EXCEPTIONAL LEARNING PH.D.
STUDENT HANDBOOK

COLLEGE OF EDUCATION

TENNESSEE TECHNOLOGICAL UNIVERSITY

2018-2019

TABLE OF CONTENTS

I. The Ph.D. Degree

The Ph.D. degree in the College of Education at TTU has been in existence since 2000. The degree takes approximately three years of full-time study beyond the Master's degree to complete.* The Ph.D. degree program is coordinated as a college wide degree. Most often, but not exclusively, in selecting the Ph.D. program, a student projects a career focused on **being engaged in research**. For the dissertation, a clear, well-defined research design and methodology are required. Ph.D. students are expected to do original research for the dissertation.

The Ph.D. at Tennessee Tech focuses on the characteristics, strengths, and educational needs of individuals and groups whose learning potential and opportunities for success are frequently unrealized. Exceptional populations include people for whom social, economic, and physical characteristics may serve as a barrier to development and learning. The Ph.D. will prepare leaders to work in schools, agencies, and universities to effect positive change in populations of diverse learners, addressing social, economic, and physical characteristics that may serve as barriers to learning, primarily through research and service activities. The program core develops an understanding of the characteristics of these populations. The research core provides a strong emphasis on research techniques and applications. The four concentrations include:

Applied Behavior Analysis prepares professionals who can develop and deliver behavioral interventions and supports for individuals in educational and habilitative settings. There are two strands in ABA:

> **Young Children and Families** prepares professionals to provide support and interventions to young, at-risk children and families with emphasis on building relationships with and advocating for children and families.
>
> **Applied Behavior Analysis School-Aged Children and Adult Populations** prepares professionals who will implement and provide empirical support for behavioral interventions for a range of populations and pursue board certification as a behavior analyst (BCBA).

Literacy empowers educational innovators to develop cutting-edge, socially conscious approaches to multiliteracies and challenge narrow conceptions of learners, families, and worldviews.

Program Planning and Evaluation prepares professionals for leadership roles in program evaluation and planning with an emphasis on statistical methods.

STEM Education builds the capacity of innovative educational leaders to advance new ideas and to design/implement strategic innovations in science, technology, engineering and mathematics (STEM) education.

* Students have eight years from the point of enrollment to complete the doctoral degree.

II. The Structure of the Ph.D. Program

	Concentration	Major Field/Core	Guided Electives	Research	Dissertation
ABA Young Children & Families	23 sh*	13 sh	6/7 sh	21 sh	15 sh
ABA School Aged & Adult Populations	24 sh	13 sh	6 sh	21 sh	15 sh
Literacy	24 sh	13 sh	6 sh	21 sh	15 sh
Program Planning & Evaluation	24 sh	13 sh	6 sh	21 sh	15 sh
STEM Education	24 sh	13 sh	6 sh	21 sh	15 sh

*sh = semester hours, all which are minimums

III. Description of the Degree Program

Concentration (23/24 sh minimum)

Although the major is exceptional learning, a concentration provides an area of specialization.

Applied Behavior Analysis

Young Children and Families

ABAP 7120* - Positive Behavior Support and Families (3)
ABAP 7920* - Topics, Issues, Research in Early Childhood Special Education (2)
ECED 7220 – Early Childhood Instruction and Materials (3)
EDUC 7400* – Programs and Service Delivery Models (3)
EDUC 7450* – Doctoral Seminar: Young Children & Families (3)
HEC 6610 – Families: Normative/Catastrophic Issues (3)
SPED 6120 – Early Childhood SPED: Evaluation/Assessment/Methods (3)
SPED 7110 – Family Collaboration (3)

Applied Behavior Analysis School-Aged Children and Adult Populations) (see page 19 for BCBA Certification Requirements)

ABAP 7120* – Positive Behavior Support and Families (3)
EDUB 7010* – Advanced Systematic Instruction (3)
EDUB 7030* – Functional Analysis of Behavior (3)
EDUB 7050* – Intervention and Treatment in Autism Spectrum Disorders (3)
EDUB 7060* – Ethics in ABA (3)
EDUB 7810* – Practicum in Behavior Analysis (1-may be repeated)
SPED 6000 – Behavioral Interventions and Supports (3)
SPED 6050 – Introduction to Applied Behavior Analysis (3)

Literacy

EDUL 7100* - Literacy History, Theory, and Policy (3)
EDUL 7200* - Equity Literacy (3)
EDUL 7300* - Multiliteracies (3)
EDUL 7400* - Literacies of Culturally & Linguistically Diverse Populations (3)
EDUL 7500* - Linguistic Perceptions (3)
EDUL 7600* - The Literacy Professional (3)
EDUL 7700* - Theory, Methodology, & Trends in Literacy Research (3)
EDUL 7900* - Community Literacy (3)

Program Planning and Evaluation

EDUP 7410* - Advanced Program Planning and Evaluation Methods I (3)
EDUP 7420* - Advanced Program Planning and Evaluation Methods II (3)
EDUP 7810* - Practicum in Planning and Evaluation (3)
EDUP 7810* - Practicum in Planning and Evaluation (6)
EDUP 7810* - Practicum in Planning and Evaluation (9)

STEM Education

EDUS 7500* - STEM Education Foundations (3)
EDUS 7510* - STEM Curriculum and Assessment (3)
EDUS 7540* - STEM Education Pedagogy (3)
EDUS 7550* - STEM Education Trends and Issues (3)
EDUS 7530* - STEM Education Research (3)
EDUS 7560* - STEM Learners and Learning (3)
EDUS 7515* - STEM Education Seminar (1)
Or
EDUS 7520* - STEM Technology Seminar (1)
EDUS 7580* - STEM Education Field Study (2)
EDUS 7570* - STEM Education Policy and Leadership (3)

Core (19/20 sh minimum = 13 sh prescribed – 6/7 sh guided electives)

The purpose of the core is to provide an interdisciplinary framework for the Ph.D. program.

EDU 7000* – Trans-Concentration Seminar (1)
EDU 7010* – Theoretical Foundations of Research (3)
EDU 7020* – At-Risk Populations: Research, Service, and Delivery (3)
EDU 7040* – Program Planning and Proposal Development (3)
CUED 7430 – Specialized Applications of Technology to Education (3)

Guided electives may be selected from the list below in addition to courses in the core and research components in consultation with your advisor.

CUED 7030 – Rural Schools and Communities (3)
CUED 7830 – Field Experience in Education – Autoethnography (3)
EDU 7060* – Issues in Education (3)
EDU 7950* – Doctoral Seminar: Special Topics in Education (3)
ENG 6010 – Teaching Composition (3)
SPED 6120 – ECSE Evaluation, Assessment, and Methods (3)
SPED 7110 – Family Collaboration (3)
Research (21 sh minimum)

The research coursework includes basic preparation in research methodology and design, including both quantitative and qualitative research. Each student who completes the Ph.D. program should have knowledge of various research inquiries for use in answering educationally related questions. In addition to possessing a well-developed expertise in at least one method of inquiry, each student should be familiar with other techniques. By the time Ph.D. students complete their doctoral work, they should understand that the choice of methodology, or methodologies, is guided by the nature of the question(s) posed, rather than the preferred methodological or analytical techniques of the researcher.

Before beginning their doctoral dissertation, Ph.D. students should become familiar with ethical standards associated with the conduct of educational research. Students must know how these ethical considerations apply to (a) any interventions used with human beings, (b) the collection and analysis of evidence, and (c) the dissemination of research.

EDU 7300* – Research Design (3)
EDU 7310* – Research in Literacy (3)
Or
EDU 7320* – Single Subject Design (3)
EDU 7330* – Qualitative Inquiry in Education (3)
EDU 7340* – Data Analysis and Representation in Qualitative Inquiry (3)
EDU 7350* - Advanced Regression Analysis (3)
EDU 7420* – Quantitative Inquiry in Education I (3)
EDU 7430* - Quantitative Inquiry in Education II (3)
EDU 7920**-Research Seminar in Education (3)

Dissertation Coursework (15 sh minimum)
EDU 7990* – Research and Dissertation (15)

*Courses limited to students admitted to the Doctoral Program
The overriding goal of EDU 7920, Research Seminar in Education, is for students to develop their dissertation research proposals and present those proposals to their committees for approval. With the exception of dissertation credit, all of the courses in a student's program of study should be completed **prior to enrolling in EDU 7920 (including removing any grade of "I"). On rare occasions, and with permission from their entire committee and the Director of the Ph.D. program, students may take EDU 7920 with one class in the core or concentration series having not been completed. There are, however, no exceptions with regard to the research series: EDU 7300, Research Design; EDU 7320, Single Subject Design or EDU 7310, Research in Literacy; EDU 7330, Qualitative Inquiry in Education; EDU 7340, Ethnographic Inquiry in Education; EDU 7420, Quantitative Inquiry in Education I; and EDU 7430, Quantitative Inquiry in Education II, must have been successfully completed prior to enrolling in EDU 7920. Typically students will also take their comprehensive written exams during the second half of the semester in which they are enrolled in EDU 7920.

IV. Admissions Procedures for Students

Admissions Criteria*

1. **QPA** – Consideration for admission to the program is based on the applicant's grade point average (GPA) in the last graduate degree or the last 60 hours of undergraduate work if no graduate degree has been completed. An average of 3.0 (on a 4.0 scale) or above from a recognized baccalaureate, graduate, or professional degree from an accredited college or university, or an international equivalent based on a four-year curriculum is required for admission.
2. **GRE** – Exceed 153 on Verbal Reasoning and score 140 or above on Quantitative Reasoning AND a score of 4.0 or above is required on Analytical Writing. -OR- Exceed 144 on Quantitative Reasoning and score 146 or above on Verbal Reasoning AND a score of 4.0 or above is required on Analytical Writing.
3. **Scholarly Writing** – Students must demonstrate the ability to do scholarly writing by submitting a reference-based paper, thesis, or other written document in which information from various sources has been synthesized. The applicant must be the sole author.
4. **Statement of Intent** – One to two pages is sufficient to address intended enrollment (fall admission only), intended concentration, autobiographical statement, education and professional goals, and areas of interest for future research.
5. **Three Letters of Recommendation** – Letters should be from professors who are able to comment on your qualifications and academic ability for doctoral study. Consideration will be made based upon the content of these letters.
6. **Professional Vitae**
7. **Interview** with Ph.D. program faculty.
8. **International Students** must also meet the English Language Requirement by providing test results on one of the following:
    - FLS Level 16
    - TOEFL – minimum IBT of 79 (FLS not required with TOEFL)
    - IELTS – minimum score of 6.0
    - PTE Academic – minimum score of 53
    - ELS Level 112
    - TOEIC 750
    - CEFR B-1
    - SLEP 58

*Please note the STEM Education concentration requires the following additional admission requirements:

1. Three years of STEM teaching/outreach (P–16)
2. Masters Degree and one of the following:
    a. Minimum of 18 semester hours of graduate credit in a STEM discipline
    b. Teacher Licensure in a STEM discipline (Grades 7–12)
    c. Teacher Licensure (K–6/8) with Highly Qualified Status in a STEM discipline based on 24 semester hours in math/science or a passing score on the PRAXIS II middle grades math or science test

Application Process

Prospective students are encouraged to make application to the College of Graduate Studies in time for admission to be completed at least one full semester before expected entrance to the Ph.D. program. Admission is open for Fall semester only. Please see the College of Graduate Studies website for admissions application deadlines and to apply to the program:

https://www.tntech.edu/graduatestudies/graduateadmissions/

Processing of Application

Once application materials reach the Director of the Ph.D. program, the file will be reviewed to see if the criteria for admission have been met. The file will then be sent to the appropriate concentration for further deliberation. Once reviewed by the admissions committee and the concentration leader, it will be returned to the Director's office with a recommendation for an interview. Once the interview is complete, a recommendation will be forwarded to Graduate Admissions. Graduate Admissions will notify each applicant of the final, official decision.

Procedures for Students to Follow After Entry to Program

Once admitted, it is important for students to follow procedures/regulations outlined below:

Procedures/Regulations	**When To Be Done**
Temporary advisor appointed by Director	No later than 2nd semester of enrollment
Submission of program of study	By the time 15 semester hours are earned
Annual review (vita submission) by faculty	Second half of spring semester
Written comprehensive exam	Second half of semester in which enrolled in EDU 7920. Results must be reported on Comprehensive Examination Form
Dissertation prospectus presentation	Proposal submitted to committee a minimum of two weeks prior to prospectus presentation. Presentation scheduled just following successful completion of EDU 7920
Fifteen hours of dissertation coursework (minimum)	To begin at time proposal is accepted by Committee or successful completion of comprehensive examination and continuously thereafter until dissertation is completed
Final draft of dissertation to committee	Minimum two weeks prior to defense
Abstract of dissertation (to Ph.D. Director)	Two weeks prior to defense
Scheduling of defense	No sooner than 2 weeks after submission of dissertation to committee
Publication of defense	Send dissertation abstract and defense date, time, location to Director at least two weeks prior to defense
Announcement of successful defense	Immediately following defense. Results must be reported on Thesis/Dissertation Defense Form
*Final official copy of dissertation (copies to Graduate School and copies committee)	When copies are finalized

*Check the Graduate School calendar for more specific deadline dates.

V. Additional Student Responsibilities

Forming a Committee

The student's Ph.D. committee includes a minimum of four members. Additional committee members are optional. The committee must include a chair who has been credentialed by the university and three or more members, who must hold either associate or full graduate faculty status at TTU. Doctoral students have the right to amend their committees by adding, omitting, or replacing members, during the process of their study and in response to their changing needs.

Filing a Program of Study

In pursuing the Ph.D. program, students have primary responsibility for knowing the requirements and meeting them. Students should expect to take the initiative in planning and following their program of study. The Program of Study must be turned in early in the program (usually no later than the third semester after formal admission to the program). This is developed in collaboration with the total committee. Each committee member must sign it before it is submitted to the Director of the Ph.D. program. The committee and the Director of the Ph.D. program must approve all changes made to the program of study.

Keeping Up With University Policies

In addition to the Ph.D. Guidelines (this document), students are to follow the TTU Student Handbook and the Graduate Catalog.

Comprehensive Examination

Following the completion of all coursework, excluding EDU 7990, at the closure of the last semester during which coursework (EDU 7920) is to be completed, students should complete their Comprehensive Examination. At the request of the Chair, each committee member will submit a number of questions to the Chair. The student will be assigned a location on campus where they will have 4 to 6 hours per day over the course of three (3) consecutive (or near consecutive) days in which to complete their Comprehensive Examination. If the student fails a portion of or the entire exam, they must wait at least until the next semester to retake the exam. The student may retake the Comprehensive Examination only once. If the student is not successful with the retake, they will be dismissed from the program.

Coordinating the Dissertation Defense/Notifying Others About the Defense/Submitting Copies of the Dissertation

A copy of the final dissertation draft must be submitted to committee members no less than two weeks prior to the defense. At the same time, the student should notify the Director of the defense day, time, and location. The Dissertation Defense Form is available on the Graduate Studies website. An electronic copy of the dissertation is submitted to the Graduate School. Bound copies for the Chair and each Committee member are courtesies, but strongly encouraged.

Academic Requirements/Standards/Expectations

The student must maintain a cumulative point average of 3.25 and, in addition to adhering to the general regulations of the Graduate School, adhere to the specific regulations for the Ph.D. program. These regulations, standards, and expectations include:

1) A minimum of 78/79 semester hours of course work, including 36 semester hours in the research component and dissertation requirements and built upon the student's course of study.

2) A residency requirement of three full-time semesters (at least 9 hours each) must be met following matriculation.

3) All requirements, including the dissertation, must be completed within a period of no more than eight consecutive years.

4) Following completion of all coursework, excluding EDU 7990, or during the last semester during which course work is to be completed; students should complete their Comprehensive Examinations.

5) Satisfactory completion of the dissertation requires an oral defense.

6) The fifteen hours required for the dissertation may be completed in no fewer than two semesters.

7) "A"s and "B"s are required in coursework. A grade of "C" and "D" is considered a failing grade in doctoral programs. The student is allowed to maintain a grade of "C" in only **one** course completed toward the Ph.D. degree. If a student receives two "C"s, they will be **dismissed** from the program. If another grade of "C" is received, it may not be substituted or moved out of the student's program of study.

8) "F"s are not acceptable in the Ph.D. program. If a student receives a grade of "F" in a course, they will be **dismissed** from the program.

9) If an Incomplete is granted, the student has one academic year to complete the requirements. The student is not allowed to carry more than one "I" at any time during the program. If the requirements have **not** been met in the allotted time period, the grade is converted to an "F" and the student will be **dismissed** from the program.

10) Approval of the dissertation topic **and** a successful proposal to the entire Committee must precede any significant work on the dissertation. Approval from the Institutional Review Board for the Protection of Human Subjects must be obtained for any research project initiated by a student (or faculty member).

11) A maximum of 12 credit hours may be taken in one semester. Written approval from the Ph.D. Director, the student's concentration leader, and advisor is required to register and take more than 12 credit hours in one semester.

Plagiarism and Academic Misconduct Policy

The faculty and staff at TTU are committed to the lifelong learning of students and thus provide an environment for learning that fosters the highest academic conduct. To this end, TTU and its faculty reserve the right to use electronic means to detect and help prevent the inappropriate use of intellectual property. Student agrees and understands that by taking this course, his or her work may be subject to originality check through Turnitin, and student thereby grants any necessary copyright permission required to do so. Personally identifiable information (such as student name, social security number, student i.d. number, etc.) should NOT be included in the work submitted to Turnitin. This work will be encoded and stored in the Turnitin database where it will also be used for originality checks on other works submitted by the student or anyone else using the system. The faculty may require that the students submit their work through Turnitin or questionable text may be submitted by the faculty for the student. The terms that apply to TTU's use of the Turnitin service are described on the Turnitin.com website.

Online educational resources that provide information for understanding plagiarism and proper ways to cite the work of others are available at:

http://www.turnitin.com/research_site/e_home.html

http://education.indiana.edu/~frick/plagiarism/

Students must complete the on-line test available at http://www.indiana.edu/~istd/plagiarism_test.html and provide documentation that they "understand plagiarism and know how to avoid it" as stated on this website by providing a copy of the completed test certificate to the faculty member.

Plagiarism and other forms of academic misconduct such as submitting another student's work as your own or the falsification of data are grounds for immediate dismissal from the Ph.D. program. Ph.D. students are held to a higher standard of ethical conduct especially considering the central focus of this program. Working with and for at-risk populations demands the utmost ethical conduct and any evidence of unethical behavior or actions in coursework or research, including plagiarism, will result in the student's dismissal from the Ph.D. program.

There is no statute of limitations on plagiarism or academic misconduct. If a student's plagiarism or academic misconduct goes undetected until after completion of the course and/or project, the student can still be dismissed from the program. The procedure for dismissal is:

1) An incidence of plagiarism or academic misconduct is presented to the student's advisor, leader of concentration, and Coordinator of the Ph.D. Program.

2) The Director of the Ph.D. Program will review the evidence in consultation with faculty members, the student's advisor, and concentration leader as well as the student accused of plagiarism or academic misconduct and will make a decision about whether dismissal is warranted. A decision advocating dismissal will be forwarded to the Graduate School.

3) The Graduate School will inform the student in writing of the final, official decision.

The student accused of plagiarism or academic misconduct may appeal the decision to the Ph.D. Admissions Committee.

Definitions of Plagiarism

Plagiarism.org defines plagiarism as "The improper use, or failure to attribute, another person's writing or ideas (intellectual property)" and explains that "It can be as subtle as the inadvertent neglect to include quotes or references when citing another source or as blatantly unethical as knowingly copying an entire paper verbatim and claiming it as your own work."

According to Merriam-Webster Online, plagiarism is "to steal and pass off (the ideas or words of another) as one's own or to use (another's production) without crediting the source, or to commit literary theft and/or present as new and original an idea or product derived from an existing source."

Any incidence of plagiarism in the Ph.D. program will result in the student's dismissal from the program.

VI. Transferring of Prior Credit that can be Applied to the Ph.D. Program

While coursework taken prior to admission to the Ph.D. program may, in certain instances, be used toward the degree, there are specific regulations governing how the coursework can be used and what part of the program must be taken at TTU after being admitted into the Ph.D. program. There may be cases in which a student's doctoral committee feels that a waiver of part of a requirement (e.g., part of the 15 semester hours in research) for the Ph.D. is warranted, given that a similar course has been taken. The committee may recommend a waiver, thus possibly reducing the number of hours required in this area if the waiver is approved. The leader of the concentration determines course substitutions in their specific area. Remember, all requirements for the degree, including the dissertation and transfer credit, must be completed within a period of no more than eight (8) consecutive years (Please refer to "Academic Requirements" on page 14, item 3).

VII. Assistantship and Financial Aid Information

Check the Graduate Catalog for more specific information:
https://www.tntech.edu/graduatestudies/financial

IX. Course Descriptions

ABAP 7120. Positive Behavior Support & Families Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. Issues and practices associated with partnering with families in designing, implementing and evaluating positive behavior support for their children with challenging behavior.

ABAP 7910. Independent Study in Early Childhood Special Education Lec. 2. Cr. 2.
Prerequisite: Admission to Doctoral Program and consent of instructor. Advanced study of an individual basis focusing on an area directly related to young children with special needs and their families.

ABAP 7920. Topics, Issues & Research in Early Childhood Special Education Lec. 2. Cr. 2.
Prerequisite: Admission to Doctoral Program and consent of instructor. Advanced study of a topic(s) relevant to research and/or practice in early childhood special education, early intervention or young children and positive behavior support.

CUED 7030. Rural Schools and Communities Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. An in-depth study of the historical, cultural, and economic characteristics of rural places and the role of schools and agencies in shaping the destiny of those places and their citizens.

CUED 7430. Specialized Applications of Technology to Education Lec. 3. Cr. 3.
Prerequisite: CUED 6430. Application of current media technologies to maximize student learning with instructional design strategies appropriate for each technology.

ECED 7220. Early Childhood Instruction and Materials Lec. 3. Cr. 3.
Planning objectives, activities, and materials for children, teaching techniques, and evaluation of curricula.

EDU 7000. Trans-Concentration Seminar Lec. 1. Cr. 1.
Prerequisite: Admission to Doctoral Program. An introduction to the Ph.D. in Exceptional Learning familiarizing students with the procedures, requirements, and expectations of the program.

EDU 7010. Theoretical Foundations of Research Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. A study of the impact of culture in society and its significance for formulating policy design to serve diverse groups effectively and equitably.

EDU 7020. At-Risk Populations: Research, Service, and Delivery Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. A survey of at-risk and diverse populations, their common and unique characteristics, and the research base for designing and implementing effective prevention and intervention strategies.

EDU 7040. Program Planning and Proposal Development Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. Theoretical perspectives, models, and effective practices in the development, planning, and evaluation of programs and services in a variety of educational settings.

EDU 7060. Issues in Education Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. An examination and analysis of contemporary trends and issues in education, including leadership, legal, and ethical issues.

EDU 7300. Research Design Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program and EDU 7420. Overview of planning, designing, and conducting experimental and non-experimental research in order to maximize research validity.

EDU 7320. Single Subject Design Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program and EDU 7300. An in-depth analysis of single-subject research design and the application of this research methodology in applied settings.

EDU 7330. Qualitative Inquiry in Education Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program and EDU 7010. An analysis of assumptions and types of procedures and criteria for evaluation in qualitative and interpretive research methods.

EDU 7340. Data Analysis and Representation in Qualitative Inquiry Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program and EDU 7330. An analysis of both theoretical and practical dimensions of conducting qualitative research.

EDU 7350. Advanced Regression Analysis Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program, EDU 7420, and EDU 7430. Advanced applications of regression analysis techniques.

EDU 7420. Quantitative Inquiry in Education I Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program and introductory course in statistics. In-depth training and understanding of common descriptive and inferential statistical techniques for conducting research and engaging in scholarly activities.

EDU 7430. Quantitative Inquiry in Education II Lec. 3. Cr. 3
Prerequisite: Admission to Doctoral Program and EDU 7420. In-depth analysis that reinforces and expands common descriptive and inferential statistical techniques and includes advanced material appropriate for more complex research problems.

EDU 7440. Technology Applications for Institutional Dissemination of Information
Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. Analysis of creation, collection, and distribution of institutional information.

EDU 7920. Research Seminar in Education Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program; EDU 7010, EDU 7300, EDU 7330, EDU 7340, EDU 7420, and EDU 7430; EDU 7310 or EDU 7320. In-depth examination of experimental, quasi-experimental, and evaluation research as applied to dissertation research.

EDU 7950. Doctoral Seminar: Special Topics in Education Lec. 1-3. Cr. 1-6.
Prerequisite: Consent of the student's doctoral chairperson required.

EDU 7990. Research and Dissertation Cr. 1, 3, 6, 9.
Prerequisite: Admission to Doctoral Program; EDU 7920.

EDUB 7010. Advanced Systematic Instruction Lec. 3. Cr. 3.
An in-depth study of instructional methodologies for persons with moderate and severe disabilities.

EDUB 7030. Functional Analysis of Behavior Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. Instruction in the functional analysis of severe and challenging behaviors.

EDUB 7050. Intervention and Treatment in Autism Spectrum Disorders Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program; SPED 6050, and EDUB 7040. A comprehensive overview of research-based practices in the design and delivery of intervention and treatments to students with Autism Spectrum Disorders.

EDUB 7060. Ethics in ABA Lec. 3 Cr. 3
Prerequisite: Admission to the Doctoral Program. An overview of the ethical concerns related to the practice of applied behavior analysis. Students enrolled in the 7000-level course will be required to complete additional work as stated in the syllabus.

EDUB 7810. Practicum in Behavior Analysis Cr. 1-3.
Prerequisite: Admission to Doctoral Program; EDUB 7010, 7030; SPED 6050. Supervised practice in development and application of behavioral intervention.

EDUC 7400. Programs and Service Delivery Models Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. Analysis and comparison of organizations, program design, leadership, administrative, and supervisory practices.

EDUC 7450. Doctoral Seminar: Young Children and Families Lec. 3. Cr. 3.
Prerequisite: Admission to Doctoral Program. Inquiry into social policy, theory, research, issues, and intervention practices and personnel preparation.

EDUL 7100. Literacy History, Theory, and Policy Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Exploration of the history and theory related to reading and writing instruction. Policies influencing literacy instruction, past and present, will also be examined.

EDUL 7200. Equity Literacy Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Promotes understanding of deficit thinking in education as it relates to students who are disadvantaged by poverty and guides students to develop language, skills, and competencies for countering deficit thinking in order to promote equity in education.

EDUL 7300. Multiliteracies Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Explores multiple and new literacies, moving beyond traditional reading and writing to examine the multimodal ways of meaning making and communicating and their place in pedagogy and practice.

EDUL 7400. Literacies of Culturally & Linguistically Diverse Populations Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Literacies of culturally and linguistically diverse groups through a critical lens.

EDUL 7500. Linguistic Perceptions Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Explores perceptions of the world through the language that we use and belief systems we create.

EDUL 7600. The Literacy Professional Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Exploring the various roles of the literacy professional. Preparing for grant and article submission.

EDUL 7700. Theory, Methodology, & Trends in Literacy Research Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Examines major theories and methodologies in literacy research and explores new trends in the field.

EDUL 7900. Community Literacy Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Working to explore and participate in various literacy initiatives within the community.

EDUP 7410. Advanced Program Planning and Evaluation Methods I Lec. 3. Cr. 3.
Prerequisite: EDPY 7310 and EDU 7040. Exploration of advanced quantitative methods used to evaluate programs and improvement initiatives.

EDUP 7420. Advanced Program Planning and Evaluation Methods II Lec. 3. Cr. 3.
Prerequisite: EDU 7040. Integration of assessment data into the strategic planning process.

EDUP 7810. Supervised Practicum in Program Planning and Evaluation Cr. 3-9.
Prerequisite: Consent of the student's doctoral chairperson is required.

EDUS 7500. STEM Education Foundations Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Introduction to the educational, political, economic, and socio-cultural foundations of the STEM and STEM education disciplines including the history and development of STEM education with attention to the STEM content in P-16 settings. Topics include: introduction to the nature of each of the STEM and STEM education disciplines; investigation of related political, economic, and socio-cultural foundations; and frameworks for constructing personal perspectives and philosophies of integrative STEM education.

EDUS 7510. STEM Curriculum & Assessment Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Current trends in STEM curriculum development and assessment. Topics include: defining objectives; planning for improvement; organization of instructional materials; and STEM curriculum evaluation.

EDUS 7540. STEM Education Pedagogy Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Signature pedagogies unique to the fields of science, technology, engineering, and mathematics (STEM) education; strengths and limitations associated with signature pedagogies; and insights into pedagogical strategies that can serve to enhance practices within chosen STEM fields.

EDUS 7550. STEM Education Trends and Issues Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Introduction to contemporary P–16 STEM education trends and issues, including both integrative and within-discipline trends/issues. Topics such as STEM literacy, integrative STEM teaching/learning, purposeful design and inquiry, legislative initiatives, and change theory are among those addressed in this course.

EDUS 7530. STEM Education Research Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program; EDU 7420 and EDU 7010. Survey of the educational research practices of STEM disciplines; investigates the approaches used in studying the teaching/learning processes within the context of each discipline; similarities, distinctions and overlaps among questions posed, research designs, and investigations into best practices with respect to improving teaching and learning among STEM disciplines.

EDUS 7560. STEM Learners and Learning Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. Designed to explore the theoretical bases for STEM learning. Topics will include the development of STEM learning environments; research on learning in STEM; and STEM learner exceptionalities.

EDUS 7515. STEM Education Seminar Lec. 1. Cr. 1.
Prerequisite: Admission to doctoral program. Designed as a general exploration into the issues surrounding the development of a STEM literate populace through education. This exploration will be facilitated by a blend of readings, discussions, and personal reflections.

EDUS 7520. STEM Technology Seminar Lec. 1. Cr. 1.
Prerequisite: Admission to doctoral program. Focused on STEM-specific technologies (e.g., Vernier probes, TI-Navigation systems, LoggerPro software, etc.), how to use them, and the issues surrounding their use in STEM education.

EDUS 7580. STEM Education Field Study Lec. 2. Cr. 2.
Prerequisite: Admission to doctoral program. Applied study in one or more educational institutions. Research, evaluation, curricular, and instructional STEM projects are examples of appropriate areas of study.

EDUS 7570. STEM Education Policy & Leadership Lec. 3. Cr. 3.
Prerequisite: Admission to doctoral program. The course explores topics in STEM education with attention to STEM education policy and leadership.

ENGL 6010. Teaching Composition Lec. 3. Cr. 3.
Theories and pedagogies of teaching writing in the middle schools, secondary schools, and on the college level.

HEC 6610. Families: Normative/Catastrophic Issues Lec. 3. Cr. 3.
In-depth study of family stress and effective coping mechanisms that relate to normative transitions and crisis events.

SPED 6000. Behavioral Interventions and Supports Lec. 3. Cr. 3.
The design, implementation, and evaluation of behavioral interventions and individualized behavioral supports for children and youth with disabilities who display challenging behavior.

SPED 6050. Introduction to Applied Behavior Analysis Lec. 3. Cr. 3.
An introduction to the application of applied behavior analysis including the theoretical origins and development of behavioral supports for individuals with learning and behavioral challenges.

SPED 6120. Early Childhood Special Education Assessment Lec. 3. Cr. 3.
Prerequisite: CFS 2400 and CFS 2410 or SPED 5010 or consent of instructor. Assessment, planning, and intervention procedures specific to child, environment, and family. Design and evaluation of intervention plans.

SPED 7110. Family Collaboration in Special Education Lec. 3. Cr. 3.
Concepts, intervention strategies, and issues related to working with parents of exceptional children.

Requirements for Certification as Board Certified Behavior Analyst (BCBA)

The Applied Behavior Analysis strand School Aged and Adult Populations at TTU prepares candidates to sit for the BCBA certification exam. The Behavior Analyst Certification Board (BACB) has established multiple eligibility standards that must be met prior to sitting for the exam. For more information on these standards please visit www.bacb.com.

The Behavior Analyst Certification Board, Inc.® has approved the following course sequence as meeting the coursework requirements for eligibility to take the Board Certified Behavior Analyst Examination®. Applicants will have to meet additional requirements to qualify.

1. **An Acceptable Graduate Degree.** BCBA applicants must have received, at minimum, a master's degree from an accredited university in behavior analysis, education, psychology, or a program with an approved BACB course sequence. All other degrees must be approved by the BACB.
2. **Completion of an Approved Course Sequence.** BCBA applicants are required to complete a sequence of graduate courses approved by the BACB. The course sequence at TTU has been approved by the BACB and aligns with the latest task standards (4th Edition).
3. **Supervised Experience.** BCBA applicants must complete 1500 hours of supervised field experience. Supervision may not begin until the applicant (a) successfully completes one course from an approved BACB course sequence and (b) completes an online Supervision and Experience Training Program. No more that 50% of the experience can be in direct implementation of behavioral programs. The BACB maintains rigorous standards for supervision and requires documentation of experience hours on a weekly to biweekly basis. TTU plans to offer a practicum in supervision, in which participants receive 1.5 hours of credit per hour of experience, beginning in the Fall semester of 2016.
4. **Certification Exam.** The final step in earning the BCBA credential is the completion of the nationally administered certification exam. Applicants may register for the exam at multiple sites throughout the United States.

Transferring Credit from other Course Sequences

As all course sequences are individually approved by the BACB, you will need to consult with Dr. Seth King before attempting to receive credit for BCBA courses taken outside of TTU.