



DOCTORAL TRAINING IN
EDUCATIONAL PSYCHOLOGY &
APPLIED DEVELOPMENTAL
SCIENCE (EP-ADS)

Guidelines for Students Entering in Fall, 2019
<http://curry.edschool.virginia.edu/ep-ads>

Doctoral Training in Educational Psychology & Applied Developmental Science (EP-ADS)

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Program Mission

Our work is focused on promoting human development in its diversity and complexity. We identify meaningful, relevant problems and develop solutions to address them. Our work is interdisciplinary, methodologically rigorous, and strength-based.

Program Overview

The Educational Psychology and Applied Developmental Science (EP-ADS) program focuses on studying and improving the social and cognitive lives of children and adolescents. EP-ADS students learn theory and research on how school and out-of-school settings influence learning and development. Students have hands-on experience developing and evaluating interventions designed to support children and youth to become important, contributing members of society. Course work provides content in educational and applied developmental psychology as well as research design, methods and statistics. EP-ADS faculty and students work together closely, fostering a productive, engaging, and exciting learning environment.

Four features of EP-ADS stand out.

- EP-ADS is an interdisciplinary program. The challenges facing children and youth do not fit neatly into a single, narrow domain of study. EP-ADS faculty draw from education, psychology, education policy, as well as other disciplines.
- EP-ADS faculty and students view rigorous research designs, advanced methodologies and data analytic procedures as important research tools. Students learn that choosing a research design and/or analytical approach depends upon the research question addressed.
- EP-ADS takes a strengths-based approach to understanding the complex challenges that children and youth face in their homes, schools, after-school programs, and communities. Students learn to develop interventions that promote optimal functioning for children and youth and develop an understanding of how to assess the extent to which interventions are more or less effective for some children/youth than others.
- EP-ADS work is relevant and applied. Many of the important research questions emanate from challenges that teachers, school administrators, communities and policy-makers face on a day-to-day basis.

The Educational Psychology-Applied Developmental Science (EP-ADS) program is housed in the Educational Leadership and Policy Department (EDLF) in the Curry School of Education at the University of Virginia.

¹ Approved for the Academic Year 2019-2020

Faculty

Faculty members work with students in close mentorship to address the training aims of the EP-ADS. The program has a mentorship model; students typically work intensely with between one and three faculty members during the course of their program. Natalia Palacios is the EP-ADS program coordinator.

The EP-ADS program is based in the department of Educational Leadership, Foundations and Policy (EDLF), chaired by Michelle Young. All EP-ADS faculty work at the Curry School of Education; their primary affiliation may be with EDLF, the Center for the Advanced Study of Teaching and Learning (CASTL), Youth Nex, and/or Center on Race and Public Education in the South. EP-ADS has approximately 14 affiliated faculty members—more than what is typical in EDLF or at the Curry. All EP-ADS faculty were initially drawn to EP-ADS because of the alignment between their research and EP-ADS training goals. As a result, all EP-ADS faculty are active researchers who provide enriched mentorship opportunities to doctoral students. To read about EP-ADS faculty and their areas of interest, see the EP-ADS website: <http://curry.edschool.virginia.edu/ep-ads>

Goals and Expectations

The EP-ADS doctoral training program requires approximately four years of full-time study. Graduates of EP-ADS are prepared to acquire positions in private and public universities, private institutions and agencies, and governmental agencies. To date, 100% of our EP-ADS graduates have obtained positions utilizing their new skills and competencies upon graduation.

The program offers two core experiences to develop student competencies: interdisciplinary coursework and research apprenticeship. These two core experiences interrelate. Students apply knowledge and skills from their classes to their research apprenticeship experiences. Students use ideas, data sets, and research questions from their apprenticeship experiences in their course assignments and projects. One component of the research apprenticeship is a research-practice experience in a field setting (e.g., a school district, state policy-making agency). Students benchmark their progress by completing high quality work on three products: 1) a predissertation research manuscript, 2) a comprehensive exam, and 3) a dissertation (involving a dissertation proposal, proposal defense, written dissertation and dissertation defense). Faculty advisers and mentors guide students through these core experiences and support students' development of products.

The EP-ADS core experiences are designed so that upon completion of the program, students have a rich understanding of the classroom, school, and other social environments that serve risk or protective roles in children and youth development. Further, these core experiences help students develop a keen awareness of the current state of knowledge in educational psychology and/or applied developmental science. Upon the completion of their program, students will have specific products that demonstrate their newly acquired knowledge and competencies—students will have presented work at conferences, published papers and/or chapters, and/or contributed to submitted grants.

Students work with their advisor(s) to develop a program of study. The program of study balances two objectives: (1) to develop an individualized doctoral training plan that is unique to the interests and goals of each student, and (2) to ensure that all program, school and university requirements are met during the doctoral training experience. Thus, the student's program of study is individualized yet designed to conform to the general guidelines

of The University for conferral of the PhD if all requirements are met at a sufficiently high level.

The program of study must meet the core requirements of the EP-ADS program as well as those of the Curry School of Education. As mentioned, students work with their advisor to develop a program of study and then present their program of study at their annual review meetings. Students make any course replacement requests to their advisor. If the advisor is unsure about the decision, the student consults the program coordinator.

Interdisciplinary Coursework

The program of study involves foundation courses, courses in human development, methods and statistics courses, a methods specialization, an interdisciplinary specialization, proseminar, research credits, teaching internship, and dissertation credits. (See the UVA Student Information System [SIS] or "[Lou's list](#)" for current course offerings.) See Appendix A for a sample student coursework schedule, Appendix B for a list of methods and statistics courses and Appendix C for a Course Planning Table.

All students enroll in a series of courses that comprise *the foundation requirements*. These courses will be common among all EP-ADS students, with limited choice and substitution. All doctoral students in EDLF and most doctoral students at Curry are required to take EDLF 7300, Research Foundations in Education.

All students enroll in three courses on *human development*. Students choose two of three development courses (e.g., child, adolescent, adult). Plus, students choose one topical development courses (e.g., Cognitive Development). Students may be exempt from one or two of these required courses if they previously completed a masters or doctoral level course with comparable content. Again, this is decision made in consultation with the student's advisor.

Students enroll in a series of *methods and statistics courses*. To acquire skills in quantitative methods, students typically take Quantitative Methods 2 and 3. Then, once they've completed these two courses, they are eligible to enroll in courses on the more advanced level quantitative courses (including Generalized Linear Models, Multivariate Statistics, Structural Equation Modeling and/or Field Experiments).

Students work with their advisor to choose the quantitative course that best matches their level of knowledge upon program entry. (Most students begin with Quant 2 because they completed Quant 1 or the equivalent prior to beginning the program.) To develop qualitative methods skills, students are required to take Qualitative Methods 1. Many students take Qualitative Methods 2 and/or Mixed Methods, as well. Further, effective research requires knowledge of data management. Although not required, the faculty recommend that students enroll in data management if they have not achieved this competency through other, previous work or educational experiences.

Students choose a *methods specialization* to obtain sufficient depth in the key methods they use (or plan to use) in their doctoral research. The methods specialization includes one seminar in advanced statistics plus one additional methods course. Students may select to enroll in courses such as Mixed Methods, Measurement Theory, Single Subject Research, Item Response Theory, among others. (VEST fellows chose a methods specialization in education science, as described below.)

Each student develops an individualized program of study called an *interdisciplinary specialization*. The specialization consists of an organized set of coursework focused on a particular topic. The trainee identifies a specialization with support from his/her advisor. The purpose of the specialization is to give the student an opportunity to explore a single topic from different disciplinary perspectives and with sufficient depth. The specialization is

comprised of 12 hours of graduate coursework, including 6 hours within the Curry School of Education and 6 hours in departments outside of the Curry School. Typically, students enroll in two courses from departments including, but not limited to Economics, Sociology, Psychology, Policy, Statistics, and/or Health Sciences.

Students enroll in directed research (3 credits per semester) during their first three years. All students enroll in dissertation credits in their final year (9 to 12 credits per semester).

Most students acquire teaching experience while at Curry. Students enroll in Internship in Teaching or become a Graduate Teaching Assistant (GTAs) to obtain teaching experience. Fellows funded through VEST can enroll in Internship in Teaching for one semester but cannot serve as GTAs due to IES restrictions.

VEST fellows have several additional course requirements. All VEST fellows must select an Education Science methods specialization that includes one course in causal inference and another course in field experiments. In addition, VEST fellows will be required to enroll in workshops to obtain additional competencies. VEST fellows are expected to attend all the VEST-sponsored talks in the Curry Speaker Series – typically four per semester. In addition, VEST fellows are required to attend conversations with the speaker after the talks.

To meet Curry Ph.D. requirements, students must earn a minimum of 72 credits. Fifty-four (or more credits) must be based on coursework (which includes foundation courses, human development, methods & statistics, the methods specialization, the interdisciplinary specialization, proseminar and up to 3 credits of apprenticeship research credits per semester). Internship and dissertation credits cannot be counted toward the 54 credits of coursework. At least 36 of these 54 credits must be completed *after* admission to the doctoral program. Up to 12 dissertation credits may be applied toward the 72 credits required. EP-ADS students typically take 24 dissertation credits. Students are required to register for 12 credits per semester to maintain status as a full time student. Students are responsible for ensuring that they meet the Curry Ph.D. requirements as described in the Graduate Record: <http://records.ureg.virginia.edu/index.php>. (At this website, search “graduate record” in the upper right corner.)

In many cases, students enter the program having taken very similar courses in other programs or universities. The student may consult with his/her advisor about using these credits toward their PhD. Students entering the EP-ADS doctoral program with a master’s degree can apply up to 24 credits to their doctoral program. The review process requires review of the course syllabus, a process that typically takes place at students’ annual meeting. To gain approval, the course needs to be masters or doctoral level, students need to have a B- or better in the course, and the content needs to be comparable to a Curry masters or doctoral level course. The form for applying for transfer credits can be found here: [http://curry.virginia.edu/uploads/resourceLibrary/Application for Transfer Credit for Graduate Students.pdf](http://curry.virginia.edu/uploads/resourceLibrary/Application%20for%20Transfer%20Credit%20for%20Graduate%20Students.pdf).

Research Apprenticeship and Independent Research

Students engage in a research apprenticeship with a faculty member (or more than one faculty member) each year of their training. Most students have the same advisor over the 4 years. However, we recommend that students take advantage of opportunities for training with other EP-ADS faculty, as well. Often opportunities to conduct research with more than one faculty member arise organically when one faculty member collaborates with another. If not, students are encouraged to develop a line of research that will lend itself to

primary work with one faculty member and secondary engagement with another EP-ADS faculty member.

During the fall of each year, first year students identify a focus for their work and mentor(s) for their year-long apprenticeship (lasting fall, spring, and summer). In subsequent years, students develop their apprenticeship plan during the summer of each year of training with the support and guidance of their advisor and mentor(s). The apprenticeship plan identifies the focus of training, specific training activities and goals, and planned products (e.g., conference presentation(s), manuscript(s), grant proposal(s)). Students use the *EP-ADS Competency Matrix* and *Annual Research Plan Document* to identify existing competencies and areas for growth and to map out ongoing research activities and planned products. Both the *EP-ADS Competency Matrix* and the *Annual Research Plan Document* are available on the Curry website and in the Appendix of this document. (See: <http://curry.virginia.edu/resource-library/ep-ads-doctoral-program-documents-for-annual-review-meeting>.)

Trainees register for 3 credits of directed research (doctoral research apprenticeship) each semester for which they are expected to complete a minimum of 10 hours of research each week during the first and second years of study and more during the third and fourth years. (VEST fellows are required to complete 20 hours of directed research each week for all four years.) During this apprenticeship, the student will assist with their advisor's/mentor's research and scholarship. Actual activities typically include data collection, coding, quantitative or qualitative data analysis, library research, presentations, writing for publication, and other related activities.

Students identify a secondary mentor by the middle of their third year of graduate study. Typically, the student selects a secondary mentor with consultation from his/her advisor. The secondary mentor is someone beside their mentor who offers guidance to the student (either formally or informally) and begins to know the students' work well. The role of the secondary mentor ranges considerably. A secondary mentor may be closely involved in the student's research or simply be a reader for the comprehensive exam or a faculty member to whom the student turns to get a fresh perspective on his/her work. Students may choose a secondary mentor from a department outside of EDLF and/or Curry. Alternatively, students may choose a secondary mentor from within EP-ADS. If the secondary mentor is within EP-ADS, he/she may be a second reader for the comprehensive exam. Secondary mentors may play other roles, as well. For instance, secondary mentors may provide students with their teaching experience or be a collaborator on a paper or other project.

Student apprenticeship experiences lead all students to develop an independent line of research that they will develop over the course of their graduate training. This work will link closely to topics explored in their research apprenticeship, often building on skills and/or using existing data sets emanating from those experiences.

Research-Practice Experience (RPE)

Too often, academic research is deemed irrelevant by practitioners, educators and policy-makers. The RPE is designed to give students real world practice in making research relevant to practice, teaching important lessons and skills needed for such work. By engaging in the RPE, students will have an opportunity to use their research skills to solve a problem identified by a partner organization. Typically, students partner with an organization outside UVA on a problem identified by policy-makers, educators or others in the community providing service to children and youth. Partners are often school districts or state agencies but there are many other community-based options available.

There are three key components of the RPE. First, the problem to solve comes from the organization's perspective, not from the perspective of the academic research team. Second, the work involves the use of students' newly developed skills in using data to answer questions. The data may be quantitative, qualitative or both and often, the data can be messy and unruly compared to the typical data we use to prepare journal articles. Third, effective communication is one of the key learning experiences – the work involves listening carefully to the issues faced by the organization to hone in on problems and solutions *and* communicating results effectively in a format that matches the needs of partners (e.g., short and to the point, without jargon, with direct recommendations for action steps, in a way that matches their timeline).

VEST fellows are required to complete the RPE. VEST affiliate fellows and EP-ADS doctoral students are also required to complete the student field experience but it may take a somewhat different form to match students' funding source. The RPE typically occurs during the Spring or Summer of a student's second or third year in the Ph.D. program. The partnership typically extends 8-14 weeks for about 20 hours per week with the potential for mutually agreed upon extensions. Other timelines options are available and can be determined in conversations with your adviser, particularly for VEST affiliates and other EP-ADS students.

Students will be jointly mentored by a Curry faculty member and a partner at the organization to engage in this work. Some students work on-site for their RPE, which can create an even richer experience. Students develop the RPE in collaboration with their adviser based on the three key components of the RPE (mentioned above) as well as the Research-Practice Partnership Skills mentioned in the Competency Matrix (in Appendix F).

Pre-dissertation Research Manuscript

All Curry doctoral students are required to complete a pre-dissertation research project that results in one lead-author manuscript submitted for publication in a peer-reviewed journal or other scholarly publication. EP-ADS students are also required to complete another paper in addition to the pre-dissertation manuscript. The student may be a co-author on the additional paper.

Both of these manuscripts must be *submitted* before the student initiates their comprehensive exam and undertakes dissertation work. There is no requirement that the paper be accepted for publication, but students are strongly encouraged to revise manuscripts if resubmission is likely to result in publication. See Appendix D for the rubric used for evaluation.

Comprehensive Exam

Students are eligible to begin the comprehensive exam process when they have completed all coursework. Students consult with their advisor and mentor(s) about the timing of their comprehensive exam and engage in the following steps:

- **Adviser notification:** The student notifies their adviser and program coordinator in writing (via emails) at least one month before he/she intends to start their comprehensive exam.
- **Selection of a second reader:** The student identifies a second reader (e.g., an EP-ADS faculty member with content expertise in the area in which the student intends to write) in consultation with his/her advisor. The student makes a request to the second reader asking that they serve as second reader for the comprehensive exam.

- **Development of questions:** The student develops one question that he/she will address during the exam. The question pertains to educational psychology and/or applied developmental science and facilitates student's learning of theory and research in an area related to his/her desired expertise. An ideal first question has elements of theory or research that will be familiar to the student but also, stretches the student to learn a new body of work. The student solicits input on the appropriateness and the rigor of the question from his/her advisor. The advisor edits the first question and contacts the second reader to develop the second question. The second question typically builds upon the first question by considering the implication of work (in question 1) for research, policy, and practice. (Sample questions are available on the website.) Students will know the first question prior to initiating the exam. However, question 2 will not be presented to the student until the first day of the comprehensive exam.
- **Examination:** The advisor sends both questions to the student on the day requested by the student. The student completes the exam in a two-week period. Students prepare two essays; each essay may not exceed 10 double-spaced pages (not including references). Students must complete the comprehensive exam completely independently without support or suggestions from peers, faculty, or others. Students follow APA style for citations and references. Students turn in the completed exam to both their advisor and second reader via email in two weeks (or less).
- **Performance Appraisal:** When the examination is complete, the advisor and second reader will evaluate the students' exam within two weeks. Readers will use the criteria in Appendix E. Both readers will assess the student's performance on the rubric, resulting in composite ratings as follows: 1) acceptable/pass, 2) marginal pass/revisions required, and 3) unacceptable.
 - a. If students receive acceptable/pass, students begin work on their dissertation.
 - b. For marginal pass or below, students receive faculty comments and have two weeks to rewrite and/or make revisions (Revision 1). After the two weeks, the student turns in the exam and again, faculty rate student's performance as: 1) acceptable/pass, 2) marginal pass/revisions required, and 3) unacceptable.
 - i. If students receive acceptable/pass, students proceed to next steps in the program.
 - ii. If students receive marginal pass/revisions required, faculty provide comments and students have one week to rewrite and/or make revisions (Revision 2). The faculty rate then rates student performance as either: 1) acceptable/pass or 2) unacceptable.
 - iii. If students receive a rating of unacceptable for either Revision 1 or Revision 2, the student begins the comprehensive exam process again. Typically, the student and readers will redesign the questions. Further, the advisor, reader and student will have a conversation involving student reflection, faculty and student problem solving. Students will return to the beginning of the comprehensive exam cycle and will have one more time to take the comprehensive exam (and proceed through the multi-step performance appraisal process

described above). The student must initiate the comprehensive exam process within one month of receiving the unacceptable rating, unless otherwise determined by the student adviser.

Doctoral Dissertation

Students begin work toward their dissertation upon successful completion of the comprehensive exam. The Curry School of Education has established a standardized process across programs. This includes the composition of the dissertation committee. Please see the most recent dissertation manual for details:

http://curry.virginia.edu/uploads/resourceLibrary/Curry_dissertation_manual_7.22.15FINAL.pdf

Most EP-ADS students opt for the manuscript-style dissertation because it lends itself to a smoother process toward manuscript publication. The manuscript-style dissertation is intended to be as or more rigorous than a traditional dissertation and students decide whether to complete a manuscript-style versus traditional dissertation in consultation with their advisor/mentor.

Program Logistics

Assignment and Selection of an Advisor

EP-ADS students will be assigned an academic program advisor (referred to here as “program advisor”) and research mentor (referred to here as mentor). The program advisor will work closely with the student to design a program of study that both meets the Ph.D. requirements for the Curry School and the individual students’ experiences, needs and interests. The mentor(s) work with the student to develop the students’ line of research, identify research activities that will help the students develop desired competencies, and help the student select project work that will lead to conference presentations, papers, and other products. (Often, students have a program advisor who is also their research mentor.)

The Curry School of Education has guidelines in place to ensure high quality advising and mentorship. Most junior faculty mentor students in collaboration with a more senior faculty member initially. Therefore, some students will have a program advisor, a junior research mentor and a senior research mentor whereas other students will have one person who serves as their program advisor and research mentor.

EP-ADS academic program advisors and research mentors work in a coordinated fashion and in ways that are in the best interest of the student. If you are a student with more than one person serving in these advisory/mentor roles, it is your responsibility to maintain and coordinate communication among your advisors/mentors. For instance, students will invite each advisor/mentor to the annual program meetings (described below). Students should run important programmatic decisions past both their advisor and mentor(s).

Some students will have a single person serve as their academic program advisor and mentor. In that case, students will acquire their secondary mentor around the middle of their third year. This secondary mentor will offer breadth in the students’ repertoire of skills. Further, the secondary mentor will be an additional person familiar with the students’ work, thus enabling the mentor to write letters of recommendation for the student.

Student interests change over the course of graduate school. If the advisor, mentor or student identifies another faculty member who is a better fit for academic advising and/or mentoring, the faculty member or student may request a change of advisor/mentor. The process involves the students’ initiation of individual conversations with and receipt of approval from the EP-ADS program coordinator, current advisor/mentor and proposed

advisor/mentor. In the case of changing advisors, students will need to complete an application to change advisors through the Curry Admissions Office.

EP-ADS faculty show impressive commitment and teamwork in mentoring doctoral students. During the school year, your advisor/mentor will typically have an individualized meeting with you lasting 30 to 60 minutes at least once every two weeks. Faculty summer schedules vary though typically students can expect one-on-one meetings at least once or twice a month. In addition to individualized meetings, students typically have meetings weekly or every other week with their advisor that include other people who are part of the faculty member’s research team. EP-ADS faculty commit to reading and commenting on student work within two weeks of receiving it, unless special exceptions apply.

Assessment and Progress Monitoring

Each student engages in a mentored planning process. There are four documents that support this process: the Course Planning Table, EP-ADS Competency Matrix, Annual Research Plan Table and the Annual Review Meeting Preparation Document. These documents can be found in Appendix C, F, G and H in this document.

Each fall, students complete the Competency Matrix individually and meet with their advisors to devise their Annual Research Plan. These documents help faculty work with students to plan a line of research. Completing the Competency Matrix involves a self-assessment of skills and abilities. It is not a measurement tool but rather, a tool for reflection designed to produce productive conversation between advisers and their students. The Annual Research Plan involves mapping out the papers and projects on which students will work. In Part A, students list their plans for presentations and publications. In Part B, students list their plans for other research activities that will teach students new skills but may be outside the work performed related to future presentations and publications.

In May, all students complete the Course Planning Table and update their Competency Matrix and their Annual Research Table (using track changes so modifications to the original plan are clear). In addition, students complete the Annual Review Meeting Preparation Document. The timing for completing planning and annual review documents can be found below in Table 1.

Table 1. Schedule for Completing the Competency Matrix and Annual Review Documents.

	First year students	Second & Third year students	Fourth year students*
EP-ADS Competency Matrix	September & May	May	May
Annual Research Plan	October with updates in May or June	Updates in May or June	Updates in May or June plus CV
Annual Review Meeting Preparation Document	May	May	May (optional)
Course Planning Table	Ongoing with a May update	Ongoing with a May update	Not applicable

*assumes graduation occurs in the fourth year and, if not, use the column for second and third year students

In May, the student schedules a 45-minute meeting with their advisor and one other faculty member. We encourage students to choose an advisor plus one or two faculty members from EP-ADS who are new to the student. This is a good place to stretch! Faculty encourage students to include a faculty member who is fairly unfamiliar with the student's work. This provides students to learn from the wide variety of faculty members in EP-ADS and this choice offers fresh perspectives.

The student sends the Course Planning Table, Annual Review Meeting Preparation Document, Competency Matrix, and Annual Research Plan to two faculty members with whom they will be meeting. These materials must be sent at least 2 days in advanced (or more) of the meeting. **The student is expected to bring one paper copy of each of the four documents to the meeting for the faculty to review and discuss.** The student leads the meeting, reviews his/her goals and progress toward those goals. Students seek advice from the faculty members. The student and faculty discuss courses, current research, and other program requirements using the Annual Review Meeting Preparation Document as a guide for the discussion. Faculty use the Competency Matrix and Annual Research Plan Table to detect strengths and challenges and to make recommendations. Faculty review the Course Planning Table to be sure course requirements are met.

Based on the conversation, the student updates their Annual Research Table in a way that reflects the advice that they've received within one month of their annual meeting. They bring this to their advisor at one of their regular meetings to affirm their plans.

The faculty advisor reflects on the student's progress and produces written comments on the Annual Review Meeting Preparation Document. The advisor shares these comments with the student and the other faculty member present. The advisor rates the student on content knowledge, research skills, writing, teaching and career development using the Competency Matrix for SACS purposes. Faculty send the completed Annual Review Meeting Preparation Document to the student to review. The student is expected to upload the completed document and their CV onto Collab by June.

Annual Meeting Description

First year students usually begin by giving a short (10 min.) description of their background, educational goals, and professional aspirations. They will describe their progress from their first year, describe their proposed program of study and areas of specialization and then will receive input and approval from the faculty. If a student is requesting transfer credit for a course taken at another university, s/he presents the syllabus for that course and explains how it fits into the proposed program of study.

At the annual review meeting in subsequent years, students will begin by giving a ten-minute description of the progress made toward their goals, as well as describe their career goals, and review their anticipated timeline for completion of program requirements (i.e., coursework, the comprehensive examination, and the dissertation). Students can also bring up any questions they have regarding their specialization, coursework, development of competencies, etc.

During this meeting, students will receive oral feedback on their progress in the areas outlined in the competency matrix, including substantive work in education, designing and conducting research, analysis, and dissemination. Students will be asked to rate their competencies in five areas (content knowledge, research skills, writing, teaching and career

development). Faculty will rate student progress in those areas, as well. A written summary of this meeting will be provided afterward. The summary will provide the student with formative feedback about his/her progress as well as recommendations for next steps.

Note that the Curry School of Education also conducts an annual review process involving listing of research goals and accomplishments on an electronic survey. All students are required to complete the Curry student annual review documents, as well.

Record of Progress

Students are required to maintain their (somewhat antiquated) record of progress form. Review this form each semester with your advisor to be sure that you are meeting all program requirements. Students need to note transfer credits on their *Record of Progress* document. It is the student's responsibility to maintain this record and to ensure that all appropriate signatures are obtained at each key point during the program (e.g., completion of comprehensive exams, formation of dissertation committee). The form is submitted to Curry along with their dissertation materials at the time of graduation. It is possible that Curry will switch to an electronic version during your time here at UVA. For now, print out the paper version and use it as you progress through the program. A pdf version of this form is available here:

http://curry.virginia.edu/uploads/resourceLibrary/ph_d_record_of_progress_fall_09_or_later.pdf

Program Components and Sequence

All EP-ADS students follow the same sequence of program activities. Some students move more quickly through the sequence than others depending on prior knowledge and experience, nature of research findings that emerge, type of research problems selected, and one's own pace of work. The *typical* timing for activities are described below.

- Year 1: Coursework and engagement in directed research apprenticeship. Typically, in their first year, students begin work on a paper on which they are co-author—a paper submitted for publication within their first or second year. Some students begin a first authored paper in year 1, depending on prior experience. These first author papers may be papers that translate research to practice for practitioner outlets or, in some cases, may be full research papers.
- Year 2: Coursework and engagement in directed research apprenticeship. Students work on a first-author paper. By the end of year 2, all EP-ADS students are *required* to submit a lead author manuscript for publication and be a contributor to another manuscript. Both must be submitted for publication by the end of year 2. VEST fellows engage in a research-practice partnership experience either the summer after their second or third year.
- Year 3: Coursework and engagement in directed research apprenticeship. Students typically engage in student teaching. When students complete all required coursework, students take their comprehensive exam (often in the middle or end of year 3).
- Year 4: Dissertation work including the preparation and defense of a dissertation proposal (in early fall) and completion and defense of a dissertation in the spring or summer (of year four).

Appendix A Sample PhD Program of Study

Student:

Advisor:

Program Entrance: Fall, 2018

Anticipated Graduation: Summer, 2022

Specialization: Early childhood math and cognition

Foundations (9 credits)		
EDLF 7150	Educational Psychology	3
EDLF 7300	Foundations of Educational Research	3
PSYC 7559	Determination of Inequality	3
Human Development (9 credits)		
EDLF 7200	Advanced Child Development	3
EDLF 7210	Adolescent Development	3
PSYC 8670	Cognitive Development (also counts for specialization)	3
Methods & Statistics (15 Credits)		
EDLF 7420	Quant II: Quantitative Methods & Data Analysis	3
EDLF 8310	Generalized Linear Models (optional)	3
EDLF 8350	Statistics IV: Multivariate statistics	3
EDLF 8361	Structural Equation Modeling	3
EDLF 7404	Qualitative research	3
Methods Specialization (6 credits)*		
EDLF 5500	Field Experiments	3
EDLF 8315	Causal Inference in Educational Policy Research	3
Interdisciplinary Specialization (12 hours)		
EDLF 7200	Child Development (also counts as a development course)	3
EDIS 7450	Problems and Issues in Math Education	3
PSYC 3500	Early Symbolic Development	3
PSYC 8670	Cognitive Development (also counts for specialization)	3
Research Credits		
EDLF 9993	Independent Study (6 credits annually in year 1)	6
EDLF 9995	Independent Research (3 credits for RPE)	3
EDLF 9998	Doctoral Research Apprenticeship (6 credits annually for years 2 & 3)	12
EDLF 9998	Non-topical Research in Doctoral Study (typically 6 credits per semester in year 3)	12
Internship & Dissertation Credits		
EDLF 9740	Internship in College Teaching (co-taught EDIS 5320 Teaching Math in Elementary School)	3
EDLF 9999	Doctoral Dissertation (typically 24 credits in year 4)	24

*This program of study involved the Ed Science Specialization, as required for the VEST program. The student enrolled Field Experiments and Causal Inference.

Appendix B: Research Methods Courses



Research Methods Courses Available from the Curry School of Education May 16, 2018

Statistics Courses

EDLF 5310 Data Management for Social Science Research

This course introduces strategies for effectively working with large-scale quantitative data for social science research. Topics covered include: data cleaning, recoding and checking; merging data from multiple sources; reshaping data; documenting processes; writing programs and macros to reduce errors; and presenting descriptive data through tables and graphs. Students will utilize Stata, a statistical software package. This course is usually offered in fall semester of every year.

EDLF 5330 Quantitative Methods and Data Analysis I

This introductory statistics course covers descriptive and inferential statistics. Students learn to identify the type of data, select appropriate statistic and graphical methods, analyze data, and interpret the results. Specific methods include the t-test, chi-square test, correlation, simple linear regression, one-way ANOVA, and repeated measures ANOVA. Calculations are done by hand and with statistical software.

EDLF 7300 Foundations of Educational Research

Social and education science research encompasses a varied and challenging set of knowledge and skills to master. The nature of the research problems are complex and multifaceted; addressing these questions requires a diverse and strategic combination of research traditions, designs, and methods, so no single research design course exposes students to all that might be of relevance and interest. This course has two broad goals: (1) to build a foundation on which students can begin to development an understanding of social and education science research designs and methods; and (2) to develop students' basic competencies in specifying linkages among research questions, designs, methods, evidence, inference, and use. This course is offered every fall semester.

EDLF 7420 Quantitative Methods and Data Analysis II: General Linear Models

The focus of this course is on quantitative methods within a general linear modeling (GLM) framework. Topics include multiple regression with continuous outcomes and predictors that are continuous, dichotomous and multi-category (i.e., analysis of variance (ANOVA) in a regression framework), and combinations of these predictor types. Emphasis will also be placed on moderation and mediation, as well as assumptions underlying the appropriate use of these procedures. Students will develop both a theoretical and applied understanding of the general linear model in the context of continuous outcomes. Prerequisite: EDLF 5330 or equivalent.

EDLF 8310 Generalized Linear Models

This course provides students with advanced quantitative skills in applying ordinary least squares (OLS) methods, as well as introduces students to the generalized linear model (GLM) for cases when variables have specific non-normal conditional distributions. The course will address common data analytic challenges that arise in real world settings, such as when outcomes are not normally distributed, when the independent and dependent variables have nonlinear relationships, and when outliers or discrepant data are present. We also examine statistical methods for addressing missing covariate data and bootstrapping methods for inference tests. Prerequisite: EDLF 7420 or equivalent.

EDLF 8315 Causal Inference in Educational Policy Research

An advanced methods course on quasi-experimental statistical techniques for generating unbiased effect estimates when random assignment is not feasible. Underlying theories, identifying assumptions, and applications are presented for techniques drawn from a variety of disciplines including economics, sociology, and psychology including regression discontinuity, instrumental variables, difference-in-difference, matching, and fixed effects. This course is usually offered in spring semester of every year. Prerequisite: EDLF 7420 or equivalent.

EDLF 5500 Field Experiments

This course has three purposes. The first is to introduce students to recent methodological advances in the design and analysis of field experiments, particularly in school settings. The second is for students to read and discuss well-known field experiments that have important implications for policy, and/or our understanding of science. The third is to demonstrate that although the course is about field experiments, many of the issues that are addressed extend easily to the design and analysis of observational studies. Students will learn to use Stata for the analysis of field experiments. Prerequisite: EDLF 7420 or equivalent. This course is usually offered in spring semester of odd-numbered years.

EDLF 8360 Multilevel Modeling in Education Research

This course is designed to familiarize students with the basics of multilevel modeling. Topics include random effects ANOVA models, means-as-outcomes models, random coefficients models, intercepts- and slopes-as-outcomes models, contextual models, random effects ANCOVA models, linear growth models, nonlinear growth models and cross-classified models. Prerequisite: EDLF 7420 or equivalent. This course is usually offered in fall semester of odd-numbered years.

Additional statistics courses include **EDLF 8361 Structural Equation Modeling** features statistical and measurement models. Details are listed under measurement courses.

(Continued on next page)

Measurement Courses

EDLF 7180 Tests and Measurements

This introductory course concentrates on the evaluation and interpretation of assessment tools. Topics include reliability and validity; social and ethical considerations of testing; summarizing and interpreting measurements; and the use of standardized tests, rating scales, and observational scales. This course is usually offered in fall semester of every year.

EDLF 8340 Measurement Theory

Fundamentals of item response theory and generalizability theory. Topics include the Rasch, two-parameter logistic, and three parameter logistic models for binary items and the partial credit, rating scale, and generalized partial credit models for polytomous items. Additional topics include scale linking and score equating, and multidimensional item response theory. Generalizability theory topics include estimation of variance components for generalizability studies, and estimation of reliability coefficients for decision studies. Application of these methods to educational and psychological testing and the use of statistical software is emphasized. Students will learn to use statistical software such as R, jMetrik, and flexMIRT. Prerequisites: EDLF 7180 and EDLF 7420 or instructor permission. This course is usually offered in spring semester of every year.

EDLF 8350 Stat IV Multivariate Statistics

Presents the theory and rationale of selected multivariate statistical techniques. Topics include multivariate analysis of variance, canonical correlation, discriminant analysis, exploratory factor analysis, and confirmatory factor analysis. Emphasizes computer-assisted analysis and the application of appropriate statistical methods to research data. Prerequisite: EDLF 7420 or instructor permission. This course is usually offered in spring semester of every year.

EDLF 8361 Structural Equation Modeling

The major topics include exploratory/confirmatory factor analysis models, a variety of structural equation models, growth curve models, and multi-sample modeling analysis. The major focus of the course is both on the conceptual understanding of latent variable modeling and on practical application of these models in research and measurement. Students will work with data sets and computer programs to gain practical research experience. Prerequisite: EDLF 7420 or equivalent.

(Continued on next page)

Qualitative and Program Evaluation Courses

EDLF 7060 Theoretical Perspectives on Educational Policy

This course introduces students to the use of theory in the educational research process by examining interpretive and critical theoretical approaches in educational policy research. It examines current theories including micro-macro theories, critical race theories, feminist and postmodern theories and their applications in research methods such as critical discourse analysis, critical ethnography, etc., as they pertain to policy research, policy analysis, and policy evaluation.

EDLF 7404 Qualitative Analysis

This class serves as an introduction to the central concepts of qualitative methods in research and evaluation. Primary emphasis is on the development of skills required to conduct qualitative research, with a focus on research design, specific methods of inquiry, and approaches to analysis. The philosophy and epistemology of qualitative approaches are also discussed. Empirical readings provide examples of qualitative research within education and related fields. This course is usually offered fall and spring semester of every year.

EDLF 7402 Introduction to Program Evaluation

An overview of current program evaluation approaches, this class is designed to provide an overview of the theories behind and approaches to evaluation as well as to begin to train students in evaluation design and methods. Theoretical, methodological, and empirical readings emphasize the terminology of educational evaluation and the variety of theoretical and design approaches to evaluation. Consideration is also given to the application of evaluation approaches and designs to non-educational settings. This course is usually offered in fall of odd-numbered years.

EDLF 7410 Mixed Methods Research Design

This course provides an introduction to mixed methods in social science/educational research. We will consider the types of questions that mixed methods can answer and discuss the benefits/challenges of mixed methods research. We will cover research design, sampling, and analysis, including reading exemplars of mixed methods research. Students will apply the theoretical/methodological tenets learned by designing their own mixed methods study. This course is usually offered in fall semester of even-numbered years.

EDLF 8400 Program Evaluation Design

Explores problems of designing, conducting, and reporting evaluation research studies. Time is spent examining philosophies of science that underlie evaluation studies; conceptualizing a total evaluation study; planning for the use of time and resources in conducting an evaluation study; assembling the evidence for or against a particular proposition; analyzing costs; and learning how to avoid common pitfalls in working with clients and program participants to design and conduct an evaluation study. This course is usually offered in fall semester of odd-numbered years.

EDLF 8440 Advanced Qualitative Analysis

Advanced course in methods and practices of qualitative research. Students determine their own philosophy of inquiry and become increasingly proficient in the application of qualitative methods. Assumes an introductory course in qualitative methods. Focuses on research design and

proposal development, data collection and analysis techniques, and presentation of findings. The course is field-based and guides students through the complete qualitative research cycle. This course is usually offered in spring semester of every year.

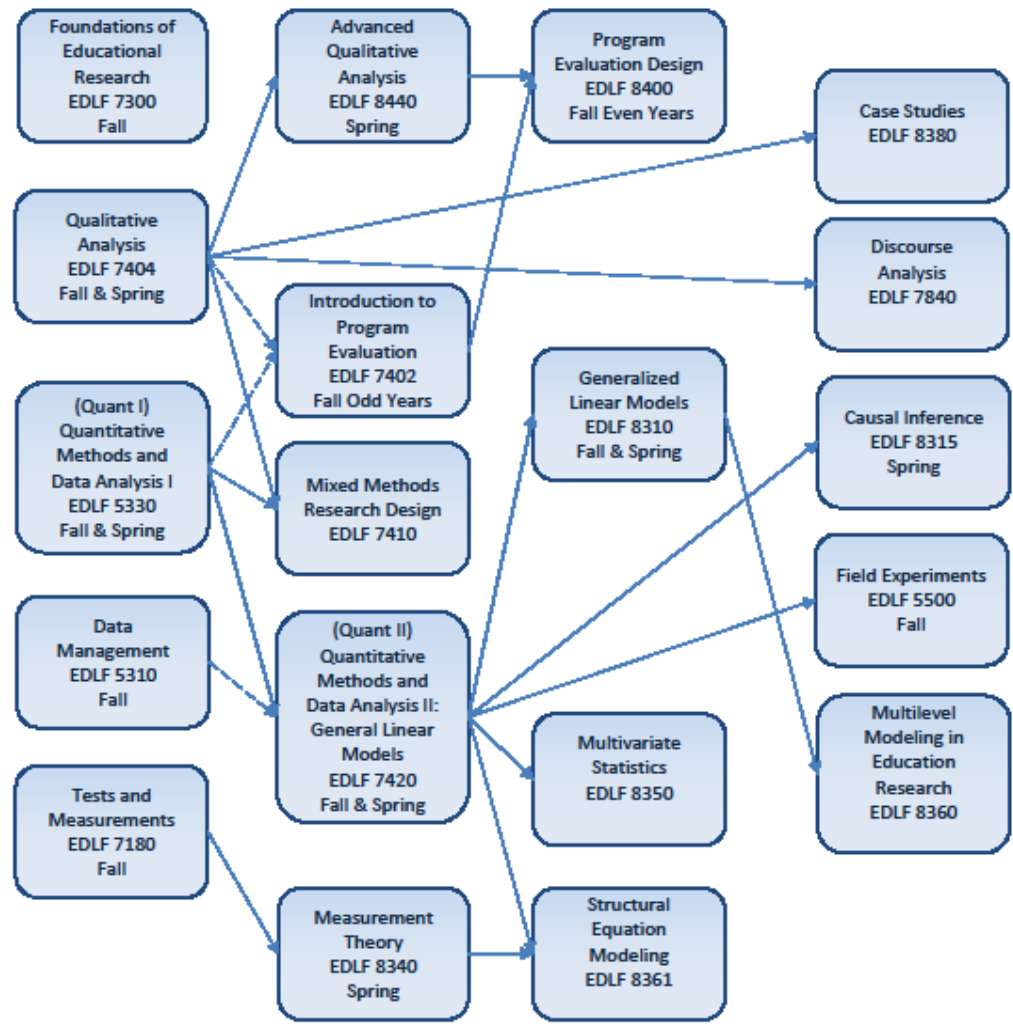
Research Methods Course Sequence Guide

The next page shows a course sequence guide. It will help you understand the recommended sequence of courses. For example, if your aim is to take a course in structural equation modeling, find that course on the chart and identify the course prerequisites. Solid arrows in the chart represent required course prerequisites, and dashed arrows indicate recommended prerequisites.

(Continued on next page)

M.Ed./Ph.D. Research Methods Course Sequence Guide

Updated: May 16, 2018



Legend

- > Required Prerequisite (or instructor permission)
- - -> Recommended Prerequisite

Important Note: Field Experiments is offered Fall of odd years only (starting in Fall, 2019). Note that information on this diagram is subject to change.

Appendix C: Course Planning Table

	COURSE REQUIREMENT		STUDENT SELECTED COURSE
Foundations	9		
All Required	3	EDLF 7150 Introduction to Educational Psychology- Applied Dev Science (infused w/ research design & methods) (Palacios)	
	3	EDLF 7300 Research Foundations in Education (Youngs)	
	3	PSYC 7559 Determination of Inequality (Hurd) <i>or similar if it is not offered</i>	
Human Development	9		
Choose 2 of 3	6	Child, Adolescent, Adult & Lifespan Development (Palacios, Williams, Tolan, Whaley)	
Topical Development Course Related to Specialization	3	Examples from Curry or Psychology Dept. include: Development and Psychopathology, Advanced Cognitive Development	
Methods & Statistics	15 (or possibly 9 or 12, depending on prior experiences)		
	3	EDLF 7420 Quant II Note: Enter at appropriate level to match skills.	
	3	EDLF 8310 — Generalized Linear Models-Recommended	
	3	EDLF 8350 – Multivariate Statistics-Required	
	3	Qual 1 (Deutsch) – required	
	3	Data Management –Bassok - Strongly recommended (unless competency met elsewhere; at discretion of adviser)	
Methods Specialization	6 (or more depending on interests)		
	3	Seminar in Advanced Methods or Statistics	
	3	One additional methods course	
		Examples of Methods Specializations: 1) Required for VEST--Ed Science specialization--causal inference + field experiments 2) Mixed methods specialization--Qual 2, mixed methods	

		3) Measurement specialization--measurement theory, IRT (in Psych Dept) or SEM 4) Customized specialization designed with your advisor—for example, SEM & HLM Note. VEST fellows must select Ed Science specialization and may choose an additional methods specialization if they enter the program having completed high-level statistics.	
Interdisciplinary Specialization	12	<i>May count one development course toward four courses in the specialization.</i>	
<i>From handbook: A specialization should consist of an organized set of coursework related to a particular content area, not a compilation of unrelated courses or topics. Can take 6 credits in Curry, 6 credits elsewhere. Relevant departments include but are not limited to Psychology, Sociology, Economics, Law</i>	3	Course 1-Dev course (listed above)	
	3	Course 2	
	3	Course 3	
	3	Course 4	
Research and Internship Credits	21		
		Directed Research (required 3 credits per semester in first three years, 3 X 2 X 3); EDLF 9993 Independent Study; 10-20 hours a week for students -- up to the discretion of the funding source and/or adviser.	
		EDLF 9995 – Independent Research for Research Practice Partnership Experience (RPE)	
<i>One semester maximum for students funded by VEST</i>		Internship in Teaching (3 credits)	
Internship/Dissertation Credits	27		
		EDLF 9999: Doctoral Dissertation Credits (min of 12 credits) (typically 12 X 2 in last year)	
Total			
		~51 content & methods course credits + 21 research credits + ~27 intern/diss credits	

Curry guidelines state: The PhD program requires a minimum of 72 credits, although programs may require more. Students must complete at least 54 credits of coursework. This includes content courses and research methodology courses, and up to 3 credits of research apprenticeship per semester, but does not include internship in teaching and dissertation credits. At least 36 course and apprenticeship credits must be completed after admission to the program.

Appendix D
Curry-Wide Rubric for Pre-Dissertation Paper & the Dissertation
Rubric for Ph.D. Research Documents²

Levels Domains	Exemplary 3	Proficient 2	Developing 1	Unacceptable 0
<p style="text-align: center;">Abstract</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ___</p>	<p>Abstract includes research questions, description of sample, major findings, and implications of the results. Limitations of the study are clearly identified. All information is stated concisely within the word limit.</p>	<p>Abstract includes all essential elements (research questions, sample description, major findings, implications, and limitations) but may be misleading due to lack of precision in language. Information is within the word limit.</p>	<p>Abstract is missing one or more essential elements and the language used lacks a strong scholarly voice. Information is significantly over the word limit.</p>	<p>Abstract has incorrect, irrelevant information and does not accurately portray the study or is completely missing. Presented information does not fit within the word limit.</p>
<p style="text-align: center;">Intro: Problem Statement, Significance, Purpose of Study</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ___</p>	<p>Articulates a specific, significant, and novel issue by connecting the issue to the larger theoretical and/or empirical literature. Problem statement logically flows from the introduction and clearly and succinctly establishes relevance to the larger body of literature.</p>	<p>Identifies a relevant research issue and establishes connections with the larger body of theoretical and/or empirical literature. Problem statement is present and a stronger or clearer connection could be made. The topic is relevant but is not necessarily novel for the field.</p>	<p>Although a research issue is identified, the statement is too broad or the description fails to establish the importance of the topic. Connections to the larger literature are insignificant, irrelevant or unclear. The topic may be too simplistic to make a contribution to the larger field.</p>	<p>There are no connections made to the larger body of literature that is related to the topic at hand. Statement of the problem, the significance of the study, and/or the purpose of the study is inappropriate, disconnected with one another, or missing. Topic is too simplistic to make a contribution to the larger field.</p>
<p style="text-align: center;">Intro: Research Questions, Definitions, Assumptions</p> <p>RATING: _____</p>	<p>Articulates clear, feasible, and succinct research questions and definitions (i.e., constructs, variables) given the purpose of the proposed study. A thorough and reasonable discussion of</p>	<p>Research questions are stated, connected to the identified issue and supported by the literature. Definitions (i.e., constructs, variables) have been</p>	<p>Elements are poorly formed, ambiguous, or not logically connected to the description of the issue or the study's purpose.</p>	<p>Research questions, definitions and assumptions are omitted, misaligned, or inappropriate given the problem statement and purpose of the study.</p>

² Only relevant sections pertaining to the specific type of document (e.g., preliminary exam, comprehensive exam, dissertation proposal) can be evaluated

Check here if the category is not applicable: ____	assumptions is provided. All elements are mutually supportive and aligned to one another.	operationalized. Assumptions are present.		
Literature Review: Structure RATING: _____ Check here if the category is not applicable: ____	The structure of the review is intuitive and grounded to each of the key constructs or the proposed study. There is a logical flow that develops a well-supported argument leading directly to the research question(s).	The structure of the review is workable in that there exists relevant literature related to the constructs. The argument can be followed that leads to the research questions.	The structure of the literature is weak—it does not identify important ideas, constructs, variables that are related to the research purpose, questions, or context.	The structure of the review is incomprehensible, irrelevant, or confusing and does not have logical flow that leads to the research question(s).
Literature Review: Substantive Review RATING: _____ Check here if the category is not applicable: ____	The narrative integrates both critical and logical details from scholarly (i.e., peer-reviewed) theoretical and empirical literature. Attention is given to different perspectives, conditions, threats to validity, and evidence of prior research. The review clearly establishes the need for the study in terms of adding to the substantive knowledge and/or the need for a different methodological approach. The review is in the author’s own words.	Key constructs and variables are connected to relevant scholarly (i.e., peer-reviewed) theoretical and empirical literature. Studies cited are generally described with sufficient detail so that the relevance to the theoretical and/or methodological issues can be understood. The review may include some unnecessary content or may have instances of poor paraphrasing. An explanation of how the proposed research adds substantive knowledge to the field could be made clearer. The synthesis provided is sparse or weak.	Key constructs and/or variables in the review are not connected to the scholarly (i.e., peer-reviewed) theoretical and empirical literature. Literature used was unreliable or from inappropriate sources. The review of the presented literature is insufficient in that the reader does not see the direct connection to other studies or to the relevant theoretical or methodological issues. There may be a lack of differing viewpoints presented and/or an over-reliance on quotes. Inconsistent acknowledgement of other’s work. There is little synthesis demonstrated.	Key constructs or variables were missing or were based on non-scholarly literature. Much of the detail of reviewed literature is missing so that the reader cannot see the relevance to the theoretical or methodological issues. There was not a logical flow of connected ideas that lead to the proposed research questions. Lack of acknowledge of other’s work or presenting other’s ideas as one’s own. There is very little synthesis of ideas.
Literature Review: Synthesis	The narrative provides synthesis of themes, describing differences among different lines of research, or otherwise comparing, contrasting, or pointing out areas with rich research versus areas in need of research. The narrative	The synthesis provided is present but weak and/or inconsistent. For instance, the synthesis may be organized around superficial commonalities. Content may be grouped into	There is little synthesis demonstrated.	There is very little synthesis of ideas.

	offers a framework or advanced organizer establishing the scope of the content. Concluding statements are evident and show conceptual depth.	paragraphs but the paragraphs may not be only weakly linked to each other.		
<p>Methods: Research Design</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ____</p>	The purpose statement, research questions, and proposed design are mutually supportive, coherent, and aligned and follow directly from the argument made in the literature review. Attention is given to eliminating alternative explanations and controlling extraneous variables, when appropriate. Appropriate and important limitations of design are clearly stated. Role of researcher is identified, if appropriate.	The purpose statement, research questions, and proposed design are aligned and are described in sufficient detail. Additional considerations are warranted for potential rival explanations or the controlling of extraneous variables, if appropriate. Some limitations and assumptions are identified but additional consideration is warranted. Irrelevant information is presented regarding the role of the researcher, if appropriate.	The purpose statement, research questions, and proposed design are incomplete or misaligned. There is limited or no attention given to considerations of rival hypotheses and extraneous variables, if appropriate. Important limitations and assumptions are not identified. Role of the researcher is not identified.	The purpose statement, research questions, and proposed design are not aligned and mutually supportive. Rival hypotheses, extraneous variables (where appropriate), limitations and assumptions are missing. Role of the researcher is not identified.
<p>Methods: Context, Participants, Instrumentation, Procedures</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ____</p>	Description of the context, sample, instrumentation, and procedures, including analyses, are meaningful (i.e., appropriate given hypotheses or study intent). Description of participants, instrumentation (e.g., psychometrics; interview and observational, procedures, and analyses are provided with enough detail that a reader could replicate the study. There is alignment between each analytic step and the appropriate research question. Pilot testing procedures are detailed for researcher-developed instrumentation.	Description of the context, sample, instrumentation, and procedures, including analyses, are identified and relevant (i.e., appropriate given hypotheses or study intent). There may be missing relevant detail on participants, instrumentation, procedures, or analyses. Limited information regarding pilot testing of researcher-developed instruments, if applicable.	Descriptions of the context, sample, instrumentation, or procedures, including analyses, are misaligned or lack relevance to the research questions. Contains some information on participants, instrumentation, and procedures but is insufficient for replication. No description of pilot testing of researcher-developed instrumentation.	Descriptions of the context, sample, instrumentation, and/or procedures, including analyses, are missing. Would not be possible for replication. No description of pilot testing of researcher-developed instrumentation.

<p>Results: Quantitative Descriptive Statistics</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ____</p>	<p>The section contains an introductory statement to remind readers of the scope of the investigation. Descriptive analyses are appropriate, accurate, cited in APA format within the text, and are aligned to the research question(s). Appropriate reporting of relevant information is present (e.g., mean, standard deviations, correlations). Tables and figures are correct, display relevant variables, and are identified and explained within the text. Proper credit is given where appropriate to tables or figures. There is no interpretation of the results.</p>	<p>Introduction of the scope of the investigation may be missing. Descriptive analyses are appropriate, accurate, and aligned with the research question(s). There are a few missing relevant information (e.g., means without SD; effect size) within the text. Tables and/or figures may have minor errors or confusing aspects but appropriate credit is given where warranted.</p>	<p>No introduction of the scope of the investigation. Descriptive statistics are appropriate but may consistently be missing relevant information (e.g., no indication of <i>df</i>). Confusion between tables and figures and/or redundant information is presented across the two. Inconsistent inclusion of statistics within the text. Credit is missing from tables and/or figures, where warranted. Some interpretation of the results is present.</p>	<p>No introduction of the scope of the investigation. Descriptive statistics are inappropriate (e.g., means computed on rank data) or are inaccurate (e.g., inclusion of outliers). Tables and/or figures are omitted or a description of the statistics within the text is omitted. Credit is missing from tables or figures, where warranted. Interpretation of the results is present.</p>
<p>Results: Quantitative Inferential Statistics</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ____</p>	<p>The section contains an introductory statement to remind readers of the scope of the investigation. Inferential analysis is appropriate for addressing each research question and a brief discussion of the assumptions of a test is presented (if necessary). Appropriate reporting of relevant information is present (e.g., alpha level, significance or not, test value, degrees of freedom, confidence interval, effect size, post hoc analyses). Tables and figures are correct, display relevant information, and are identified and explained within the text. Proper credit is given where appropriate to tables or figures. There is no interpretation of the results.</p>	<p>Introduction of the scope of the investigation may be missing. Inferential analysis and relevant statistical information are given but may be incomplete (e.g., lacking appropriate post hoc tests, missing effect size estimates). Tables and figures may have minor errors or confusing aspects but appropriate credit is given where warranted. There is no interpretation of the results.</p>	<p>No introduction of the scope of the investigation. Inferential analyses may be incomplete or incorrect. Results do not seem to be linked to the research questions. Confusion between tables and figures and/or redundant information is presented across the two. Inconsistent inclusion of statistics within the text. Credit is missing from tables and/or figures, where warranted. Some interpretation of the results is present.</p>	<p>No introduction of the scope of the investigation. Inferential analyses are inappropriate (e.g., means computed on categorical data) or computed inaccurately. Tables and/or figures are omitted or a description of the statistics within the text is omitted. Credit is missing from tables or figures, where warranted. Interpretation of the results is present.</p>

<p>Results: Qualitative</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ____</p>	<p>Indicates how results will be organized and how the results derived from the analysis. The presentation of results is consistent with the methodology indicated. Exemplary evidence is presented within the text to support findings with an explanation of how the excerpts support each finding or assertion. Each exemplar illustrates a unique finding rather than multiple findings tied to one exemplar.</p>	<p>Greater clarity in the organization of the results and how the results were derived from analyses could be provided. There is alignment between the presentation of results and the methodology used. Evidence to support assertion/finding is present but somewhat tangential.</p>	<p>No discussion of how the results will be presented or how the results were derived from the analyses. There could be a tighter connection between the presentation of findings that the methodology employed. Insufficient evidence is provided to support findings.</p>	<p>Completely omitted are how the results will be presented and how the results were derived from the analyses. There is a lack of connection between the presentation of results and the methodology implemented. No evidence or irrelevant evidence is provided to support findings.</p>
<p>Discussion: Interpretation of Findings</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ____</p>	<p>Discussion includes a brief restatement of the study's findings. Patterns and relationships in the data are explained and conclusions do not go beyond the data. The interpretation of the findings is well connected to the research question(s) and is situated back into the literature clearly showing the unique contribution of the study. Discrepancies between the anticipated findings (i.e., hypotheses) and the actual findings are explained. Discussion of implications is present, if appropriate.</p>	<p>Discussion includes an overly extended statement of the study's findings. There is some conclusions drawn that go beyond the data and/or does not situate the findings back into the literature. No explanation of discrepancies in findings is presented. Some discussion of implications is present but may contain some irrelevancy or could be improved.</p>	<p>Limited overview of some findings is present but conclusions go beyond data. Study's findings are not situated back into the literature. No explanation of discrepancies in findings is presented. Discussion of implications is limited.</p>	<p>There is no overview of findings; conclusions go beyond the data and are not situated back into the current literature. No explanation of discrepancies in findings is presented. Discussion of implications is missing.</p>
<p>Limitations</p> <p>RATING: _____</p> <p>Check here if the category is not applicable: ____</p>	<p>Consideration to what extent the results are conclusive and can be generalized is presented, if appropriate. Potential confounds or methodological limits are fully discussed. Future research is suggested.</p>	<p>Consideration to extent the results are conclusive or can be generalized (if appropriate) is present but additional consideration could be given. Only a brief presentation of methodological limits is</p>	<p>Insufficient consideration given to the extent results are conclusive and can be generalized (if appropriate). Missing indication of methodological limits. Some future research is suggested but is irrelevant to findings or is incomplete.</p>	<p>No consideration is given to the extent to which results are conclusive and can be generalized (if appropriate). No indication of methodological limits or future research.</p>

		presented. Future research is suggested.		
References RATING: _____	Reference list includes all and only cited current and relevant works. Seminal studies are included if applicable. Original literature served as the predominant source of information.	Reference list may omit some cited articles or include ones that were not cited. Sources included seminal work if appropriate. Some use of secondary sources rather than primary sources is evident as well as the use of some dated work.	Reference list may contain some inappropriate sources (non-scholarly). Relevant seminal works are missing. Sources tend to be dated. Some works cited with text are not listed in reference list or vice versa.	Reference list consists of mainly secondary sources or non-scholarly sources. Relevant seminal works are missing. Sources tend to be dated. There is not a one-to-one correspondence between reference list and cited within text works.
Writing Style: Organization, APA Style RATING: _____	The document is written with logic, clarity, and precision using scholarly language. The text is logical and coherent. Appropriate transitions and subheadings allow for comprehension from one idea to the other. There is consistent application of the latest APA scholarly writing and publication guidelines.	The document is generally written with logic, clarity, and precision using scholarly language although there may be instances of redundancy or lack of transitions or subheadings. Mostly follows latest APA scholarly writing and publication guidelines.	The document tends to be logically organized but there is a lack of precision and clarity. The use of scholarly language is sporadic throughout the document with missing transitions and/or subheadings. Inconsistent or inappropriate application of latest APA scholarly writing and publication guidelines.	The document is not written in a scholarly fashion or lack precision and clarity. Failure to follow latest APA for scholarly writing and publication guidelines
Documentation: IRB RATING: _____ Check here if the category is not applicable: ___	Appropriate IRB forms are completed and reflect the study's purpose. There is an acknowledgment in the Methods section of IRB approval.	Appropriate IRB forms are completed and reflect the study's purpose but greater detail could be added regarding study details (e.g., recruitment, confidentiality). There is an acknowledgment in the Methods section of IRB approval.	IRB forms are completed but do not provide sufficient information or includes irrelevant forms. No indication of IRB approval in Methods section.	IRB forms are missing or incomplete. No indication of IRB approval in Methods section.

Additional Comments:

Committee Member Signature:

Date:

Appendix E
Rubric for the Comprehensive Exam*

Criteria	Unacceptable; important aspects are neglected or unfinished	Marginally acceptable; not all aspects of the task have been fulfilled	Adequate/ Acceptable; meets all requirements	Exceptional; exceeds requirements
	0	1	2	3
Scholarly Aspects				
Describes the topic in a way that is specific, significant, and novel				
Grounds writing in current theory				
Grounds writing in current empirical research				
Avoids overgeneralizing or otherwise arriving at conclusions that overstate existing evidence				
Qualifies statements that are speculative or that apply to narrow circumstances				
Writing and synthesis demonstrates deep knowledge about the topic				
Shows knowledge and correct application of methods (if applicable to the question)				
Rhetorical Aspects				
Structures the argument logically and effectively with effective cohesion of ideas				
Uses logical transitions between and within paragraphs & sections				
Creates a logical text structure signaled by appropriate headings and subheadings				
Displays sense of intended readership through appropriate assumptions about prior knowledge				
Embeds in-text citations appropriately to document assertions and/or indicate quotes				
Engages the reader effectively (e.g., uses active verbs, varies sentence structure)				
Appropriately incorporates tables, charts, figures, and other graphics to complement ideas presented in text (only if applicable)				
Technical Aspects				
Uses correct spelling and punctuation				
Chooses words precisely (e.g., correct vocabulary with explanations or examples, if needed)				
Uses proper grammar and usage				
Adheres to APA style				

Overall Ratings	Scholarly Aspects	
	Rhetorical Aspects	
	Technical Aspects	
	Composite (mean of the three scores)	

Note. Composite ratings of 2 and 3 correspond to acceptable/pass, ratings of 1 corresponds to marginal pass/revisions required, and ratings of 0 correspond to unacceptable. The correspondence is only approximate. *We anticipate modifying this rubric in 2018-19. The new rubric will be available upon request prior to engagement in the comps requirement.

**Appendix F: Educational Psychology: Applied Developmental Science
Competency Matrix – August 2018**

Describe your core area of interest and your primary and secondary disciplines.
My primary area of research is:
My research is interdisciplinary, drawing from the following fields:

In the following section, we ask you to rate your knowledge of each topic listed below. We expect that you will become familiar with virtually all of these topics as you progress through your training. However, we certainly do not expect you to reach mastery level in all of the listed competencies. Your program will be tailored to achieve breadth and depth. Through coursework, research experiences, and support from program faculty, you will see progress year-to-year in many of the competencies. Plus, you will develop mastery competencies in a subset of the listed competencies.

The lists below are not intended to be a measure of your knowledge, but rather, the raw material for your conversations with faculty. The information here will help you and your adviser design your courses and research experiences.

For the following sections, rate your knowledge of each topic below according to the following scale:

Unfamiliar—you have no or almost no knowledge of the topic;

Familiar—you have some understanding from exposure in class, but you are not able to address the ideas independently;

Perform with guidance—you have enough knowledge/competence to lead the task, in consultation with an expert;

Mastery – independent performance—you can perform the task independently with mastery;

Mastery—prepared to teach—you can perform independently and with accuracy to the extent that you could teach the skill to others.

1. Content Knowledge

1a. Experiences in Educational Settings	Level of Knowledge				
Competency/Experience	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Experience observing, testing and/or teaching in schools or other contexts of child or youth development					
Familiarity with common and/or a range of educational practices in the U.S. and/or internationally					
Familiarity with contemporary issues in educational policy that impact the teacher and student experience in schools					

1b. Developing Research Questions	Level of Knowledge				
Competency	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Know theory in Ed Psych and Applied Developmental Science					
Situate research problems within existing theory					
Situate research problems within existing empirical literature					
Select and synthesize relevant literature					
Build a conceptual/logic model					
Link conceptual model to research questions/hypotheses					
Understand relevance of research questions/hypotheses					
Link research questions to constructs					
Link research questions to measurement plans					
Consider measurement issues specific to diverse samples					
Understand limitations of research questions/hypotheses					

2. Research Skills

2a. Primary Data Collection	Level of Knowledge				
Competency	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Recruit participants					
Establish and sustain research partnerships (with families and/or schools)					
Navigate IRB					
Choose measures					
Construct measures					
Establish reliability/validity					
Conduct interviews					
Conduct observations					
Conduct surveys					

2b. Using Secondary Data Sets	Level of Knowledge				
Competency	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Identify key data sets					
Use documentation/codebooks					
Understand meaning of measures					
Access data					
Handle permissions					
Identify of existing work from same data sets (NCES, NICHD)					

2c. Data Management	Level of Knowledge				
Competency	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Specify appropriate software					
Manage data (e.g., clean, reshape, and merge data)					
Recode and transform variables					
Handle missing data					
Create visual displays (graphs, figures)					
Prepare macros					
Build in internal data checks					

2d. Qualitative Methods	<i>Level of Knowledge</i>				
<i>Competency</i>	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Use case studies					
Know qualitative paradigms/approaches					
Design studies					
Interview/conduct focus groups					
Analyze qualitative data					
Interpret findings					
Comprehend quality criteria					

2e. Quantitative Analysis	<i>Level of Knowledge</i>				
<i>Competency</i>	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Descriptive Analyses					
Measurement scales (e.g., nominal, ordinal, interval, ratio)					
Dummy variables					
Regression					
ANOVA					
Other multivariate designs					
Single subject designs					
Reliability analysis					
Factor analysis					
Hierarchical linear modeling					
Structural equation modeling					
Growth modeling					
Item response theory					
Latent variable analysis					
Other methods (specify)					

2f. Design and Analysis of Studies that Permit Causal Inference	<i>Level of Knowledge</i>				
	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
<i>Competency</i>					
Randomized controlled trials					
Development of logic models					
Counterfactual description					
Identification of confounds					
Intent to treat vs. treatment on treated					
Clustering and intraclass correlation Structures					
Fidelity of implementation					
Pre-test variables					
Quasi-experimental methods					
Instrumental variables					
Regression discontinuity designs					
Propensity score matching					
Related methodological issues					
Selection bias					
Identification of confounds					
Matching/stratification					
Clustering					
“Contamination” of control group					
Treatment standardization					
Attrition issues					
Handling differences at pre-test					

3. Writing

3. Writing Skills	<i>Level of Knowledge</i>				
	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
<i>Competency</i>					
Understanding the structure of academic papers					
Basic writing skills					
Writing an abstract					
Building the logic of the paper					
Preparing a literature review and identifying gaps					
Writing about a conceptual or theoretical foundation					
Writing about methods					
Writing about analyses and results					
Interpretation of analyses					
Writing about findings in relation to existing research					

Writing about implications of work for policy or practice					
Preparing a policy brief					
APA style					

4. Teaching

4a. Instruction-Related Skills	Level of Knowledge				
	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
<i>Competency</i>					
Prepare syllabi					
Select readings					
Prepare a lecture					
Prepare a discussion					
Prepare assessments and evaluations					
Incorporate student engagement					
Mentor students					
Incorporate diverse perspectives					
Incorporate technology					
Design grading rubrics					
Design and grade exams					
Design and grade paper assignments					

5. Career Development

5a. Research Practice Partnership Skills	Level of Knowledge				
	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
<i>Competency</i>					
Engage in joint planning with partners					
Develop data use agreements and/or memorandum of agreement					
Navigate IRB and/or privacy issues created by an agency outside of UVa					
Listen to stakeholders' description of problems/needs and turn those problems into questions that can be researched					
Adjust research decisions to match specific contexts and local constraints					
Identify ways of initiating programs and policies to maximize the rigor of evaluation					
Identify appropriate research designs that can be used in situ					
Evaluate existing research on programs and policies in a way that produces maximum relevance to partners					
Be able to describe trade-offs in research to stakeholders (“...these interviews provide insights into how teachers are using this					

program” or “...this type of evaluation leads to this level of causal inference”)					
Prepare written documents for a practice- or policy-oriented audience					
Prepare and deliver presentations for a practice- or policy-oriented audience					
Learn about an organization and identify the motivating forces for change					
Be able to integrate and synthesize information from many different sources					
Build trustworthy interactions that lead to mutually-beneficial partnerships					

5b. Grant-related Skills	Level of Knowledge				
<i>Competency</i>	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Familiar</i>	<i>Mastery – prepared to teach</i>
Identify funding agencies					
Tailor question to RFP					
Clear description of aims					
Fitting aims, literature synthesis, and methods to RFP					
Familiarity with budgets					
Creating timelines					

5c. Dissemination Activities and Other Career Related Skills	Level of Knowledge				
<i>Competency</i>	<i>Unfamiliar</i>	<i>Familiar</i>	<i>Perform with guidance</i>	<i>Mastery – independent performance</i>	<i>Mastery – prepared to teach</i>
Prepare conference presentations/posters					
Engage in the publication process from start to finish for own research					
Respond to reviewers					
Deliver a talk					
Teach a workshop					
Engage a speaker in conversation					
Describe research to a lay audience					
Review for journals					
Manage others in research					
Balance numerous priorities					
Have awareness of professional organizations					

Appendix G: EP-ADS Annual Research Plan Table

**Please note this is now a form, so please click on the gray areas to edit and enter text.

Name: _____

Date: _____

Year in Program (1-4): _____

Instructions: This form should be completed by each fellow at the beginning of each academic year with support from their advisors. Then throughout the year they should update this document using track changes. Students should bring this to their annual meeting with faculty in May.

A. Presentations and Publications

**Add rows as needed

Project Name (and description, if necessary)	Research Question(s)	Collaborators (indicate 1 st authorship where appropriate)	Presentation(s) (Title, or working title, with date of completion)	Paper(s) (Title, or working title, with date of completion)

Appendix G: EP-ADS Annual Research Plan Table

B. Other Research Activities

**Add rows as needed

Project Name (and description, if necessary)	Activity	Related Competency (see matrix)

Appendix G: EP-ADS Annual Research Plan Table

C. Additional Questions

How many of the 10 to 20 hr/wk. allotted for research will be accounted for by your project(s)?

What questions or issues can the EP-ADS program or your mentors assist you with?

Appendix H: EP-ADS Annual Review Meeting Preparation and Feedback Document

Name: _____

Date: _____

**Please note this is now a form, so please click on the gray areas to edit and enter text.

Information about the Annual Review Meeting:

The student should initiate and schedule this meeting with their advisers and possibly one faculty that is less familiar with their work (so you get 'fresh eyes'—this person can be different each year). If you only have one adviser/mentor, you are encouraged to add another faculty member to this discussion. If you are co-mentored, it is not necessary to add a third faculty member to your annual meeting, unless you want to do so. The meeting should be 30-45 minutes and completed before May 31st. This is a student led meeting, and an opportunity to describe your work and led faculty in important discussion (e.g., on courses, research direction and/or career goals).

At the Annual Review meeting, students should bring printed copies of the completed Annual Review Meeting Document, the updated Competency Matrix (using track changes), and the updated Annual Review Plan Table (using track changes). These documents should also be sent to the faculty prior to the meeting.

First year students will begin by giving a ten-minute description of their background, educational goals, and professional aspirations. They will present their proposed program of study and receive input and approval. If a student is requesting transfer credit for a course taken at another university, s/he must also present the syllabus for that course and explain how it fits into the proposed program of study.

Students in their 2nd to 4th year will begin by giving a ten-minute description of the progress made toward their goals, as well as describe their career goals and review their anticipated timeline for completion of program requirements, including coursework, the comprehensive examination, and the dissertation. They should also bring up any questions they have regarding their coursework, specialization, development of competencies, etc.

During this meeting, students will receive oral feedback on their progress in the areas outlined in the competency matrix, including substantive work in education, designing and conducting research, analysis, and dissemination. The student and faculty will be asked to complete a brief rating on some required Curry School of Education program monitoring. A written summary of the meeting will be provided afterward and uploaded to Collab for the Program Coordinator, student and advisors to refer to later.

Preparation by Student

Please bring a paper copy of this document to your scheduled meeting.

Reflections on Coursework (describe progress broadly, do not list courses): _____

Description of Interdisciplinary Specialization: _____

Description of Methods Specialization: _____

Plans for remaining coursework (if applicable at this point): _____

Update on past years' research plans (attach list of papers and publications, including papers in progress): _____

Topic of papers to be included in a manuscript style dissertation (if applicable) and current status (if applicable): _____

Comps/Dissertation timeline (if applicable at this point): _____

Competency Matrix:

1. Identify areas in which you have made significant progress this year and what you did to develop in those areas: _____
2. Identify areas you would like to work on in the coming year, and describe any assistance you would like from faculty: _____

Current Ideas about Career Goal(s) : _____

The Curry School of Education also requires documentation of your progress toward program learning objectives. Please reflect on your learning and understanding in the area(s) of the field in which you have established your expertise. Then rate yourself on a 1 to 5 scale in relation to these five categories (bolding or changing color of selected number is acceptable):

**We acknowledge these area approximations of course assessment.

	Novice	Familiar	With Guidance	Demonstrated mastery	Expert, ready to teach these skills or transition to next professional role
Content Knowledge	1	2	3	4	5
Research Skills	1	2	3	4	5
Writing	1	2	3	4	5
Teaching	1	2	3	4	5
Career Development	1	2	3	4	5

Comments/Feedback from Faculty

Advisors, please complete this section summarizing the discussion from the annual review meeting, and upload to the VEST Pre-Doc Fellow Prog Collab Site afterwards in the fellows' individual folder.

Recommendations regarding:

- **coursework (if applicable):** _____
- **comps/dissertation timeline (if applicable):** _____
- **competency matrix:** _____

Other comments regarding research and professional development: _____

Overall evaluation of progress: _____

The Curry School of Education also requires documentation of the students' progress toward program learning objectives. Please reflect on the students' learning and understanding in the area(s) of the field in which s/he has established expertise. Then rate s/he on a 1 to 5 scale in relation to these five categories (bolding or changing color of selected number is acceptable):

**We acknowledge these area approximations of course assessment.

	Novice	Familiar	With Guidance	Demonstrated mastery	Expert, ready to teach these skills or transition to next professional role
Content Knowledge	1	2	3	4	5
Research Skills	1	2	3	4	5
Writing	1	2	3	4	5
Teaching	1	2	3	4	5
Career Development	1	2	3	4	5