**Doctoral Program in Reading Science --- DRAFT**

***Prerequisite Course Descriptions: All Currently Part of the Reading Science MA Degree—All students would need these or courses/experiences equivalent to these. PREREQ’S DESCRIPTIONS FROM CURRENT CATALOG ARE IN ITALICS FOLLOWING CURRENT DESRIPTION***

**RDG 505: The Psychology of Reading**

This course examines the psychological substructure of reading. Neural, perceptual, cognitive, and linguistic processes involved in reading development and disorders are addressed. Emphasis is placed on understanding how readers extract information from the printed page and how they comprehend text. Current research findings are discussed and considered in the context of evidence-based practice in reading instruction.

**RDG 540: Fluency and Comprehension**

This course is designed to teach how to implement research-based instructional practices to build children’s fluency and comprehension skills. Participants learn the key research findings for teaching fluency, vocabulary, and comprehension; understand how to evaluate and improve current instructional practices; and acquire specific research based instructional strategies and interventions to develop fluency, vocabulary, and comprehension skills.

**RDG530: Phonics and Linguistics**

This course teaches the fundamental principles and concepts of the structure of language. Students learn the sound-symbol correspondences of language and understand the relationship of phonemic awareness and the phonological system of language to the reading process. Students also study the linguistic and cognitive bases of reading.

**RDG 538: Diagnosis and Remediation of Reading Problems**

This course addresses the use of formal and informal assessment procedures used to design robust reading instruction/intervention for children in preschool through high school. This course serves as a specialized, advanced training in assessment, diagnosis and the remediation of reading problems.

**RDG 591: Evidence Based Practicum 1** (Orton Gillingham Training)

In this course, students implement a research based intervention to an individual who is struggling with early reading skills. Emphasis is placed on the instructional strategies appropriate for use in effective intervention design and implementation. This practicum course includes three components: 1) learning the Orton-Gillingham method of reading intervention, 2) completion of tutoring hours and 3) supervision.

***Leadership & Systems Change –3 hours***

**\*EDU 710: Leadership and Systems Change**

This course is a study of leadership and systems change. Students will explore what leadership is, characteristics of effective leaders, and reflect upon their own skills, knowledge, and disposition as leaders. Emphasis will be placed on understanding how to lead systems change to create inclusive educational environments for all students.

***Research and Statistics—12 hours***

**RDG 700: Introduction to Research Design and Statistics**--**3 hours**

Introduction to Research Design & Statistics provides understanding of how to improve study design, collect and analyze data, and promote reproducible research. It includes a detailed overview of scientific inquiry, examples of various research designs, a discussion of data management methods, and an introduction to statistical analysis. Dissertation requirements and methodology will be outlined.

**RDG 701: Intermediate Research Design and Statistics**--**3 hours**

Intermediate Statistics explores statistical analysis and sound approaches to optimize the reproducibility of research results. Topics discussed include displaying and describing data, the normal curve, regression, probability, statistical inference, confidence intervals, and hypothesis tests with applications in the real world.

**EDU 702: Behavior Research and Accountability Methods**--**3 hours**

Behavioral Research and Accountability Methods provides an overview of single-case design procedures for use in academic intervention research and practice. The course presents a number of behavioral research designs that can be applied to reading intervention research in school settings and can be used in the program’s dissertation. The course is designed to cultivate the ability to critically review research studies so that graduate students can become active producers and/or consumers of research.

**EDU 703: Program Evaluation**--**3 hours**

This course is a study of the methods and tools used in program evaluation. Students further their understanding of how to interpret data for educational decision-making and learn how to design and implement effective program evaluations. The course prepares students to conduct program evaluations in schools and presents a methodology that can be used in the program’s dissertation.

***Language and Reading- 27 hours***

**RDG 740: Cognitive and Neurological Psychology’s Contributions to Understanding Reading and Learning**--**3 hours**

This course reviews seminal research in the science of reading and deeply explores research contributions from cognitive psychology and neurological psychology. Topics include understanding skilled reading, reading development, brain bases of reading (parts of the brain involved in reading, how the brain processes reading, four part processor model, etc.), anatomical and functional neuroimaging techniques, the causes of developmental reading impairments and how such impairments can be treated. The research will be discussed in light of its applications for teaching and instruction.

**RDG 745: Linguistics**--**3 hours**

The purpose of this course is to increase awareness and understanding of the complex organization and systematic nature of language. The focus is on the major core subfields of linguistics: orthography, phonetics, phonology, morphology, syntax, semantics, discourse and pragmatics. The course is intended to clarify these forms and functions of language in order to apply this disciplinary knowledge base to instruction.

**RDG 750: Language Development: Research and Practice**--**3 hours**

This course examines the research on language acquisition. It starts with an overview of first language acquisition, with an in-depth examination of the components of language development and their relationship to reading and writing. It then covers second language acquisition, and effective instruction and assessment of English Language Learners.

**RDG 755: Learning Disabilities**--**3 hours**

This course reviews the research on learning disabilities and its implications for practice,

systems’ change, and policy. Key topics include: history of learning disabilities, understanding laws and key policies, symptoms and characteristics of dyslexia and related learning disabilities, implications for screening, diagnosis, and intervention design.

**RDG 760: Multi-Tiered Systems of Support**--**3 hours**

This course covers advanced topics in educational assessment and intervention design within a Multi-Tiered Systems of Support (MTSS) model. Coursework includes the study of criterion referenced and norm referenced assessments at both the systems and individual child level. Students evaluate assessments based on the technical adequacy of individual assessment’s designed purpose, analyze assessment results, and understand implications for systems change and individual child educational planning.

**RDG 765: Teaching and Evaluating PreK-12 Writing**--**3 hours**

This course examines seminal research regarding the teaching and evaluation of Pre-Kindergarten through 12th grade writing. Evidence based instructional practices are explored along with interventions that will enhance writing outcomes for a variety of students within diverse contexts.

**RDG 775: Clinical Practice 1—Supervision & Teaching in Higher Education**--**3 hours**

The practicum experience provides the opportunity to apply and integrate knowledge acquired through the core program. Students will perform activities related to the expectations of individuals with terminal degrees and extensive understanding of literacy and learning. These activities include supervision of explicit, sequential instruction, preparation and presentation of a literacy topic and the teaching of a master’s level class.

**RDG 770/771/772: Special Topics (a = first year; b = 2nd year; c = 3rd year) – Each 3 hours (See below)**

Special topics courses (a, b, and c) are offered each summer. The hybrid format of these classes requires some online work along with face-to-face work at the on-campus institute. The mandatory on campus one to two week institute requires:

a.) online preparation work related to the special topic to prepare for the summer institute

b.) participation in seminar class meetings connected to the special topic

c.) attendance at on-campus lectures of Reading Science experts

d.) participation in presentations by Reading Science faculty and doctoral students

e.) participation in collaborative discussion opportunities with peers

f.) participation in the institute’s book study (a new Reading Science book is chosen each summer).

**RDG 770: Foundations of the Science of Reading Seminar**--**3 hours**

In this seminar students are oriented to the doctoral program, discuss program expectations, examine seminal research in the field and develop a model of practice guided by the science of reading.

**RDG 771: Preparing for Teaching and Supervision in Higher** **Education**--**3 hours**

This seminar further develops students’ leadership and presentation skills. The seminar also prepares students to teach and supervise in higher education.

**RDG 772: Advancing the Science of Reading in Educational Practice Seminar**--**3 hours**

This seminar further develops students’ leadership and presentation skills. The seminar also prepares students to choose their dissertation topics.

***Dissertation Guidance – 12 hours***

**EDU 801 & EDU 802: Dissertation Seminar – each 3 hours**

This course clarifies and supports the development of the dissertation proposal to facilitate timely and successful completion of the dissertation. The course reviews the dissertation process, including requirements, procedures, timelines, and research topics.

**EDU 805**: **Dissertation Guidance – Repeated course, 3 hours (maximum of 9 hours)**

The purpose of these graduate hours is to provide coaching and support for doctoral students as they implement their research projects and write their corresponding dissertation. Stu dents will produce their scholarly research and writing under the direction of members of the Reading Science Faculty.

Doctoral Program Sequence--DRAFT-6/26/19

**Reading Science Core—Pre-Requisites -- 15 hours**

RDG 505 Psychology of Reading RDG 530 Phonics & Linguistics

RDG 540 Fluency & Comprehension RDG 538 Diagnosis & Remediation of Reading Problems

RDG 591 Evidence Based Practicum 1 (OG Training)

**Leadership & Systems Change –6 hours**

\*EDU 710Leadership and Systems Change

**\***EDU 720 Data Driven Decision Making and Program Evaluation

**Research and Statistics—9 hours**

EDU 700 Introduction to Research Design & Statistics

EDU 701 Intermediate Statistics

EDU 702 Research Design

**Language, Reading, & Writing- 33 hours**

RDG 740 Cognitive and Neurological Psychology’s Contributions to Understanding Reading & Learning

RDG 745 Linguistics

RDG 750 Language Development: Basic and ELL

RDG 755: Learning Disabilities

RDG 760Testing & Evaluation & Intervention Design

RDG 760bTesting & Evaluation & Intervention Design--Field Experience)

RDG 765 Teaching & Evaluating Preschool – 12th Grade Writing

RDG 775 Clinical Practice 1—Supervision

RDG 770a/b/c - Special Topics (a = first year; b = 2nd year; c = 3rd year)

**Dissertation Guidance – 12 hours**

EDU 801 - Getting Started Seminar – 3

EDU 805 - Guidance - 9

Total Hours = 60 - 73

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| Summer  S421 | Fall  S122 | Spring  S222 | Summer  S422 | Fall  S123 | Spring  S223 | Summer  S423 | Fall - Spring |
| 9 hours | 6 hours | 6 hours | 12 hours | 6 hours | 6 hours | 6 hours | 9 hours |
| Summer 1 (Site)  RDG 770a-Spec. Topic  Summer 2:  RDG 740 Cog. & Nero  RDG 750 Lang. Dev. | Fall 1: EDU 710 Leader.  Fall 2: RDG 745 Linguistics | Sp 1: EDU 720 Prog. Ev.  Sp 2:  EDU 700 Into. Research & Stats. | Summer 1 (Site)  RDG 770b-Spec.  Summer 2  EDU 701 In. Stats  RDG 765 Writing  RDG 755 LD | Fall 1:  EDU 702 Research  Fall 2:  EDU 801 | Across Spring:  RDG 775 Sup.  Spring 2:  RDG 760 Test. | Summer 1 (Site)  RDG 770c  RDG 760b | EDU 805 |