in 1978 to the

(301) 405-3620	College of Education as professor and chairperson. I was the department chairperson for 26 years and have recently stepped down to return to the life of a faculty member. I have had many great experiences as an administrator, including chairing the campus Senate back in 1992 and chairing numerous campus committees before that time. I have been an Associate Dean for the College of Education developing a management information system and implementing total quality management efforts. The National Council on Measurement in Education and the American Educational Research Association have both asked me to chair a number of committees that have allowed me to provide a national service function. These include the Committee on External Relations, Diversity Relations, and the General Committee on Special Interest Groups. Many years ago, I was elected to Chair the Special Interest Group on Educational Statistics. For 1998-99, I chaired the NCME Awards Committee on Technical Contributions to Measurement Practice and in 2005 I chaired their elections committee.
Mix, Kelly Ph.D. University of Chicago Professor and Chair kmix@umd.edu (301) 405-5914	Kelly S. Mix, Ph.D., joined the UMD College of Education as the new chair of the Department of Human Development and Quantitative Methodology, effective on Sept. 1, 2016. A former elementary school teacher, Dr. Mix transitioned to academia early in her career, as she was interested in better understanding how different teaching processes work, as well as why some students struggled to learn concepts that came easily to others. Motivated to conduct research and influence policy at a broader level, she obtained a Ph.D. in psychology from the University of Chicago. Dr. Mix began her career in academia at Indiana University and most recently served as a professor in educational psychology at Michigan State University, where her work centered on applying the ideas from developmental psychology to educational practices. Her current research focuses on the development of mathematical cognition and number concepts in young children.
Prather, Richard W. Ph.D. University of Wisconsin-Madison Assistant Professor; Educational Psychology Specialization prather1@umd.edu (301) 405-2806	Richard Prather's laboratory investigates children's neurocognitive development with a primary focus on cognitive processes relevant to early mathematics learning. His research program uses neuroimaging, computational modeling and behavioral experimentation to develop mechanistic explanations of behavior and insights into the relationship between children's behavior and neural activity. In addition to laboratory based experiments he also works in schools to develop interventions to improve children's mathematics performance. This multifaceted approach allows him to investigate questions in a manner that integrates neuroscience with developmental theory and important educational applications. Prior to joining the university of Maryland Dr. Prather received degrees from the University of Wisconsin – Madison (PhD) and MIT (BS).
Ramani, Geetha Ph.D. University of Pittsburgh Associate Professor; Developmental Science Program & Educational	Geetha Ramani is an Associate Professor of Human Development and Quantitative Methodology. Before coming to the University of Maryland in 2008, Dr. Ramani received her Ph.D. in Developmental Psychology from the University of Pittsburgh and worked as a Postdoctoral Research Associate in Cognitive Development at Carnegie Mellon University. Dr. Ramani's research focuses on understanding how children's social interactions influence their cognitive development, mainly in the areas of mathematics and problem solving. Specifically, Dr. Ramani examines how

Psychology Specialization gramani@umd.edu (301) 405-8777	children learn early math and problem-solving skills through play and informal learning activities, such as playing with games and blocks. She also investigates how parent-child interactions, parental beliefs, and the early home environment can contribute to children's development in these areas. Dr. Ramani is also interested in the development and correlates of peer cooperation in young children. Together, Dr. Ramani's work focuses on the benefits and unique processes of learning through cooperation and joint play with adults and peers, and their importance for educational practices with young children.
Rubin, Kenneth Ph.D. Pennsylvania State University Professor; Developmental Science Program krubin@umd.edu (301) 405-0458	Kenneth H. Rubin (B.A., McGill University, 1968; Ph.D., Pennsylvania State University, 1971) is Professor of Human Development and Quantitative Methodology and Founding Director, Center for Children, Relationships, and Culture at theUniversity of Maryland. Rubin's research interests are focused on such topics as social, emotional, and personality development; social competence; social cognition; play; aggression; social withdrawal/behavioral inhibition/shyness; peer relationships and friendship; parenting and parent-child relationships; and cross-cultural studies. Many of his over 300 peer-reviewed publications have been co-authored by colleagues on five continents. As Director, International Consortium on the Study of Children, Relationships, and Culture (research sites include Australia, Brazil, Canada, China, India, Italy, Korea, Oman, Portugal, and the USA), he and his colleagues have studied social and emotional development from cultural and cross-cultural perspectives. Rubin's current projects include a National Institute of Mental Health funded 12-year longitudinal research project entitled 'Friendship and psychosocial adjustment in middle childhood and adolescence;' a National Institute of Child Health and Human Development funded project 'Social outcomes in pediatric traumatic brain injury;' and a National Institute of Mental Health funded project (with Professor Andrea Chronis-Tuscano, Psychology Department), "A Multi-Component Early Intervention for Socially Inhibited Preschool Children. Rubin was the elected President of the International Society for the Study of Behavioral Development (1998-2002), an elected member of the Society for Research in Child Development Governing Council (2009-2015), and an elected member of the American Psychological Association, Developmental Psychology Division Executive Board (1987-1990). He has served as Associate Editor of Child Development (1981-1984; 1998-2001). In addition, he has been a member of the National Institute of Child Health and Human Development study section on Human Development and Aging as well as the National Institute of Mental Health's study section on Risk and Prevention. Rubin is a Fellow of the American and Canadian Psychological Associations, the Association of Psychological Science, and the International Society for the Study of Behavioral Development. Among his honors are the Society for Research in Child Development Award for distinguished Contributions to Understanding International, Cultural and Contextual Diversity in Child Development; the International Society for the Study of Behavioral Development Award for Distinguished Contributions to the International Advancement of Research and Theory in Behavioral Development; the Developmental Psychology Mentor Award of the American Psychological Association; the Pickering Award for Outstanding Contribution to

	Developmental Psychology in Canada; and the Killam Research Fellowship (Canada Council)
Stapleton, Laura Ph.D. University of Maryland Associate Professor; Measurement, Statistics and Evaluation lstaplet@umd.edu (301) 405-1933	Laura M. Stapleton is an Associate Professor in Measurement, Statistics and Evaluation (EDMS) in the Department of Human Development and Quantitative Methodology at the University of Maryland. Additionally, she serves as the Associate Director of the Research Branch of the Maryland State Longitudinal Data System Center. She joined the faculty of EDMS in Fall 2011 after being on the faculty in Psychology at the University of Maryland, Baltimore County and in Educational Psychology at the University of Texas, Austin. Each year she serves on the faculty of the National Center for Education Research (NCER) funded Summer Research Training Institute on Cluster Randomized Trials at Northwestern University. Prior to earning her Ph.D. in Measurement, Statistics and Evaluation from the University of Maryland in 2001, she was an economist at the Bureau of Labor Statistics and, subsequently, conducted educational research at the American Association of State Colleges and Universities and as Associate Director of institutional research at the University of Maryland.
Sweet, Tracy Ph.D. Carnegie Mellon University Assistant Professor; Measurement, Statistics and Evaluation tsweet@umd.edu (301) 405-3623	I am an Assistant Professor in Measurement, Statistics and Evaluation in the Department of Human Development and Quantitative Methodology at the University of Maryland. Prior to this appointment, I was in the Department of Statistics at Carnegie Mellon University as a postdoctoral fellow. My degrees include Ph.D. and M.S. in Statistics from Carnegie Mellon University and M.A. in Mathematics from Morgan State University. I also taught high school mathematics for Baltimore County Public Schools. My research focuses on developing multilevel statistical social network models and on models for interventions on social networks in particular. I am also interested in statistical methodology for large-scale educational interventions and recently started studying teacher rating models.
Torney-Purta, Judith Ph.D. University of Chicago Professor; Developmental Science Program & Educational Psychology Specialization jtpurta@umd.edu (301) 405-2806	social/political cognition; civic education cross-nationally; cross-cultural and inter-cultural studies; research related to social policy; Interaction in technology-rich environments; social studies and history learning. Areas of Student Supervision: Social development and social cognition (pre-school through adult); applied cognitive psychology; gender roles; cross-cultural and inter-cultural studies; research related to social policy; social studies and history learning. Due to expected retirement in June 2015 I am not accepting new students, though I continue to teach, publish with students and serve on committees for doctoral students.
Wang, Min Ph.D. Ontario Institute for Studies in Education/University of Toronto	Dr. Min Wang received her Ph.D. in Applied Cognitive Science from the University of Toronto in 2000. Upon graduation she completed her post-doctoral training at the Learning Research and Development Center at the University of Pittsburgh, funded by a fellowship from the Social Sciences and Humanities Research Council of Canada. She became a member of the Faculty of Human Development at the University of Maryland in 2002.

Professor; Educational Psychology Specialization & Developmental Science Program minwang@umd.edu (301) 405-8798	Dr. Wang's research interests are in the area of language and reading development. Specifically, she is interested in how cross language and writing system differences impact learning to speak and read in a first and second language. Her recent work has mainly focused on Chinese-English, Korean-English, Spanish-English bilingual children and adults, funded by NIH/NICHD, NSF, and Spencer Foundation. Dr. Wang is also interested in extending her work to other bilingual populations involving various languages and writing systems in the world. Dr. Wang has been serving on the editorial boards of Applied Psycholinguistics, Writing Systems Research, Contemporary Educational Psychology, and International Multilingual Research Journal. She has served as the Director of Graduate Studies in her department and the Executive Committee of the NSF-IGERT program at the University of Maryland in Biological and Computational Foundations of Language Diversity. She is a Fellow of the Association of Psychological Science (APS) and Psychonomic Society.
Wentzel, Kathryn Ph.D. Stanford University Professor; Developmental Science Specialization & Educational Psychology Specialization wentzel@umd.edu (301) 405-2810	Kathryn Wentzel is a Professor of Human Development in the Department of Human Development, Learning, and Quantitative Methodology. She received her Ph.D. in Psychological Studies in Education from Stanford University in 1987, after which she held post-doctoral positions at the Center for the Study of Families, Children, and Youth at Stanford and in the developmental psychology program in the Department of Psychology at the University of Illinois, Urbana-Champaign. Dr. Wentzel's research examines the social correlates and antecedents of adolescent motivation and achievement. This work includes a focus on the nature of teacher-student relationships and teacher supports as predictors of young adolescents' goal pursuit, prosocial behavior, and academic performance. A related strand of her work has examined peer relationship configurations (peer status, peer networks, and friendships) and supports (e.g., emotional support from peers) as predictors of these same outcomes. Her research is school-based, relies on a variety of research methods, and focuses on adolescent students from diverse backgrounds. Dr. Wentzel has published over 100 articles and book chapters based on this work andhas co-edited books on achievement motivation, Social motivation: Understanding children's school adjustment (1996), and Handbook of motivation at school (2009; 2015), and social influences on school outcomes, Handbook of Social Influences in School Contexts: Social-Emotional, Motivation, and Cognitive Outcomes. She is currently editor of Educational Psychologist and past editor of the Journal of Applied Developmental Psychology. Dr. Wentzel is past Vice-President of Division E (Counseling and Human Development, AERA), past Interim Chair of HDQM, and has Fellow status in the American Psychological Association, Division 15, and American Educational Research Association, Division E.
Wigfield, Allan Ph.D. University of Illinois, Urbana Professor; Developmental Science Program &	Dr. Wigfield is Professor, Distinguished-Scholar Teacher, and Director of Human Development Graduate Studies in HDQM. He also is an Honorary Faculty Member in Psychology at the University of Heidelberg, Germany. He received his Ph. D. in educational psychology from the University of Illinois, and then went to the University of Michigan on a postdoctoral fellowship in developmental psychology. His research interests concern the development of children's achievement motivation, children's motivation for reading and how

Educational Psychology Specialization awigfiel@umd.edu (301) 405-2809	it is influenced by different reading instructional practices, and gender differences in achievement motivation. Dr. Wigfield has authored more than 130 peer-reviewed journal articles and book chapters on children's motivation and other topics, including the chapter on the development of motivation in the Handbook of child psychology (6th and 7th editions). He was Associate Editor of the Journal of Educational Psychology from 2000 to 2002 and Associate Editor of Child Development from 2001 to 2005. He was editor of the teaching, learning, and human development section of the American Educational Research Journal from 2007-2010. Dr. Wigfield has one awards for his research and also for his teaching
Yang, Ji Seung Ph.D. University of California – Los Angeles Assistant Professor; Measurement, Statistics and Evaluation jsyang@umd.edu (301) 405-6073	Dr. Yang is an Assistant Professor of Measurement, Statistics, and Evaluation (EDMS) in the Department of Human Development and Quantitative Methodology at the University of Maryland. Before joining the EDMS faculty in the fall of 2013, Dr. Yang worked as a postdoctoral researcher at University of California - Los Angeles (UCLA) where she received her Ph.D. in the Social Research Methodology Program (focus: Advanced Quantitative Methods in Educational Research) within the School of Education and Information Studies in 2012. Prior to joining UCLA, she earned her M.A. and B.A. in Education at Yonsei University, Korea. Dr. Yang's research interests focus on measurement and advanced quantitative research methods in social sciences. The research interests encompass 1) development of statistical models that incorporate measurement errors in the frameworks of Item Response Theory, Generalizability Theory, Hierarchical Linear Modeling, and Latent Variable Modeling, and 2) development of multilevel/multidimensional item response model with efficient computation.

Appendix D: Syllabus for EDHD200

EDHD 2AA: THE STUDY OF HUMAN DEVELOPMENT

Paradigms & Perspectives

Course description

EDHD 2AA is an introduction to the paradigms and perspectives that guide the study of human development across the lifespan in cognitive, social, physical and emotional domains. Topics of study include overlying principles, concepts, assumptions, theoretical frameworks, and research methods that influence ways in which development is conceptualized. The course is designed to provide insight into major questions of the day in human development and how these prevailing perspectives have evolved over time. This course will also help students understand how knowledge of theory and research is translated into practice in a variety of professional settings. EDHD 2AA is a requirement for all students enrolled in the EDHD minor or major undergraduate program.

Course purpose

This course is intended to help undergraduate students who will be pursuing either a minor or major in Human Development gain foundational knowledge in preparation for advanced coursework in Human Development at the undergraduate level in those programs. It is also appropriate for students from a variety of majors who wish to gain knowledge of the field that will inform their future decisions about potential courses of study and career objectives.

Course objectives

Students will demonstrate:

1. The ability to evaluate the strengths and weaknesses of theories of human development;
2. Understanding of the major perspectives and prevailing questions that influence the ways in which development is studied;
3. Knowledge of scientific reasoning;
4. Understanding of how course concepts are translated into applied tasks in a variety of career contexts.

Required readings

Textbook. Green, M. & Piel, J.A. (2010). Theories of Human Development (2nd Edition). Boston, MA: Pearson Education, Inc

Supplemental articles. Can be accessed on CANVAS via elms.umd.edu

University Policies and Resources

As a student, you have the responsibility to be familiar with and uphold the *Code of Academic Integrity* and the *Code of Conduct*, as well as for notifying your course instructors in a timely fashion regarding academic accommodations related to absences and accessibility as indicated below.

You also have the right to know the expectations set by University Policy. The University of Maryland values the diversity of its student body and is committed to providing a classroom atmosphere that encourages the equitable participation of all students.

University Policies outlined at this link are particularly relevant to your experience in academic courses: http://ugst.umd.edu/courserelatedpolicies.html. Topics that are addressed in these policies include academic integrity,

student and instructor conduct, accessibility and accommodations, attendance and excused absences, grades and appeals, copyright and intellectual property.

Course Requirements

1) Exams (total 200 points)

There will be *two non-cumulative exams*. Each exam is worth 100 points.

Mid Term Exam: _____
Final Exam: _____

2) Critical thinking papers (total 100 points)

Students will complete *four critical thinking papers*, each worth 25 points, in which they are responsible for analyzing an infant, child, or adolescent development life narrative from each of the four theoretical perspectives covered in Unit 3. Details of this assignment will be distributed in a separate handout during the second week of class.

3) Term paper (total 100 points)

Students will complete a term paper, in which they will demonstrate the ability to apply course concepts to potential career goals and objectives, as they relate to the field of human development. Details of this assignment will be distributed in a separate handout during the fourth week of class.

Course Grades

Mid Term Exam	100 points
Final Exam	100 points
Term Paper	100 points
4 Critical Thinking Papers	100 points

360-400 points	A
320-359 points	B
280-319 points	C
240-279 points	D
< 240 points	F

Course Schedule

UNIT 1

Introductory Concepts

Week 1 *The field of Human Development: definition & scope*
- The study of Human Development
- Biological stages of maturation
- Cognitive, social, and emotional stages of development

Instructional goal: This class introduces students to Human Development as a field of study. We will discuss biological maturation and the dominant role that it plays in shaping cognitive, emotional, and social development. We will also discuss the interactive nature of these domains and how environmental influences further act to determine developmental outcomes. Students will learn how this approach to studying human thought and behavior compares with other traditions and fields.

Week 2 *Biological determinants of development*
- Evolution & embryology
- Population genetics
- Behavioral genetics
- Developmental neuroscience

Instructional goal: This class will include a discussion of how different aspects of biology determine maturation. Specifically, the class will focus on genetics as a determining factor in human growth, behavior, cognition, and emotion. The class will also emphasize the role of the brain in orchestrating the nature of these changes.

Week 3 *Environmental influences on development*
-Culture
Race, Ethnicity, Cohort, SES
-Family
-Peers
-Ecological factors

Instructional goal: This class will include a discussion of how environmental factors affect the maturational processes across domains of development, including an emphasis on cultural, familial, peer and a variety of ecological influences.

Week 4 *Central issues & questions*
-Continuous v. discontinuous change
-Critical windows & sensitive periods
-Heredity v. environment

Instructional goal: This class will include a discussion of the fundamental debates in developmental research and how they persist across a range of domains. These are the concerns that directly and indirectly influence the nature of the questions that human development researchers ask and the types of investigations that are conducted in order to answer them.

UNIT 2
Principles of Human Development Research

Week 5 *Scientific reasoning*

-Empiricism: Principles of theory development
- Internal consistency
- Parsimony
- Empirical reliability
- Testability
- Integration
- Predictive power
- Explanatory power

-Inductive v. deductive reasoning

Instructional goal: This class will focus on an exploration of how theories are derived and the principles of scientific reasoning by which theories are evaluated. We will explore how principles such as Occam's Razor are applied when scientists evaluate competing theories of development.

Week 6 *Research designs*

- Dependent v. independent variables
- Experimental design
- Cross sectional v. longitudinal design
- Observational/case studies
- Sample characteristics

Instructional goal: This class will focus on principles of research design and methods; specifically, those designs and methods that are typically employed in the study of human development. Students will learn how scientists make inferences about development based upon specific properties of their research design.

UNIT 3
Paradigms & Perspectives

Week 7 *Psychodynamics & Humanistic*

-History
-Premiere theorists
-Core concepts
-Paradigmatic shifts/contemporary incarnations
-Implications for human development

Week 8 *Behavioral & Cognitive*

-History
-Premiere theorists
-Core concepts

-Paradigmatic shifts/contemporary incarnations
-Implications for human development

Week 9 *Contextual*
-History
-Premiere theorists
-Core concepts
-Paradigmatic shifts/contemporary incarnations
-Implications for human development

Week 10 *Evolutionary*
-History
-Premiere theorists
-Core concepts
-Paradigmatic shifts/contemporary incarnations
-Implications for human development

Unit 3 Instructional goal: These classes will focus on four fundamental perspectives on human development that underlie the body of work that emerges from the field. Students will understand how growth and development can be explained from a variety of theoretical approaches, and how these approaches have evolved over the course of history via paradigmatic shifts in our understanding.

Week 11 Thanksgiving/Spring Break

UNIT 4
Applied Aspects

Week 12 *Understanding developmental disabilities and psychopathology*
- Autistic spectrum disorder
-Cognitive disabilities
Developmental delays
-Physical disabilities
Muscular & skeletal disorders
-Emotional trauma
Neglect, abuse, violence

Instructional goal: This class will focus on a variety of disorders that occur during the course of human development. These disorders have the potential to affect biological, cognitive, and socio-emotional development. Students will explore contemporary explanations for the root causes of these disorders and how environments contribute to either the exacerbation or amelioration of these conditions.

Week 13 *Employment perspectives*
-educators
-health care workers

-government/NGO/policy consultants
-research
-therapeutic staff support
-counseling/social work
-law enforcement

Instructional goal:
How do people from different professions access and apply the knowledge of HD in their work?

Week 14 *Final Examination*

DATE: 5/15/18

TO: Lucas P. Butler

Department of Human Development & Quantitative Methodology

FROM: On behalf of the University of Maryland Libraries:

Tahirah Akbar-Williams, College of Education & African American Studies Librarian

Maggie Saponaro, Head of Collection Development

Daniel Mack, Associate Dean, Collection Strategies & Services

RE: Library Collection Assessment

We are providing this assessment in response to a proposal by the Department of Human Development & Quantitative Methodology in the College of Education to create a Bachelor of Science in Human Development. The Department of Human Development & Quantitative Methodology asked that we at the University of Maryland Libraries assess our collection resources to determine how well the Libraries support the curriculum of this proposed program.

Serial Publications

The University of Maryland Libraries currently subscribe to a large number of scholarly journals—almost all in online format--that focus on human development, child & infant development, learning methodologies, brain development, research methods, and diversity and culture.

The Libraries subscribe to most of the top ranked journals that are listed in the your subject category in the Social Sciences Edition of *Journal Citation Reports.* * These journals include the following, all of which are available online:

- Brain and Language, Elsevier
- Educational Psychologist, Taylor and Frances
- Review of the Educational Research, Sage
- Sociology of Education, Sage
- Learning and Instruction , Elsevier Science
- Educational Research Review, Taylor and Frances
- Early Childhood Research, Harvard Graduate School
- Human Development, Karger

Articles in journals that we do not own likely will be available through Interlibrary Loan/Document Delivery.

*Note: *Journal Citation Reports* is a tool for evaluating scholarly journals. It computes these evaluations from the relative number of citations compiled in the *Science Citation Index* and *Social Sciences Citation Index* database tools.

Databases

The Libraries' *Database Finder* (http://www.lib.umd.edu/dbfinder) resource offers online access to databases that provide indexing and access to scholarly journal articles and other information sources. Students and faculty should first refer to their Research/Subject Guide (http://lib.guides.umd.edu/education) to learn how to access and search the list of core and supplemental databases and other important materials in Education. Many of these databases cover subject areas that would be relevant to this proposed program. Databases that would be useful in the field of Human Development are Web of Science, ScienceDirect, Education Source, Eric, PsycINFO, SocINDEX, and PsycARTICLES. Some of the other subject databases that would be relevant to this curriculum include Sociological Abstracts, Psychology & Behavioral Sciences Collection, and Education Index Retrospective.

In addition, three general/multidisciplinary databases, Academic Search Complete, JSTOR and Project MUSE are good sources of articles relevant to this topic.

In many-and likely in most--cases, these indexes offer full text copies of the relevant journal articles. In those instances in which the journal articles are available only in print format, the Libraries can make copies available to graduate students either through the Libraries' Scan & Deliver Program (http://www.lib.umd.edu/access/scan-deliver) or via Interlibrary Loan. (Note: see below.)

Monographs

The Libraries regularly acquire scholarly monographs in Human Development and allied subject disciplines. Monographs not already part of the collection can usually be added upon request.

Even though most library research for this program likely will rely upon online journal articles, students may wish to supplement this research with monographs. Fortunately, more and more monographs are available as e-books. Even in instances when the books are only available in print, graduate students will be able to request specific chapters for online delivery through the Libraries' Scan & Deliver program (Note: see below).

A search of the University of Maryland Libraries' WorldCat UMD catalog was conducted, using a variety of relevant subject terms. This investigation yielded a sizable list of citations of books that we own under the subject term *Child Development*, the catalog yielded 78,000 titles. A further search revealed that the Libraries' membership in the Big Ten Academic Alliance (BTAA) had a list of holdings and citations of roughly 13,000 titles. Another search was conducted using the subject term *Educational Psychology* returned 300,000 titles and from the Libraries' membership in the Big Ten Academic Alliance (BTAA) it generated 200,000.

As with our own materials, graduate students can request that chapters be copied from these BTAA books if the books are not available electronically.

Scan & Deliver and Interlibrary Loan

These services offer online delivery of bibliographic materials that otherwise would not be available online. As a result, remote users who take online courses may find these services to be helpful. Scan & Deliver and Interlibrary Loan are available free of charge.

The Scan & Deliver service scans and delivers journal articles and book chapters within three business days of the request--provided that the items are available in print on the UM Libraries' shelves or in microform. In the event that the requested article or chapter is not available on campus, Scan & Deliver will automatically refer the request to Interlibrary Loan (ILL). Interlibrary Loan is a service that enables borrowers to obtain online articles and book chapters from materials not held in the University System of Maryland.

Additional Materials and Resources

In addition to serials, monographs and databases available through the University Libraries, students in the proposed program will have access to a wide range of media, datasets, software, and technology. Library Media Services (http://www.lib.umd.edu/lms) houses media in a variety of formats that can be utilized both on-site and via ELMS course media. GIS Datasets are available through the GIS Data Repository (http://www.lib.umd.edu/gis/dataset) while statistical consulting and additional research support is available through the Research Commons (http://www.lib.umd.edu/rc) and technology support and services are available through the Terrapin Learning Commons (http://www.lib.umd.edu/tlc) .

The subject specialist librarian for the discipline is Tahirah Akbar-Williams (takbarwi@umd.edu) also serves as an important resource to programs such as the one proposed.

Other Research Collections

Because of the University's unique physical location near Washington D.C., Baltimore and Annapolis, University of Maryland students and faculty have access to some of the finest libraries, archives and research centers in the country vitally important for researchers in Human Development. These include the Library of Congress, the National Archives, National Library of Medicine, and the Smithsonian to name just a few.

Conclusion

With our substantial journals holdings and index databases, as well as additional support services and resources, the University of Maryland Libraries have resources to support teaching and learning in Human development. These materials are supplemented by a strong monograph collection. Additionally, the Libraries Scan & Deliver and Interlibrary Loan services make materials that otherwise would not be available online, accessible to remote users in online courses. As a result, our assessment is that the University of Maryland Libraries are able to meet the curricular and research needs of the proposed Bachelor of Science in Human Development.

UNIVERSITY OF MARYLAND

Dr. Michael Dougherty, Chair
Department of Psychology
College Park, Maryland 20742-4411

September 13, 2018

To the Committee on Programs, Courses, and Curriculum:

We have reviewed the proposal for an Undergraduate Major in Human Development from the Department of Human Development & Quantitative Methodology. We have worked with their faculty to mitigate any impact on the enrollment in our courses and our major. While we do not believe that the proposed major in Human Development will have a major impact on enrollment within psychology, this has been one of our main points of discussions. Psychology currently has roughly 1100 majors, and is currently in the process of establishing a new major in Neuroscience that will be administered jointly with Biology. We expect that the NEUR major will shift our enrollment numbers in PSYC somewhat, but we are not expecting extraordinary changes. Likewise, our assessment is that the proposed major in Human Development will not have a major impact on PSYC enrollment or number of majors. HDQM faculty have assured us that they will work with us in the future to ensure the health and success of both of our programs. Therefore, we support the current proposal to establish the HD major.

Sincerely,

Michael Dougherty

Michael Dougherty, Ph.D.
Professor and Chair

UNIVERSITY OF MARYLAND
SCHOOL OF PUBLIC HEALTH
Department of Family Science

4200 Valley Drive, Suite 1142
College Park, Maryland 20742
301.405.3672 TEL 301.314.9161 FAX
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www.sph.umd.edu/fmsc

To: UMD Committee on Programs, Courses, and Curriculum

From: Sandra Crouse Quinn, Chair, Department of Family Science

Re: Proposal for a new major in Human Development

Date: September 13, 2018

We have reviewed the Proposal for an Undergraduate Major in Human Development from the Department of Human Development & Quantitative Methodology. We confirm our agreement to have the following courses in FMSC listed as electives in the proposed major:

FAMILY SCIENCE ELECTIVES
FMSC 105 Individuals in Families
FMSC 290 Family Economics *Restricted to FMSC majors and non-majors with less than or equal to 60 credits*
FMSC 330 Family Theories and Patterns
FMSC 332 Children in Families
FMSC 430 Gender Issues in Families
FMSC 431 Family Crises and Intervention
FMSC 452 Family Policy Analysis
FMSC 460 Violence in Families
FMSC 480 Work and Family Issues
FMSC 497 The Child and the Law

As a department, we have appreciated the willingness of the faculty to work with us to mitigate any impact on the enrollment in our courses and our major. The HDQM faculty has also provided assurances that they will work with us in the future to ensure the health and success of both programs, and we are certainly willing to work collaboratively to ensure the success of our programs and our students. Therefore, we support the current proposal to establish the HD Major.

PCC Proposal to Rename the Post-Baccalaureate Certificate in "MSDE Administrator I" to "School Improvement Leadership" (PCC 18020)

PRESENTED BY	**Janna Bianchini, Chair, Senate Programs, Curricula, & Courses Committee**
REVIEW DATES	**SEC – October 29, 2018 | SENATE – November 7, 2018**
VOTING METHOD	**In a single vote**
RELEVANT POLICY/DOCUMENT	**NA**
NECESSARY APPROVALS	**Senate, President, Chancellor, and Maryland Higher Education Commission**

ISSUE

The College of Education proposes to rename its current post-baccalaureate certificate program in "MSDE Administrator I" to "School Improvement Leadership." The title "MSDE Administrator I" refers to a school administrator certification that is granted by the Maryland State Department of Education (MSDE). When the program began, students enrolled in the program only if they sought this MSDE certification. The curriculum is now more flexible. MSDE certification is still an option, but students do not have to complete all of the MSDE requirements in order to complete the program requirements. In fact, students who already have their MSDE certification can now take this program to develop their school improvement leadership. The new title, "School Improvement Leadership," is therefore more accurate and appealing to a wider array of students.

This proposal was approved by the Graduate School Programs, Curricula, and Courses committee on September 28, 2018, and was approved by the Senate Programs, Curricula, and Courses committee on October 5, 2018.

RECOMMENDATION(S)

The Senate Committee on Programs, Curricula, and Courses recommends that the Senate approve this program name change.

COMMITTEE WORK

The committee considered this proposal at its meeting on October 5, 2018. Maggie McLaughlin and Jean Snell of the College of Education presented the proposal, which was unanimously approved by the committee.

ALTERNATIVES

The Senate could decline to approve this program title change.

RISKS

If the Senate declines to approve this name change, the program will retain its inaccurate title and be less appealing to potential students.

FINANCIAL IMPLICATIONS

There are no financial implications with this proposal.

University of Maryland PCC
Program/Curriculum/Unit Proposal

PCC Log No: 18020

Program: Post Baccalaureate Certificate in Administrator/Supervisor I Certification

Department/Unit: EDUC

College/School: Education

Proposal Contact Person (with email): Jean Snell

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
- ☐ *Establish/Discontinue a formal Area of Concentration*
- ☒ Other: Modify and rename existing PBC and move program to college level oversight
- ☐ *Establish a new academic degree/certificate program*
- ☐ Create an online version of an existing program
- ☐ Establish a new minor
- ☐ *Suspend/Discontinue a degree/certificate program*
- ☐ Establish a new Master or Certificate of Professional Studies program
  - ☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - *Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair MARGARET J McLAUGHLIN 5-11-18
2. Department Chair _____
3. College/School PCC Chair Denis Sullivan Denis Sullivan 5-17-18
4. Dean Jennifer King Rice Jennifer King Rice 6/7/18
5. Dean of the Graduate School (if required) _____
6. Chair, Senate PCC Jianna Bianchini 10-5-18
7. University Senate Chair (if required) _____
8. Senior Vice President and Provost _____

Instructions:
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, **and** email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):

This proposal is to rename the post-baccalaureate certificate entitled "MSDE Administrator I" to "School Improvement Leadership." The title change will provide greater flexibility to meet the professional knowledge needs of a wide array of educational practitioners, many of whom already hold the Administrator/Supervisor I certification but who desire to obtain greater knowledge in design-based school improvement. A separate proposal to modify the curriculum has also been submitted.

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

Appendix 1 - Additional Context on Program Specifications

UNIVERSITY OF MARYLAND
OFFICE OF THE SENIOR VICE PRESIDENT AND PROVOST

1119 Main Administration Building
College Park, Maryland 20742-5031
301.405.5252 TEL 301.405.8195 FAX

October 24, 2018

MEMORANDUM

TO: Jennifer King Rice
Dean, College of Education

FROM: Elizabeth Beise EB
Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Modify the Post-Baccalaureate Certificate in MSDE Administrator I (PCC Log No. 18011)

At its meeting on October 5, 2018, the Senate Committee on Programs, Curricula and Courses approved the proposal to modify the Post-Baccalaureate Certificate in MSDE Administrator I. A copy of the approved proposal is attached.

The change is effective Spring 2019. Please ensure that the change is fully described in the Graduate Catalog and in all relevant descriptive materials.

MDC/
Enclosure

cc: Janna Bianchini, Chair, Senate PCC Committee
Barbara Gill, Office of Enrollment Management
Reka Montfort, University Senate
Huifang Pan, Division of Information Technology
Pam Phillips, Institutional Research, Planning & Assessment
Kendall Aughenbaugh, University Archives
Linda Yokoi, Office of the Registrar
Ryan Long, Graduate School
Maggie McLaughlin, College of Education

University of Maryland PCC
Program/Curriculum/Unit Proposal

PCC Log No: 18011

Program: Post Baccalaureate Certificate in Administrator/Supervisor I Certification

Department/Unit: EDUC

College/School: Education

Proposal Contact Person (with email): Jean Snell

Type of Action (check one):

- ☐ Curriculum change (includes modifying minors, concentrations/specializations and creating informal specializations)
  - ☐ Curriculum change is for an LEP Program
- ☐ *Rename a program or formal Area of Concentration*
- ☐ *Establish/Discontinue a formal Area of Concentration*
- ☒ Other: Modify and rename existing PBC and move program to college level oversight
- ☐ *Establish a new academic degree/certificate program*
- ☐ Create an online version of an existing program
- ☐ Establish a new minor
- ☐ *Suspend/Discontinue a degree/certificate program*
- ☐ Establish a new Master or Certificate of Professional Studies program
  - ☐ New Professional Studies program will be administered by Office of Extended Studies

Italics indicate that the proposal must be presented to the full University Senate for consideration.

Approval Signatures - *Please print name, sign, and date. For proposals requiring multiple unit approvals, please use additional cover sheet(s).*

1. Department Committee Chair MARGARET J McLAUGHLIN 5-11-18
2. Department Chair
3. College/School PCC Chair Denis Sullivan Denis Sullivan 5-17-18
4. Dean Jennifer King Rice 6/7/18
5. Dean of the Graduate School (if required) 10/17/18
6. Chair, Senate PCC Janna Bianchini 10-5-18
7. University Senate Chair (if required)
8. Senior Vice President and Provost 10/24/18

Instructions:
When approved by the dean of the college or school, please send the proposal and signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus-5031, and email the proposal document as an MSWord attachment to pcc-submissions@umd.edu.

Summary of Proposed Action (use additional sheet if necessary):

This proposal is to modify the existing 18 credit PBC in MSDE Administrator I to 12 credits. The new PBC, unlike the prior 18-credit program, will not result in MSDE certification; however, students who wish to receive that certification will have the opportunity to complete the additional 6 credits that include an internship. The modified PBC will be organized at the College level in order to draw on faculty from each of the 3 departments in the College. The requested changes will provide greater flexibility to meet the professional knowledge needs of a wide array of educational practitioners, many of whom already hold the Administrator/Supervisor I certification but who desire to obtain greater knowledge in design-based school improvement.

Unit Code(s) (to be entered by the Office of Academic Planning and Programs):

2017-2018 PCC Program Modification Proposal

In order to complete this form, you will need to copy this template to your own document, then complete, print, and submit this proposal with the PCC Cover Sheet

Program: Post Baccalaureate in School Improvement Leadership

Date of Proposal:

Start Term for New Version of Program: Fall, 2018

A program modification can consist of the following actions: (a) modifying current requirements; (b) adding, modifying or discontinuing a concentration or specialization, (c) changing the delivery method (offering the program online, at a new off-campus location, or in a non-standard term), or (d) renaming a program.

1. Current Catalog Description of Program. Include any special admissions information.

- The approved *MSDE Administrator I Certification* P.B.C. program is described as follows in the current Graduate Catalog: "This certification is cohort-based and is only open to internal candidates." Admission requirements include: To qualify as a Non-Degree Seeking Student, you must: Have achieved a cumulative 3.0 (on a 4 point scale) average for work done at the undergraduate level; OR
- Have earned a master's, doctoral, or a post-baccalaureate professional degree (MD, JD, DVM, etc.) from a regionally accredited institution; OR
- Have attained a letter recommending admission from the PBC Coordinator.
- Submit a personal statement.
- Submit 2 Letters of Recommendation

2. Current Requirements for Program. Include all course requirements for program.
See attached accreditation report

Degree Requirements -- completion of the following courses (18 credits total):
*EDUC 689 *Practicum in Educational Administration and Supervision* (3 credits)
*EDUC 671 *Education Law, Finance, and Policy* (3 credits)
*EDUC 640 *Introduction to Educational Leadership* (3 credits)
*EDUC 645 *Leading Instructional Improvement* (3 credits)
*EDUC 646 *Leading Instructional Excellence* (3 credits)
*EDUC 670 *Learning Communities* (3 credits)

3. Description and Rationale for Modifications.
This proposal seeks to modify the requirements, rename, and change delivery method of the existing approved 18 credit PBC in *MSDE Administrator I Certification* to a 12 credit PBC in *School Improvement Leadership* that will be offered in a non-standard schedule and blended format to local school based instructional leaders. The proposed PBC, unlike the current PBC, will not lead to MSDE certification as Administrator/Supervisor I; however, students who wish to receive that certification may enroll in an

additional 6 credits (including the mandatory internship) after completing the PBC in School Improvement Leadership. This modification is requested to provide greater flexibility to meet the professional knowledge needs of teacher and school-level leaders, many of whom hold Administrator/Supervision I certification but desire additional coursework in current practices in design-based school improvement.

4. New course requirements.

Current PBC in MSDE Administrator I Certification (18 Credits)	**Proposed PBC in School Improvement Leadership (12 Credits)**
EDUC 640 Introduction to Educational Leadership (3)	EDUC 640 Introduction to Educational Leadership (3)
EDUC 645 Leading Instructional Improvement (3)	EDUC 645 Leading Instructional Improvement (3)
EDUC 646 Leading Instructional Excellence (3)	EDUC 646 Leading Instructional Excellence (3)
EDUC 670 Learning Communities (3)	EDUC 670 Learning Communities (3)
EDUC 671 Education Law, Finance, and Policy (3)	~~EDUC 671 Education Law, Finance, and Policy (3)~~
EDUC 689 Practicum/Internship (3)	~~EDUC 689 Practicum/Internship (3)~~
Total credits (18)	Total credits (12)

5. Use the space below for any additional comments on the courses or other requirements selected for the revised curriculum.

Two courses: EDUC 671 and 689 have been removed from the PBC because both are specific to MSDE certification requirements and not applicable to all potential applicants to the revised PBC. Course prefixes were changed in a prior PCC action and EDUC 671 was renamed and modified in a prior PCC action.

6. Sample plan. Provide a term by term sample plan that shows how a hypothetical student would progress through the program to completion. For undergraduate programs, this should be the *four-year plan.*

Certificate students would take two courses per semester, Fall and Spring, which would allow them to complete this PBC program in one academic year. For those who opted to take the additional 6 credits to complete the Administration I certification requirements, they would enroll in EDUC 671 in the summer and would complete the Practicum in the Fall semester, thus extending the program from 9 months to 15 months in total.

Sample Plan: *School Improvement Leadership PBC*

Fall Semester	EDUC 640	EDUC 646
Spring Semester	EDUC 645	EDUC 670
Summer (and Fall)*	EDUC 671	EDUC 689
*Only for students who opt to complete full Administrator I Certification program		

7. For new or modified courses, please provide the course catalog information (credits, description, prerequisites, etc.) . Suffixed "Selected" or "Special" topics courses should be avoided. If suffixed - Selected or Special Topics courses are offered regularly in the new program, you should make the courses permanent.

*EDUC 640 (formerly EDHI 640) is listed as a 3-credit course (no pre-requisite):
"The focus of this course is the analysis of the role of education administrators/leaders in the social, political, and legal contexts of schools. Also examines the role of leadership in school improvement."

*EDUC 645 (formerly EDHI 645) is listed as a 3-credit course (no pre-requisite):

"Development of knowledge and skills in the use of data bases, research findings and models of supervision, to improve instruction in schools."

*EDUC 646 (formerly EDHI 646) is listed as a 3-credit course (no pre-requisite):

"Leader's role in fostering high quality teaching and learning. Exploration of the relationship between curriculum instruction assessment and the organizational structure of K-12 public schooling. Development and assessment of frameworks for understanding instructional quality. Analysis of strategies for supporting teachers as they engage in curricular and professional development. Consideration of factors involved in creating and sustaining instructionally centered schools."

*EDUC 670 (formerly EDHI 670) is listed as a 3-credit course (no pre-requisite):

"Reviews contemporary research on student and teacher learning and schools as learning organizations. It aims to build students understanding of opportunities and challenges to implementing learning environments in various educational organizations. Readings, cases and assignments emphasize students' understanding of learning theories and their application to various organizational settings."

Note: Course modifications approved through prior PCC proposals

8. Supporting documentation.
Learning Progressions and outcome assessments
Addition of a new campus site

9. Impact on current students.

There are no students currently enrolled in the PBC in Administration/Supervision I.

10. Additional Information. Depending on the nature of the changes, other information may also be necessary for review.

- **New learning outcomes and assessment plan for new concentration or specialization, or if changes to curriculum warrant. See Attached "School Improvement Leadership Course Progression" chart**
- **New program description for the catalog.**
- **For online delivery of an existing program, please complete this additional form and add as an appendix: https://docs.google.com/document/d/1ojpUBt4mAWINPCiQNzZ48UH68zGPYj31TPgEOfW3q1E/**
- **For the addition of a new off-campus site, please complete this additional form and add as an appendix: See Attached Form.**
- **For non-standard term offerings, identify the term structure that will be used for the program and indicate whether relevant offices, such as the Registrar's Office and International Scholar & Student Services, have been notified and support the program. Non-standard terms need to fit within the university's scheduling system calendar, and non-standard terms need to work with international student visa requirements.** All courses will be offered within the standard terms.

Attach to Proposal to Modify Program

The following prompts are based on academic policies for off-campus programs as well as questions frequently asked by review committees. Please feel free to add additional information at the end of this document or in a separate appendix.

Indicate the location and describe the suitability of the site for the off-campus program.

The School Improvement Leadership program will be offered to cohorts of teacher leaders who serve in the same school system, in partnership with the targeted District. As the program partner, the district will provide appropriate meeting venues for all class sessions and will ensure these meeting spaces are equipped with the necessary technology and internet access. The first cohort of Certificate students will be located in Prince George's county public schools, where we have established several instructional locations that have been previsouly vetted for their suitability, such as Eleanor Roosevelt HS and/or Oxon Hill Professional Development Center.

Describe the method of instructional delivery, including online delivery, on-site faculty, and the mix of full-time and part-time instructors (according to MHEC 13B.02.03.20.D(2), "At least ⅓ of the classes offered in an off-campus program shall be taught by full-time faculty of the parent institution"). Discuss the resources available for supporting faculty at the location.

This Certificate program will be offered through a blended-delivery format. Two courses will be scheduled per semester and will be organized around weekly in-person sessions as well as on-line extension learning modules. Each course will be led a full-time faculty member from the College of Education (drawn from across the three departments) and, whenever possible, will be paired with a teaching partner who currently serves as an instructional leader from the partner district. College faculty will be co-supported by an identified team/liaison from the district partner, such as the Office of Talent Development in Prince George's County Public Schools.

Discuss the academic oversight for the off-campus program.

This Certificate program will be managed by faculty from the Center for Educational Improvement and Innovation, which is housed in the Dean's Office in the College of Education. The Associate Dean for Research and Partnerships will provide academic oversight. A program manager will be identified to work closely with both the partner district liaison as well as the campus Outreach office and the College's Student Support office. The program manager will guide all candidates through the outreach admissions and selection process and will track the matriculated students through completion of the four-course Certificate program.

Discuss how students will have reasonable and adequate access to the range of student support services (library materials, teacher interaction, advising, counseling, and financial aid) needed to support their learning activities.

The course instructors as well as the program manger will offer weekly bi-weekly virtual "office hours" through the Fall and Spring semesters to ensure that students are provided individualized advising and support throughout the progression of the program. Additionally, the program faculty and district partners will host three whole cohort meetings at quarterly intervals throughout the program to share information about campus resources and professional opportunities.

Describe the admissions criteria and procedures for the online program.

Following is the information provided to all PBC applicants regarding admissions:

To qualify as a Non-Degree Seeking Student, you must:

- Have achieved a cumulative 3.0 (on a 4 point scale) average for work done at the undergraduate level; OR
- Have earned a master's, doctoral, or a post-baccalaureate professional degree (MD, JD, DVM, etc.) from a regionally accredited institution; OR
- Have attained a letter recommending admission from the PBC Coordinator.
- Submit a personal statement.
- Submit 2 Letters of Recommendation

To apply, you must:

- Submit a completed online application, which includes uploading official transcripts showing a bachelor's degree from a regionally accredited institution and a personal statement, and
  Pay the non-refundable application fee.

Discuss how the off-campus program will be comparable to the existing program in terms of academic rigor. What are the learning outcomes for the online offering? Do they differ from the existing on-site program? How will the program be evaluated?

At the end of each cohort sequence, the program will be evaluated internally by the College of Education. The PBC is part of an accredited and state approved program and each course has mandatory assessments that will be evaluated and results aggregated for both accreditation review and internal program faculty review as well as externally by the District partner.

MHEC Required Information:

List the resource requirements for the program and the source of funds to support the program for the first 2 years of program implementation.

This PBC is developed at the request of the PGCPS as part of an overall professional development strategy for the lowest performing schools in the system. No new resources will be required

Describe the market demand for the program. Evidence may be research from industry or the discipline, and should also consider state and federal employment projections.

The PGCPS will support tuition for 30 teachers per year for 2 years.

List similar programs that may be offered within the state. Indicate how your program may differ. Explain how market demand would be sufficient for the state to have an additional program.
As a new offering, this Certificate program integrates Improvement Science as the core pedagogy throughout the modified four-course sequence. Instead of focusing on preparing teachers to become effective principals as is the purpose of the "MSDE Administrator I Certification PBC," this certificate program in School Improvement Leadership is dedicated to developing experienced teachers' skills as instructional leaders and change agents.

CEII *School Improvement Leadership* Coursework Progression

Course	Overview/Purpose	Modules	PSEL	SPA Assessments*
EDUC 640 *Introduction to Educational Leadership* (3 credits)	This course will provide an overview of leadership in educational environments and cultures. Historical and traditional perspectives of leadership will be critiqued and students will be introduced to "design focused" leadership for improvement. Students will understand how to align leadership practices and key improvement goals to school mission and values as well as core professional ethics. Students will utilize Improvement Science methodology to investigate persistent challenges to leadership and learning in schools.	*Introduction to School Leadership * School Leadership Standards & Ethics * Introduction to Improvement Science	*Standard 1 (*Mission, Vision, and Core Values)* *Standard 2 (*Ethics and Professional Norms)* *Standard 10 (*School Improvement)*	**CAEP Assessment #2 (Assessment of Content Knowledge in Educational Leadership):** Students will identify a key school improvement goal and define the problem of practice with respect to the goal. They will develop a Causal Systems Analysis in collaboration with key stakeholders and generate a driver diagram with descriptive narrative which portrays the influence of each driver supported by local data, research literature, and investigation of the current system.
EDUC 646 *Leading Instructional Excellence* (3 credits)	This course will expand upon the introduction to School Leadership and Improvement Science in EDUC 640 and will specifically focus on student learning. Students will undertake a disciplined inquiry into the effects/impact of current curriculum, assessment, and instructional practices on diverse groups of children, including children living in urban poverty, children who are ELs and children with special education needs. Students will hone their Improvement Science skills in investigating and addressing persistent challenges	* Diverse Student Learners *Highly Effective Instruction *Culturally-responsive Learning Environments * Improvement Science, part 2	*Standard 3 (*Equity and Cultural Leadership*) *Standard 4 (*Curriculum, Instruction, and Assessment)* *Standard 5 (*Community of Care and Supports for Students)*	**CAEP Assessment #5 (Assessment that demonstrates ability to support student learning and development):** Students will select a targeted instructional problem of practice and will uncover the critical barriers to student achievement through a systematic investigation of the conditions for learning for these students. Students will identify key leverage point(s) to address these instructional barriers (with

	to student learning in schools.			substantiation from the scholarly literature), and will develop an Aim and "Theory of Practice Improvement" to guide the acceleration of student learning at their school.
EDUC 645 *Leading Instructional Improvement* (3 credits)	This course will provide students with knowledge of strategies and models that foster collaboration among school staff to drive improvement of instructional practices and/or engage in broader school-wide change. Students will gain understanding of effective teacher development and evaluation practices, and will consider the effectiveness of various models of contemporary instructional improvement supports such as PLCs, coaching, learning walks, demonstration classrooms, etc. Students will also identify and develop measures to gauge student progress and change parameters.	*Teacher Evaluation (& Supervision) *Teacher Development *Implementing Improvement Science Learning Cycles	*Standard 6 (*Professional Capacity of School Personnel)* *Standard 7 (*Professional Community for Teachers and Staff)*	**CAEP Assessment #3 (Assessment that demonstrates candidates' instructional leadership skills):** Students will design and implement a short-cycle, intervention test (PDSA) with a group of school colleagues, based on their "Theory of Practice Improvement," and will gauge what effect the implemented change has on instructional quality and student growth. Students will adapt and revise their proposed changes and measures based on the 1st round PDSA results.

EDUC 670 *Learning Communities* (3 credits)	This course will introduce students to the importance of engaging with a broader group of colleagues in the work of continuous improvement, through the development of and participation in a "Networked Improvement Community" (NIC) or "Network for School Improvement" (NSI), which include teachers, administrators, parents, students from a cluster of schools as well and other community stakeholders. Students will learn the conditions that contribute to the successful scaling of new educational reforms that produce meaningful improvement.	* Parent and Community Partnerships * Introduction to Network Improvement Communities	*Standard 8 (*Meaningful Engagement of Families and Community)*	**CAEP Assessment #6 (Assessment that demonstrates candidates' community relations leadership skills):** Students will develop a proposal for a new "Networked Improvement Community" (NIC) in their district, including educators, parents, and other stakeholders from 3 or more schools, which includes a purpose statement, an identified Problem of Practice, and an articulated strategy for enlisting and convening the group for mutual learning and improvement. This proposal must consider the constraints and challenges that will likely arise through collective attempts to sustain the proposed NIC, as well as the benefit(s) for mutual engagement.

* SPA Assessment #1 is program transcript/course grades for each candidate
SPA Assessment #4 is linked to Practicum/Internship (EDUC 689)
SPA Assessment #6 is linked to EDUC 671 (*Education Finance, Law, and Policy*)
SPA Assessments #7 & 8 are optional and can be developed & incorporated into any of the five courses above.

Review of Interim Research Misconduct Policy

Interim Research Misconduct Policy

- Approved on an interim basis June 29, 2017.
- Aligns with federal guidance from the Department of Health and Human Services Office of Research Integrity (ORI) and the Public Health Service (PHS) on how to resolve research misconduct allegations involving federal funding.
- Satisfies ORI's interest in addressing the misconduct itself and correcting the research record, while recognizing the institution's need to investigate whether University faculty, staff, or students engaged in misconduct.

Interim Research Misconduct Policy

- Incorporated ability to take interim actions during review of an allegation of research misconduct in order to protect the research environment, ensure appropriate management of research funds, and/or address safety issues that may be a concern depending on the allegation.
- Clarified provisions on committee memberships and allowed for the parties in the case to identify any conflicts of interest as the memberships of committees are being formed.

Faculty Affairs Committee Review

- The Faculty Affairs Committee (FAC) created a Research Misconduct Working Group (WG) to review the interim policy.
- The WG reviewed peer institution policies and consulted with the Office of Faculty Affairs, Office of General Counsel, the Research Council, and the Vice President for Research.
- The FAC received a draft of possible revisions to the interim policy from the WG in October, 2018.
- The FAC is working to review the possible revisions and gather feedback on key issues and concerns before finalizing its work.

Policy Scope

- The interim policy applies to all members of the campus community.
- The FAC would like to ensure the policy addresses “Scholarly Misconduct” as an umbrella for research misconduct and misconduct in creative activities. This protects ORI’s interest in federally-funded research while allowing the policy to address all types of scholarship.
- The FAC’s draft policy does not cover instructional misconduct or professional misconduct, and notes that separate University policies and procedures should be used to address activities that fall outside of the scope of this policy.

Policy Definitions

- The FAC is revising definitions to more accurately reflect the types of misconduct that may occur; adding or significantly revising definitions for Fabrication, Falsification, and Improprieties of Authorship; and adding a definition for Self-Plagiarism.
    - Fabrication involves intentionally generating false data or results and reporting them as genuine.
    - Falsification involves manipulation or omissions that deviate from accepted practices within the field, so that information is purposely misrepresented in the research record.
    - Improprieties of Authorship, or improper assignment of credit, requires an understanding of the accepted standards in the relevant discipline, as some exclusion or inclusion of authors may be established convention.
    - Self-Plagiarism, when not in accordance with the accepted standards in the relevant discipline, can constitute misconduct under the policy.

Due Process Rights for Respondents

- The draft revisions clarify the parties' rights to challenge committee membership, and permits the Research Integrity Officer (RIO) to remove a committee member if a conflict of interest emerges during the proceedings.
- The FAC is considering how to ensure the Respondent has an opportunity to provide a written response to the allegation.
- The parties may review all evidence and supply corrections or additional supporting documentation as needed in response to the evidence submitted by others.

Research Integrity Officer Structure

- At UMD, the RIO is the Associate Provost for Faculty Affairs.
- At many peer institutions, the RIO is a staff member or administrator within the Division of Research, or leads a Research Compliance Office that handles issues related to research misconduct as well as other compliance-related issues.
- The FAC has discussed the administrative burden and expertise involved in managing the research misconduct process.
- The FAC would like to ensure that the policy language is broad enough to accommodate changes in practice and structure that may be necessary in the future given the administrative burden of managing this process.

Feedback Needed

- Are there types of scholarly work or work in specific disciplines that seem to not be covered by the interim policy?
- Would the policy definitions and processes be appropriate to review allegations of misconduct for research conducted on non-federal grants?
- Does the policy adequately detail the role of Inquiry or Investigation Committee members?
- Does the policy adequately detail the rights, responsibilities, and expectations for Respondents?
- Does the policy adequately detail the overall process for Respondents?

Faculty Affairs Committee
Charge: Interim University of Maryland Policy and Procedures Concerning Research Misconduct (Senate Document #17-18-07)
Interim Policy: https://president.umd.edu/administration/policies/section-iii-academic-affairs/iii-110a

Background
An interim version of the University of Maryland Policy and Procedures Concerning Research Misconduct was adopted in June 2017 following work to bring them into alignment with regulations from the Health and Human Services Office of Research Integrity (ORI) and the Public Health Service (PHS).

There are several main issues that the interim policy was established to address:

- ORI and PHS have established expectations and standards that should be used in all investigations into research misconduct involving research that uses federal grant money. UMD's policy needed to be revised to comply with these expectations and standards.
- The federal government is interested in addressing the misconduct and correcting the research record; these interests must be balanced with institutional interests and those of the individual(s) involved in a research misconduct allegation. UMD's policy needed to be revised to meet the needs of both the federal government and the institution.
- The interim policy addresses a key need identified by the University, to be able to take interim actions during the review of an allegation of research misconduct. This can be necessary in order to protect the research environment, ensure appropriate management of research funds, and/or address safety issues that may be a concern depending on the allegation.

A Research Misconduct Working Group (WG), which included representatives from the Faculty Affairs Committee, the Research Council, and the Office of the Vice President for Research, was formed to review the interim policy. The WG met frequently throughout the spring semester of 2018, working to identify and resolve issues in the interim policy and procedures. This process involved working closely with representatives of the Office of Faculty Affairs and the Office of General Counsel, consulting with the Research Council and the Vice President for Research, and conducting peer institution research. The WG reported to the full Faculty Affairs Committee in October 2018.

Preliminary Directions on Policy Revisions

Scope of the Policy and Types of Misconduct
The FAC's current draft renames and reframes the policy to address "Scholarly Misconduct," which includes both research misconduct and misconduct related to creative activities. This protects ORI's interest in focusing on research that is funded by federal grant money, while also allowing the policy to address research misconduct for non-federally funded projects. It applies to all members of the University community - students, staff, faculty, and administrators - and all scholarly work, including research and creative activity.

The draft policy intentionally does not cover actions that would be considered instructional misconduct (e.g., using another person's course materials without permission/attribution) or professional misconduct (e.g., misrepresentation of one's credentials for professional advancement), or misconduct by an individual acting as an administrator. Separate University policies or procedures should be used or developed to address these types of misconduct.

Definitions
The FAC would like to ensure that definitions in the policy are clear and accessible to faculty who may be involved in this process. This involves adding details where appropriate or revising definitions to more accurately reflect the types of misconduct that may occur on our campus; adding or

significantly revising definitions for Fabrication, Falsification, and Improprieties of Authorship; and adding a definition for Self-Plagiarism. This includes clarifying that:

- Fabrication involves intentionally generating data or results that are fictitious and reporting them as genuine.
- Falsification involves manipulation or omission of data or results in a way that deviates from accepted practices within the field, so that information is purposely misrepresented in the research record.
- Improprieties of Authorship requires an understanding of the accepted standards in the relevant discipline, as some exclusion or inclusion of authors may be established convention.
- Self-Plagiarism, when not in accordance with the accepted standards in the relevant discipline, can constitute misconduct under this policy.

Due Process Rights for Respondents

The FAC would like to ensure that the policy and procedures provide appropriate due process rights for the Respondent. The current draft clarifies the parties' rights to challenge the appointment of specific members of committees, and permits the Research Integrity Officer to remove a committee member if a conflict of interest emerges during the proceedings. The FAC is developing language to ensure that the Respondent has an opportunity to provide a written response to the allegation for consideration during the inquiry and investigation processes. The parties may review all evidence and supply corrections or additional supporting documentation as needed in response to the evidence submitted by others. The policy also addresses the institution's role in restoring a Respondent's reputation if there is no finding of misconduct.

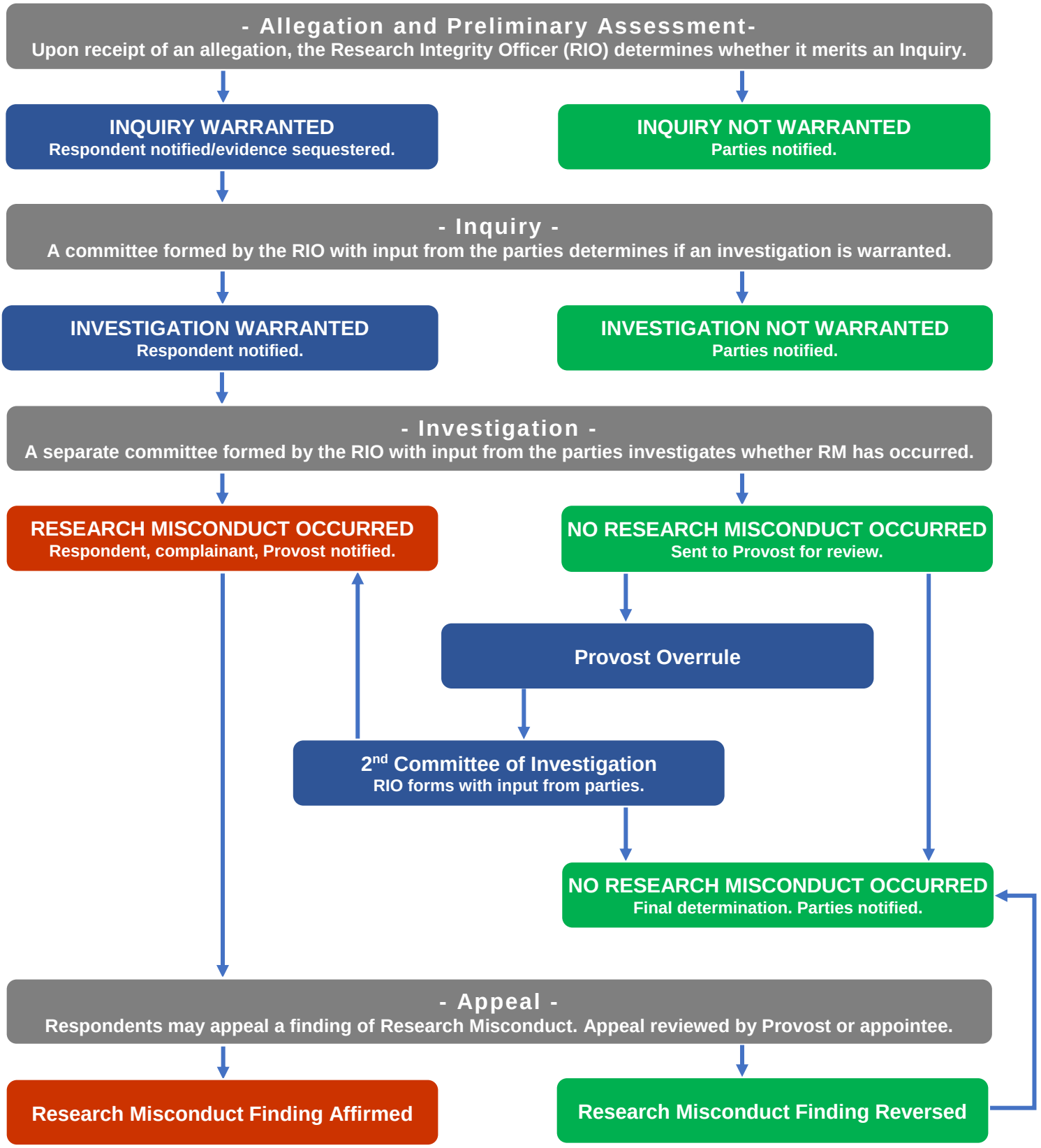
Oversight of the Process

The interim policy clearly indicates the role of the Research Integrity Office (referred to as the RIO) throughout the misconduct process, and indicates that the RIO is appointed by the Provost. In current practice, the RIO is the Associate Provost for Faculty Affairs. At many peer institutions, the RIO is a staff member or administrator within the Division of Research, or leads a Research Compliance Office that handles issues related to research misconduct as well as other compliance issues. The FAC has discussed the administrative burden and expertise involved in managing the research misconduct process. Though it currently does not plan to propose any changes to the existing structure, the FAC would like to ensure that the policy language is broad enough to accommodate changes in practice and structure that may be necessary in the future given the administrative burden of managing this process.

Clarifications of Processes and Roles

The FAC is working to ensure that the policy is clear and consistent, and in some instances is adding information to explain what, in practice, the interim policy means. The current draft clarifies roles and responsibilities, including the role of the Provost in all stages of the process. It clarifies the role of legal counsel: the interim policy indicates that Respondents and Complainants may be advised by counsel, but fails to explain the role of counsel during the proceedings. The FAC is considering language to clarify counsel's role as an advisor to assist the parties but not engage on behalf of the parties, to be consistent with other University policies. The current draft also clarifies and revises timelines for various stages and actions within the procedures, and clarifies details regarding the appointment of the RIO.

Overview of the Research Misconduct Process



- If no finding of RM is made, respondents may still be referred for Unacceptable/Questionable Research Practices or potential violations of other University, USM, or state policies/laws.
- The University will take efforts to restore the reputation of Respondents if an inquiry or investigation is found Not Warranted, or if it is determined that no RM occurred.
- If a finding of RM is made, a Responsible Administrator will determines/takes action; the RIO will work to correct the research record.