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Cover Sheet for In-State Institutions
New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	University of Maryland, College Park

Each action below requires a separate proposal and cover sheet.

- (●) New Academic Program
- ( ) New Area of Concentration
- ( ) New Degree Level Approval
- ( ) New Stand-Alone Certificate
- ( ) Off Campus Program
- ( ) Substantial Change to a Degree Program
- ( ) Substantial Change to an Area of Concentration
- ( ) Substantial Change to a Certificate Program
- ( ) Cooperative Degree Program
- ( ) Offer Program at Regional Higher Education Center

Payment Submitted: ( ) Yes (●) No

Payment Type: ( ) R*STARS (●) Check

Date Submitted:

Department Proposing Program	Human Development and Quantitative Methodology	
Degree Level and Degree Type	Bachelor of Science	
Title of Proposed Program	Human Development	
Total Number of Credits	120	
Suggested Codes	HEGIS:	CIP: 42.2703
Program Modality	(●) On-campus ( ) Distance Education (*fully online*) ( ) Both	
Program Resources	(●) Using Existing Resources ( ) Requiring New Resources	
Projected Implementation Date	(●) Fall ( ) Spring ( ) Summer	Year: 2019
Provide Link to Most Recent Academic Catalog	URL: https://academiccatalog.umd.edu/	
Preferred Contact for this Proposal	Name: D.J. Bolger	
	Title: Associate Professor	
	Phone: (301) 405-9103	
	Email: djbolger@umd.edu	
President/Chief Executive	Type Name: Wallace D. Loh	
	Signature: [signature]	Date: 11-27-2018
	Date of Approval/Endorsement by Governing Board:	

Revised 6/13/18

A. Centrality to the University's Mission and Planning Priorities

Description. 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. The program will be housed in the Department of Human Development and Quantitative Methodology (HDQM Department) within the UMD College of Education.

Relation to Strategic Goals. The UMD strategic plan states: "The University will offer its students an outstanding and rigorous educational experience, as well as an environment and programs to support their social, moral, and intellectual growth. Students will have a range of educational opportunities that reflect the breadth and depth of a comprehensive research university."[1] One gap in UMD's program offerings is an undergraduate program in Human Development. This is surprising given that the faculty that comprise the HDQM Department are recognized nationally and internationally for their specific expertise and hold leadership positions in premiere professional organizations. For decades, the department has offered a graduate program in Human Development that is consistently among the highest ranked programs in the nation. The existing faculty would allow UMD to provide a robust and in-depth perspective on learning and development that would set UMD apart from peer institutions. The department currently offers a minor program in Human Development that enrolls more than 150 students. The proposed degree program builds on this minor to allow students to benefit from faculty expertise in a full degree program.

Funding. The program will draw upon existing resources. The HDQM Department already has faculty and offers a doctoral, master's and minor program in Human Development. With an already existing faculty, facilities are already in place. The department provides undergraduate coursework in human development for the minor and other major programs that need foundational instruction in this area. The department has the administrative and advising infrastructure for undergraduate education as it currently co-sponsors the bachelor's program in Early Childhood and Early Childhood Special Education.

Institutional Commitment. The department has the administrative, instructional, advising, and facilities infrastructure in place to operate the program. In the event that the program is discontinued, the courses will be offered for a reasonable time period so that enrolled students can finish the program. The faculty and administrative

[1] University of Maryland, College Park. (May 21, 2008). *Transforming Maryland: Higher Expectations. The Strategic Plan for the University of Maryland.* (p. 11). Retrieved October 29, 2018 from: http://www.provost.umd.edu/SP07/StrategicPlanFinal.pdf..

infrastructure will still be in place to work with students who have not finished the program.

B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan

Need. Graduates of the Human Development program will be well prepared with the knowledge base and skills to pursue, often with additional graduate education, subsequent careers in a variety of occupations including 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. These career paths align exceptionally well with the economic base in the State. The State of 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.

State Plan. The proposed program in Human Development aligns with the *Maryland State Plan for Postsecondary Education's* emphasis on career training. Strategy 7 of the *Maryland State Plan* is "Enhance career advising and planning services and integrate them explicitly into academic advising and planning."[2] One of the educational outcomes for the program is to prepare students to enter the workforce. A substantial focus of the program will be preparation for employment in a variety of public and private sectors via internships and externships. Through the Capstone Seminar course, which students take in the spring of their junior year, students will walk through career plans, draft resumes, address professional standards and behavior, discuss ethical issues, and draft internship plans/contracts with the goal of participating in those internships in the Summer/Fall of their senior year.

C. Quantifiable and Reliable Evidence and Documentation of Market Supply and Demand in the Region and State

Enrollment figures on campus and at other institutions indicate the market for Human Development majors at the University of Maryland. The undergraduate minor in Human Development is a popular program that currently serves more than 150 students from across campus. In a recent survey of minors, the majority of respondents indicated that if there had been an undergraduate Human Development program when they entered UMD, this program would have been of interest to them.

[2] Maryland Higher Education Commission. (2017). *Maryland State Plan for Postsecondary Education.* (p. 60). Retrieved October 29, 2018 from: http://www.mhec.state.md.us/About/Documents/2017.2021%20Maryland%20State%20Plan%20for%20Higher%20Education.pdf.

We may also obtain enrollment estimates by comparison to our peer institutions. There are roughly 140 bachelor degree programs of Human Development across the country consisting of roughly 14,000 undergraduate students. 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. Fellow BIG 10 institution University of Wisconsin – Madison has 187 undergraduates 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.[3] Relevant jobs listed under this category include the following: health educators and community health workers, marriage and family therapists, and social workers. According to the Maryland Occupational Projections, Community and Social Service occupations will increase by 3,573 from 2016-2026.[4]

D. Reasonableness of Program Duplication

Washington College is the only other institution in the state that offers a Human Development major. This program has a non-teacher certification track that is somewhat similar to the proposed UMD program curriculum, although the UMD program requires substantially more development courses as well as a statistics course. Because of this curricular difference, and because of enrollment size and location (with Washington College being a small liberal arts college on the Eastern Shore of Maryland), we believe that a similar program at UMD, which has the capacity to enroll more students and is located in the Washington, DC metropolitan area, will be viable and therefore a reasonable duplication.

Human Development as a program could be considered duplicative of Psychology or Family Science programs, which are offered at multiple institutions in the state, including UMD, which offers both a Psychology and Family Science program. Although there is some content overlap with these programs and Human Development, the emphases of these three undergraduate programs are different. For example, while all three majors include individual development over the lifespan, individual development is the central focus of the Human Development major and students will go into much

[3] United States Bureau of Labor Statistics. *Occupational Outlook Handbook: Community and Social Service Occupations.* Retrieved November 13, 2018 from https://www.bls.gov/ooh/community-and-social-service/home.htm.

[4] Maryland State Department of Labor, Licensing, and Regulation. *Maryland Occupational Projections – 2016-2026 – Workforce Information and Performance.* Keyword: community and social service. Retrieved November 13, 2018 from http://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml.

greater depth and detail of individual development than in either Psychology or Family Sciences. In contrast, whereas families are considered within Human Development as a context for development, families are the central focus of Family Science majors and students undoubtedly go into much greater depth about families than would be possible in a Human Development major. Similarly, whereas topics like abnormal psychology may be included in Human Development coursework, the major will not offer as much depth as would the Psychology major. Conversely, a Psychology major will not go into as much depth in development theories across the lifespan as a Human Development program. Finally, the level of analysis differs across these three programs. In Human Development, 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, Family Science programs include theory but also covers more applied topics, such as family law and family economics. Psychology programs can also be 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. The Psychology and Family Sciences departments at UMD support this new program.

E . Relevance to Historically Black Institutions (HBIs)

There are no Human Development programs offered by Maryland HBIs. Bowie State University has a Child & Adolescent Studies bachelor's program, which is similar to the proposed Human Development major. Despite the similarity in some of the required courses, however, the program at Bowie State does not include adult development and it emphasizes clinical experience as opposed to research experience. Otherwise, although some HBIs offer Psychology or Family Science programs, these programs, as discussed in Section D, differ from Human Development programs.

F. Relevance to the identity of Historically Black Institutions (HBIs)

UMD has already established itself in the field of Human Development, as our graduate program in Human Development has been offered for many years. UMD has also offered undergraduate coursework in Human Development for many years. Accordingly, the proposed program would not have an impact on the uniqueness or institutional identity of any Maryland HBI.

G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes

Curricular Development. The curriculum builds upon existing undergraduate courses that are part of the existing Human Development 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 outside of the College (e.g. Criminal Justice, Hearing and Speech Sciences, etc.).

Faculty Oversight. The program will be housed in the Department of Human Development and Quantitative Methodology, College of Education. HDQM Department faculty have experience administering both graduate and undergraduate programs. A full-time professional track faculty member will be hired to serve as Program Director, and have overall responsibility for all academic and administrative aspects of the program.

Educational Objectives and Learning Outcomes. In preparation for career paths in Human Development, 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.

See Appendix A for detailed information on Learning Outcomes assessment.

Institutional assessment and documentation of learning outcomes. Undergraduate programs complete annual assessments, with each learning outcome evaluated at least once in a four-year cycle. Programs report findings each fall in summary form following a template structure and are informed by a "best practices" guide and a rubric. Assessment summary reports for each college are collected by the College Coordinator, who works to promote high standards through support and guidance to programs and with continuous improvement practices.

Course requirements. 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

Introductory/Gateway Courses (9 credits)			
Course	Title	Credits	General Education Designation
EDHD2XX (Course will be numbered and created when proposal is approved)	The Study of Human Development: Paradigms and Perspectives	3	
EDHD201	Learning How to Learn	3	History and Social Sciences
EDHD320	Human Development through the Lifespan	3	History and Social Sciences
Statistics and Method Courses (6 credits)			
EDHD306	Research Methods in Human Development	3	Fundamental Studies: Analytical Reasoning
EDMS451	Introduction to Educational Statistics	3	Fundamental Studies: Analytical Reasoning
Core Human Development Courses. Three of the following five core courses (9 credits):			
EDHD412	Infant Development	3	History and Social Sciences
EDHD411	Child Growth and Development	3	History and Social Sciences
EDHD413	Adolescent Development	3	History and Social Sciences
EDHD440	Adult Development	3	History and Social Sciences
EDHD460	Educational Psychology	3	History and Social Sciences
Four of the following elective courses (12 credits). Related courses from other departments may be used with departmental permission.			
EDHD230	Human Development and Societal Institutions	3	History and Social Sciences or Natural Sciences; Understanding Plural Societies
EDHD231	Inside 21st Century Creativity: How Creative Ideas, Concepts, and Products are Generated	3	History and Social Sciences; I-Series

EDHD310	Your Brain on Education: The Neuroscience of Learning and Development	3	History and Social Sciences; I-Series
EDHD402	Social Development	3	
EDHD414	Development of the Scientific Mind Across the Lifespan	3	
EDHD420	Cognitive Development and Learning	3	
EDHD421	Peer Relations	3	
EDHD425	Language Development and Reading Acquisition	3	
EDHD426	Cognition and Motivation in Reading	3	
EDHD430	Adolescent Violence	3	
EDHD445	Guidance and Young Children	3	
EDMS4XX (Course will be numbered and created when proposal is approved)	Applied Measurement: Issues and Practices	3	
Pro-seminar (3 credits)			
EDHD4XX (Course will be numbered and created when proposal is approved)	Pro-Seminar in Human Development	3	
Internship/Field Experience (6 credits)			
EDHD489	Field Experiences in Education	6	

See Appendix B for course descriptions.

General Education. Students will complete their General Education History & Social Science and Fundamental Studies: Analytical Reasoning requirements by way of fulfilling major requirements. Some major electives will also count for General Education requirements (see the table above for courses that count for general education requirements). Otherwise, students will have room in their schedules to fulfill the other General Education requirements. *See Appendix D Curriculum Overview for how students meet major and General Education requirements.*

Accreditation or Certification Requirements. There are no specialized accreditation or certification requirements for this program.

Other Institutions or Organizations. The department will not contract with another institution or non-collegiate organization for this program.

Student Support. Students enrolled in this program will have access to all the resources necessary in order to succeed in the program and make the most of the learning opportunity. Students entering the university as either first-time college students or transfer students will learn about the program through their orientation program. Students entering the major as internal transfers will meet with an advisor in the program when they declare the major. Two full-time advisors will be dedicated to the major.

Marketing and Admissions Information. The program will be clearly and accurately described in the university website and marketed at university recruiting events.

H. Adequacy of Articulation

As with all students who have completed an Associate of Arts (AA) Degree at another institution, students entering the HD major with an AA degree will have completed all of their UMD General Education requirements, except for the upper-level professional writing requirement. Whereas there are no specific articulation agreements in place, the program in Human Development will allow for the fulfillment of certain course requirements from other institutions including community and local colleges, thus ensuring that students who transfer into the university will be at no disadvantage to complete their degree requirements in a reasonable time.

Course equivalencies from other institutions will be evaluated by the Director of the Undergraduate Program in accordance with university policy. For example, "Gateway" courses such as the statistics and methods courses or electives may be deemed as equivalent courses at other institutions. Such equivalencies would be on a case-by-case basis requiring the evaluation of syllabi.

I. Adequacy of Faculty Resources

Program faculty. Our nationally and internationally recognized faculty are teaching a growing number of undergraduate students who require a foundational knowledge of development and learning. 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.

The department has several strengths that are reflected in faculty research areas. The developmental science faculty 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 proposed program will receive the highest quality instruction by faculty who are uniquely positioned to teach human development and quantitative research methodology. A total of 22 tenured/pre-tenured and clinical faculty have the responsibility for curriculum and programmatic decisions.

See faculty biographies in Appendix C.

Faculty training. Opportunities to improve teaching and learning in the program will be identified through program assessment process as described in Section M. UMD's Teaching and Learning Transformation Center provides instructional training resources, support, and consultations to instructors across the university.

For the learning management system, faculty teaching in this program will have access to teacher development opportunities available across campus, including those offered as part of the Teaching and Learning Transformation Center. For online elements of the coursework, instructors will work with the learning design specialists on campus to incorporate best practices when teaching in the online environment.

J. Adequacy of Library Resources

The University of Maryland Libraries has conducted an assessment of library resources required for this program. The assessment concluded that the University Libraries are able to meet, with its current resources, the curricular and research needs of the program.

K. Adequacy of Physical Facilities, Infrastructure, and Instructional Resources

The facilities, infrastructure, and instructional equipment 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.

All UMD students have access to the institutional electronic mailing system. This program is not a distance education program, however, student will have access to the campus learning management system for the elements of the courses that exist online.

L. Adequacy of Financial Resources

Resources for the new program will be drawn from those currently available in the department and College of Education. The university is not anticipating overall enrollment growth as a result of this major, but anticipates a possible shift in major selection by matriculating students, so no new tuition revenue is assumed in identifying available resources. Reallocated funds to support the program will come from the Dean's office of the College of Education for the Program Director and full-time lecturer. In addition, the department is hiring two tenure-track faculty this year, with another expected in the following years to replace retiring faculty. Current tenure-track faculty and Graduate Student teaching assistants will shift teaching toward gateway and core courses as well as popular electives.

See Appendix D: Resource and Expenditure Tables

M. Adequacy of Program Evaluation

Formal program review is carried out according to the University of Maryland's policy for Periodic Review of Academic Units, which includes a review of the academic programs offered by, and the research and administration of, the academic unit (http://www.president.umd.edu/policies/2014-i-600a.html). Program Review is also monitored following the guidelines of the campus-wide cycle of Learning Outcomes Assessment (https://www.irpa.umd.edu/Assessment/LOA.html). Faculty within the department are reviewed according to the University's Policy on Periodic Evaluation of Faculty Performance (http://www.president.umd.edu/policies/2014-ii-120a.html). Since 2005, the University has used an online course evaluation instrument that standardizes course evaluations across campus. The course evaluation has standard, university-wide questions and also allows for supplemental, specialized questions from the academic unit offering the course.

N. Consistency with Minority Student Achievement goals

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 field itself is largely defined by its focus on human diversity. Accordingly, the department adheres to the UMD's diversity goals as stated in the *Mission and Goals Statement*: "Providing equal educational opportunity, hiring and retaining a diverse faculty and staff of

exceptional achievement, and recruiting and graduating talented students from traditionally underrepresented groups are institutional priorities."[5]

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, 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.

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), a Human Development 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.).

O. Relationship to Low Productivity Programs Identified by the Commission

N/A

P. Adequacy of Distance Education Programs

N/A

[5] University of Maryland, College Park. (Aprl 29, 2014). *Mission and Goals Statement.* (p. 1). Retrieved November 15, 2018 from https://www.provost.umd.edu/Documents/UMCP-Mission-Statement-Final-2015.pdf.

Appendix A: Learning Outcomes Assessment

The tables below list the intended student learning outcomes, organized by 5 overarching goals, followed by 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

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**
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	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

			Reading Acquisition EDHD 460 – Educational Psychology	Psychology
How Sub-goal is Assessed	• Written Assignments • Exams	• Written Assignments • Oral Presentations	• 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	• Written Assignments • Exams • Group Presentations	• Final Project Multimedia Presentations • Group Presentations

	• Group Presentations • Written Assignments		• 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 B: Course Descriptions

Introductory/Gateway Courses (9 Credits)

*EDHD2XX The Study of Human Development (3 Credits)
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.
*This course will be created when the program proposal is approved.

EDHD201 Learning How to Learn (3 Credits)
Immerses students in the theoretical and empirical study of learning by engaging them in orchestrated experiences and activities drawn directly from the disciplinary research. Students achieve deep understanding of their own learning, as well as the means of enhancing that learning both in school and out-of-school contexts.

EDHD320 Human Development Through the Life Span (3 Credits)
Central concepts related to parameters of human development, individual and social, which arise throughout the life span. Continuity and change within the developing individual.

Statistics and Methods Courses (6 Credits)

EDHD306 Research Methods in Human Development (3 Credits)
Addresses the scientific concepts and principles central to the study of human behavior and development. Students will learn about basic research methods in studying human behavior in developmental context and will participate in experiential activities, such as conducting observations and collecting self-report data. Major themes: goals of developmental research, fundamental research designs, types of measurement, elements of good scientific writing, and ethical issues in the study of human development.

EDMS451 Introduction to Educational Statistics (3 Credits)
Introduction to statistical reasoning; location and dispersion measures; computer applications; regression and correlation; formation of hypotheses tests; t-test; one-way analysis of variance; analysis of contingency tables.

Core Human Development Courses (9 Credits)

EDHD411 Child Growth and Development (3 Credits)
Theoretical approaches to and empirical studies of physical, psychological and social development from conception to puberty. Implications for home, school and community.

EDHD412 Infant Development (3 Credits)
Infant development across domains, including perceptual, motor, cognitive, language, social and emotional functioning from pre-natal through third year of life.

EDHD413 Adolescent Development (3 Credits)
Adolescent development, including special problems encountered in contemporary culture. Observational component and individual case study.

EDHD440 Adult Development (3 Credits)
Major conceptual approaches to the study of adult development including physical, cognitive, social, emotional and self processes that take place within individuals as they progress from emerging adulthood through middle age.

EDHD460 Educational Psychology (3 Credits)
Application of psychology to learning processes and theories. Individual differences, measurement, motivation, emotions, intelligence, attitudes, problem solving, thinking and communicating in educational settings.

Elective Courses (12 Credits)

EDHD230 Human Development and Societal Institutions (3 Credits)
Development of the individual in the context of relationships with the formal and informal institutions of society. An examination of various aspects of development from the broad perspective of the social sciences.

EDHD231 Inside 21st Century Creativity: How Creative Ideas, Concepts, and Products are Generated (3 Credits)
Mechanisms of the creative mind. Psychological, social, sociological, developmental, cultural, educational, genetic and neural based roots of creativity.

EDHD310 Your Brain on Education: The Neuroscience of Learning and Development (3 Credits)
Investigation linking research in the brain science of learning and development, including the neural basis of academic skills, to achievement, disability, and broader applications to classroom learning. This course will focus on areas of education including language (spoken and written), conceptual change, numerical/quantitative processing, and social cognition as well as burgeoning areas of neuroscientific research in general cognitive processes such as attention, memory, and executive processing. These topics will be discussed with respect to typical and atypical development with some focus on developmental disabilities including autism, specific language impairment, reading and math impairment, and attention deficit disorders among others. This course will focus on both the theoretical perspectives and pragmatic issues of how evidence regarding brain development can or may be translated into useful or misleading information for educators, professionals, and parents/guardians of our children.

EDHD402 Social Development (3 Credits)

Social Development. Critical concepts and ideas of the study of child and adolescent social development. Focus on changes in interpersonal relationships, emotions, achievement-related behavior and competence, and functioning within the broader social context.

EDHD414 Development of the Scientific Mind Across the Lifespan (3 Credits)
Study of the educational, cognitive, social, and cultural factors that underlie the development of the scientific mind across the lifespan.

EDHD420 Cognitive Development and Learning (3 Credits)
Current developmental theories of cognitive processes such as language, memory, and intelligence and how differences in cognitive level (infancy through adolescence) mediate learning of educational subject matters.

EDHD421 Peer Relations (3 Credits)
Historical and theoretical underpinnings to contemporary research on peer interactions, relationships, and groups. Focus on (1) inter-dependencies of individual characteristics, social behaviors, social relationships; (2) relations between familial factors and extra-familial peer interactions and relationships; (3) normal and abnormal peer relationships; and (4) cross cultural universals and differences.

EDHD425 Language Development and Reading Acquisition (3 Credits)
This course focuses on young children's language development and the relationship between language and reading acquisition. Students will learn: concepts central to language development; language achievements at different ages; concepts of emergent literacy; models of reading acquisition and skilled reading.

EDHD426 Cognitive and Motivational Literacy Content (3 Credits)
Students preparing for secondary teaching will learn about the cognitive and motivational aspects of literacy and learning from text for the content areas of literature, science, history and mathematics. Different evidenced-based literacy approaches appropriate for content learning are presented. Characteristics of learning environments that enable students to engage productively with diverse texts, disciplinary tasks, and technological resources in content areas are identified.

EDHD430 Adolescent Violence (3 Credits)
Examines the roots of violence among adolescents and the extent to which this constitutes a problem in various settings. Research studies on its origins, prevention and intervention and implications for social policy are examined.

EDHD445 Guidance of Young Children (3 Credits)
Practical aspects for helping and working with children, drawing on research, clinical studies, and observation. Implications for day care and other public issues.

*EDMS4XX Applied Measurement: Issues and Practices (3 Credits)

Measurement theory and its application at an intermediate level; test development, validation and interpretation; issues and recent developments in measurement.
*Course will be created when program proposal is approved.

Appendix C. Faculty in Human Development and Quantitative Methodology

Faculty Info	Faculty Bio
Alexander, Patricia Ph. D. University of Maryland, College Park Professor; Full-Time Educational Psychology Specialization palexand@umd.edu (301) 405-2821 Courses: EDHD201, EDH460	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; Full-Time Developmental Science & Educational Psychology Specialization	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.

djbolger@umd.edu (301) 405-9103 Courses: EDHD310, EDHD420, EDHD425	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; Full-Time Developmental Science Program lpbutler@umd.edu (301) 314-1815 Courses: EDHD411	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; Full-Time Developmental Science Program ncabrera@umd.edu (301) 405-2827 Courses: EDHD411	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; Full-Time Developmental Science Program & Educational Psychology Specialization kndunbar@umd.edu (301) 405-7233 Courses: EDHD231, EDHD414, EDHD420	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; Full-Time Developmental Science Program fox@umd.edu	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.

(301) 405-2816	
Hancock, Gregory Ph. D. University of Washington Professor; Full-Time Measurement, Statistics and Evaluation UM Distinguished Scholar-Teacher ghancock@umd.edu (301) 405-3621 Courses: EDMS451	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 Full-Time	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; Full-Time Measurement, Statistics and Evaluation	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.

hjiao@umd.edu (301) 405-3627	
Jones-Harden, Brenda Ph.D. Yale University Associate Professor; Full-Time Developmental Science Program bjharden@umd.edu (301) 405-2580 Courses: EDHD220, EDHD412	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; Full-Time 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; Full-Time 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; Full-Time Measurement, Statistics and Evaluation rlissitz@umd.edu (301) 405-3620	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 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; Full-Time 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; Full-Time Educational Psychology Specialization prather1@umd.edu (301) 405-2806 Courses: EDHD420	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; Full-Time Developmental Science Program & Educational Psychology Specialization gramani@umd.edu (301) 405-8777 Courses: EDHD411, EDHD413	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 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;	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

Full-Time Developmental Science Program krubin@umd.edu (301) 405-0458 Courses: EDHD421	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.	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,

University of Maryland Associate Professor; Full-Time Measurement, Statistics and Evaluation lstaplet@umd.edu (301) 405-1933 Courses: EDMS451	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; Full-Time 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; Full-Time 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 Professor; Full-Time Educational Psychology Specialization & Developmental Science Program minwang@umd.edu (301) 405-8798 Courses: EDHD420, EDHD425, EDHD460	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. 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; Full-Time Developmental Science Specialization & Educational Psychology Specialization wentzel@umd.edu (301) 405-2810 Courses: EDHD402	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; Full-Time Developmental Science Program & Educational Psychology Specialization awigfiel@umd.edu (301) 405-2809 Courses: EDHD413	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 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; Full-Time 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: Bachelor of Science in Human Development (120 Credits) Curriculum Overview

Category	Credits	Code
Major Requirements: 45 Credits		
Major Introductory/Gateway Courses	9	MIG
Major Statistics and Methods Courses	6	MSM
Major 400-Level Core Restricted Electives	9	MCR
Major Restricted Electives	12	MRE
Major Pro-Seminar	3	MPS
Major Field Experience	6	MFE
General Education Requirements: 40 Credits Minimum		
Fundamental Studies: 15 Credits		
Fundamental Studies Academic Writing	3	FSAW
Fundamental Studies Professional Writing	3	FSPW
Fundamental Studies Oral Communication	3	FSOC
Fundamental Studies Mathematics	3	FSMA
Fundamental Studies Analytic Reasoning[2]	3	FSAR
[2] If a student passes an Analytic Reasoning course that requires a Fundamental Studies Math course as a prerequisite, then the Fundamental Studies Math course is considered to be fulfilled (e.g., students who place into and pass a calculus course, which counts for FSAR, do not need to take a less advanced Math course to fulfill the FSMA requirement).		
Distributive Studies: 25 Credits		
Distributive Studies Natural Sciences	3	DSNS
Distributive Studies Natural Science Lab Course[3]	4	DSNL
Distributive Studies History and Social Sciences	6	DSHS
Distributive Studies Humanities	6	DSHU
Distributive Studies Scholarship in Practice[4]	6	DSSP
[3] A second DSNL course can fulfill the DSNS course requirement.		
[4] Students learn and practice skills of critical evaluation and participate in the process of applying knowledge in the pursuit of a tangible goal. At least one course must be outside of the major.		
I-Series Courses: 6 Credits [5]		
The signature courses of the UMD General Education program, I-Series courses investigate a significant issue in depth and demonstrate how particular disciplines and fields of study address problems.		
I-Series Course	6	SCIS
[5] I-Series credits may be double-counted with courses taken for the Distributive Studies requirement.		
Diversity: 4-6 Credits[6]		
Diversity Understanding Plural Societies[7] Courses examine how diverse cultural and ethnic groups co-exist.	3-6	DVUP
Diversity Cultural Competence Courses help students develop skills to succeed in a diverse world.	0-3	DVCC

[6] These credits may be double-counted with courses taken for the Distributive Studies requirement.
[7] Students may take either two DVUP courses or one DVUP course and one DVCC course.

Bachelor of Science in Human Development Four-Year Plan

Course	Credits	Requirement	Course	Credits	Requirement
First Semester			**Second Semester**		
ENGL101	3	FSAW	EDHD201	3	MIG; DSHS
MATH107	3	FSMA	EDHD2XX-4XX	3	MRE
Gen. Ed. Course	4	DSNL	EDHD2XX-4XX	3	MRE
Gen. Ed. Course	3	SCIS	Gen. Ed. Course	3	DSHU
Elective	3		Gen. Ed. Course	3	FSOC
Total	16		Total	15	
Third Semester			**Fourth Semester**		
EDHD2XX	3	MIG	EDHD2XX-4XX	3	MRE
EDHD320	3	MIG; DSHS	Gen. Ed. Course	3	DSSP
Gen. Ed. Course	3	DSSP	Gen. Ed. Course	3	DVUP
Gen. Ed. Course	3	DSHU	Gen. Ed. Course	3	DSNS
Gen. Ed. Course	3	SCIS	Elective	3	
Total	15		Total	15	
Fifth Semester			**Sixth Semester**		
EDMS451	3	MSM; FSAR	EDHD306	3	MSM
EDHD4XX	3	MCR	EDHD4XX	3	MCR
Gen. Ed. Course	3	DVUP/DVCC	EDHD4XX	3	MCR
Gen. Ed. Course	3	FSPW	Elective	3	
Elective	3		Elective	3	
Total	15		Total	15	
Seventh Semester			**Eighth Semester**		
EDHD2XX-4XX	3	MRE	EDHD489	6	MFE
EDHD4XX	3	MPS	Elective	3	
Elective	3		Elective	3	
Elective	3		Elective	2	
Elective	3				
Total	15		Total	14	

Notes:
9 credits of General Education requirements are fulfilled by major requirements (EDHD201, EDHD320, and EDMS451).
General Education I-Series (SCIS) and Diversity (DVUP and DVCC) courses can overlap with General Education Distributive Studies courses (DSNS, DSNL, DSHS,

DSHA) to further reduce number of courses taken for the purpose of fulfilling General Education requirements.
Other than major and General Education requirements, students will take Elective courses to meet the 120 credit degree requirement.

Appendix D: Resource and Expenditure Tables

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)	$0	$0	$0	$0	$0
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)	$0	$0	$0	$0	$0
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)	$0	$0	$0	$0	$0
3. Grants, Contracts, & Other External Sources	$0	$0	$0	$0	$0
4. Other Sources	$0	$0	$0	$0	$0
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.

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**