Institutional Effectiveness
2023-2024

Program: Higher Education PhD
College and Department: College of Education & Human Sciences, Curriculum & Instruction
Contact: Ashley Akenson
Mission:
The online Higher Education Ph.D. (HE PhD) program is designed for candidates pursuing careers in leadership using cutting-edge data to serve as academic faculty, university administrators, policy analysts, and educational researchers in higher education institutions across the state and nation. This program prepares candidates to leverage robust and complex data across educational systems—both P-12 and postsecondary—to better understand student access, persistence, and success as well as challenges facing higher education.

Since a Ph.D. is driven primarily by research rather than practice, a core objective of this proposed program is to prepare professionals to lead institutions of higher education and confront the challenges facing higher education through rigorous research and data science. The curriculum emphasizes mastery of theoretical frameworks and research methodologies to foster creative, relevant solutions using the most reliable, valid data and innovative platforms and systems to drive change. The HE PhD program is grounded in research and data science with 18 credit hours of research coursework—this is three times more than most terminal degree programs. The program features technological innovation, extensive research training, comprehensive faculty and peer support, and opportunities for collaborative scholarly work. In addition to, being fully online, this proposed program will leverage Tech's cutting-edge instructional technologies where program candidates will learn advanced technologies to engage future and current college students through various platforms.

Attach Curriculum Map (Educational Programs Only):
In progress.

PG 1: High Quality Course Instruction

Define Outcome:
Provide high quality, innovative course instruction that models and applies evidence-based practices in research methods, data science, and crucial higher administration content knowledge.

Assessment Methods:
Course evaluations for each faculty member are implemented and maintained through the IDEA evaluation system and are used by faculty members to refine instructional practices and modify course content based on student feedback in support of program goals and student learning outcomes. The IDEA evaluation survey is nationally normed, standardized instrument. These evaluations allow for national comparisons against similar courses with student ratings of progress on relevant objectives and teacher and course effectiveness. IDEA evaluations are used at higher education institutions all over the US. The evaluations have the support of 45 years of research and include questions to account for variables such as class size, student motivation, and other student and course characteristics. Scores, on a five-point scale, are used to gauge curriculum and faculty efficacy with respect to program goals and SLOs. The IDEA evaluation reports incorporate resources to support instruction development and improvement. The Director of Graduate Programs tracks and reviews all ELPhD faculty IDEA scores each semester. Reported scores are aggregated for each semester and compared against program-set quality benchmarks. Trend data (5-year) is also tracked and reviewed to ensure quality.

Criteria for Success (Thresholds for Assessment Methods):
Acceptability: 4.0 score
Expectation: 4.4 score
Exceptionality: ≥ 4.5 score

Link to 'Tech Tomorrow' Strategic Plan:
1.A Experiential Learning,1.E Stackable Credentials,2.A Technology Infused Programs,2.B Research, Scholar, Intellect, and Creativity,2.C Adult Learners,4.B Programs, Certificates, and Training,4.C Network of Scholars

PG 2: Scholarly Research & Data Science Proficiency

Define Outcome:
Develop innovative scholars who are equipped with robust research methods and data science skills through applied data science and scholarly activities. These administrator-scholars will use research methods and data science to address challenges, initiate data-informed change, and enhance higher education program development centered on student success.

Assessment Methods:
Professional Applications of Research Methods & Data Science

Most students in the HE PhD program are currently working in higher education, K–12 education, or training/education in industry. The program equips them with skills that can be readily applied to their professional environments as they progress and transforms them to administrator-scholars. These opportunities may include creating or revising reports, creating data visualizations, presenting data-informed products/processes/guidance to boards or committees, leading initiatives implementing best practices from higher education and research scholarship, internal evaluation efforts (including data analysis and visualization), and more. Students' ability to apply curricular content in these contexts directly demonstrates their scholarly research and data science skills. It should be noted that the number and type of opportunities will vary widely. Data about the types and quality of these experiences will be collected by survey, related course assignment data, and/or qualitative inquiry. Number of opportunities to present, publish, train, or receive professional development in these areas will also be used to ensure students have access to adequate opportunities across a variety of forums, conferences, symposia, trainings, publications, and platforms.

Criteria for Success (Thresholds for Assessment Methods):
Thresholds TBD based on faculty & student feedback.

Link to 'Tech Tomorrow' Strategic Plan:
1.A Experiential Learning,1.D High Impact Practices,2.A Technology Infused Programs,2.B Research, Scholar, Intellect, and Creativity,2.C Adult Learners,4.B Programs, Certificates, and Training,4.C Network of Scholars

SLO 1: Data Science & Quantitative Research Methods Mastery

Define Outcome:
Higher Education Ph.D. program students demonstrate progressively more complete and sophisticated data science and quantitative research methods content mastery appropriate for a doctoral student, building on and connecting theories, concepts, skills, and other subject matter through courses on their Program of Study. In the culminating quantitative research course (EDU 7300), ≥ 80% of students will answer 70 of 85 final exam questions correctly. The course *Data Manipulation, Analytics, & Visualization* (HRED 7180), has not yet been offered; faculty will work to identify most appropriate assessment and associated data.

Assessment Methods:
EDU 7300 Final Exam

The EDU 7300 final exam is the culminating assessment for the 3-course quantitative research sequence. Students must have appropriate comprehension and proficiency at the doctoral level to pass the exam. The exam has a total of 85 questions pertaining to the nature of research (n = 17), measurement and instrumentation (n = 2), sampling (n = 5), reliability and validity (n = 19), the literature review (n = 5), proposal writing (n = 2), design characteristics (n = 12), choosing an appropriate design and methodology (n = 15), statistical choice (n = 5), and results interpretation (n = 5).

Criteria for Success (Thresholds for Assessment Methods):
EDU 7300 Final Exam thresholds
Acceptability: 65/85 points earned
Expectation: 70/85 points earned
Exceptionality: 75/85 points earned

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SLO 2: Content Mastery & Skill Integration

Define Outcome:
Higher Education PhD students develop, integrate, and apply foundational higher administration content, research, data analysis, data visualization, and communication skills across the curriculum, demonstrated by the successful completion of the Digital Writing Collaborative (DWC) portfolio. This portfolio is comprised of work from 5 key courses.

Assessment Methods:
With scaffolded learning experiences across five courses, students will participate in a sequential project to examine data science related to the student's respective career or career aspirations. The Digital Writing Collaborative is intended to develop students' writing skills, socialize them into the profession of higher education, and build relationships between students and faculty. The courses will be offered in a hybrid of synchronous and asynchronous formats to allow for flexibility and numerous high impact touch points. Students will identify a real-world problem or concern at their respective institutions (via the student's context of rural, urban, community college, private, public, populations served, etc.), students will participate in an embedded applied learning experience (15 clock hours) in each of the courses to further examine the issue using data, research methods, and scholarly literature. Faculty will help students identify units across Tech's campus in which they may carry out their field experience. Faculty will connect students to the respective people in the units. Students are then responsible for fulfilling the applied learning project expectations with help and guidance from the course instructor:

- HRED 7010 – working paper
- HRED 7020 – conference proposal
- HRED 7030 – funding proposal
- HRED 7040 – literature review
- HRED 7050 – technology platform review

These will be shared with and/or presented to peers and other colleagues who provide formative feedback. The refined artifact which will then be loaded into the student's portfolio. The artifacts and supporting materials will then be used to build each student's body of knowledge and professional preparation across the remaining curriculum.

As these courses are new and may not have been offered, assessments for each artifact and thresholds for the DWC portfolio are under discussion. Individual course data may be reported until full portfolio data is gathered, which will take multiple semesters for each cohort to complete. As the program grows, 5-year trend data will be collected and analyzed.

Criteria for Success (Thresholds for Assessment Methods):
TBD as not all courses have been offered.

Link to 'Tech Tomorrow' Strategic Plan:
1.A Experiential Learning,1.D High Impact Practices,2.A Technology Infused Programs,2.B Research, Scholar, Intellect, and Creativity,2.C Adult Learners,4.A Sustainable Partnerships,4.B Programs, Certificates, and Training,4.C Network of Scholars,4.D Alumni/Friend Engagement

SLO 3: Professional Preparedness

Define Outcome:
Higher Education PhD candidates masterfully apply program content and skills commensurate with rigorous doctoral and professional expectations. Candidates will demonstrate a depth and breadth of higher administration knowledge, research proficiency, and data science competence through successful completion of a dissertation prospectus, prospectus defense, and dissertation defense. One hundred percent of Higher Education PhD candidates who have a scheduled dissertation defense should pass on their first attempt.

Assessment Methods:
Dissertation prospectus scores and defense pass rates are monitored each semester. Data are looked at over semester, annual, and cohort levels. As the program grows, 5-year trend data will be collected and analyzed.

<u>Dissertation Prospectus</u>
Note: Ph.D. candidate is used in place of student as the individual will typically have passed comprehensive exams before presenting the prospectus.

Ph.D. candidates prepare their dissertation prospectus in Research Seminar in Education (EDU 7920). In this course, the Ph.D. candidate crafts the research design and write the prospectus for the proposed study. After receiving iterative feedback on the first three chapters of their research proposal from the course instructor and making revisions, the Ph.D. candidate presents a practice prospectus defense. The course instructor and candidate's Chair attend, though all committee members are welcome. Input from the course instructor and Chair is given at the end of the practice defense. The Ph.D. candidate then incorporates the feedback into the prospectus presentation and the dissertation prospectus.

Once a formal prospectus presentation and defense date has been selected, the Ph.D. candidate is required to submit the dissertation prospectus to committee members at least two weeks prior to the scheduled prospectus date, though earlier is encouraged when possible. If the prospectus defense was not successful, the committee will ask the Ph.D. candidate to revise the proposal and convene at a later date to present the revised prospectus. Ph.D. candidates who successfully defend the dissertation prospectus are given permission to proceed with their dissertation work.

Dissertation prospectus defense pass rates are monitored each semester. Data are looked at in semester, annual, and cohort levels, as well as 5-year trend data. This data is also reviewed in conjunction with other assessment data (e.g., research sequence, comprehensive exam,

academic achievement, scholarly activity) to provide a comprehensive understanding of the student progress and program quality.

Dissertation Defense

Building upon the prospectus work, the Ph.D. candidate works closely with committee members throughout the dissertation process in preparation for the dissertation defense. A Ph.D. candidate regularly submits dissertation chapters to each committee member for feedback (schedule determined by Ph.D. candidate and committee Chair). The Ph.D. candidate incorporates feedback from all members and continually seeks additional guidance on revisions and refinement. The full dissertation must be submitted to the dissertation advisory committee and Director of Graduate Programs a minimum of three weeks prior to the scheduled defense date, though earlier is encouraged when possible.

During the dissertation defense, the Ph.D. candidate has 20–40 minutes to review the information covered in the prospectus proposal (e.g., context, problem addressed, significance, methodology) and present the original dissertation research findings, conclusions, and implications (defense time is determined by the Chair). The defense includes written materials and a formal presentation. After the presentation has concluded, the committee and any others present may pose questions to the Ph.D. candidate. Committee questions may focus on research methods, findings, connections to the literature, implications, and areas that have been the subject of substantial revision during the dissertation process. If the dissertation defense was successful, the committee signs the Dissertation Defense form and submits it to the Director of Graduate Programs and Graduate Studies. If the defense was not successful, the committee also provides additional feedback and outlines revisions that need to be made before scheduling a second defense.

The dissertation defense serves as the final assessment of a Ph.D. candidate's content mastery, course competency, and professional skill development as well as their development as scholars and leaders. Students must have mastered and integrated the content and skills acquired throughout the ELPhD program in order to pass the dissertation defense.

Criteria for Success (Thresholds for Assessment Methods):
Dissertation Prospectus thresholds

Acceptability: 100% will earn mostly 2s (acceptable), with no more than 2 elements receiving 1 (developing) or less; Ph.D. candidates pass the prospectus defense in no more than two attempts.

Expectation: 80% will earn ≥2 on every element; Ph.D. candidates pass the prospectus defense with some major revisions.

Exceptionality: 100% will earn ≥2 on every element, with at least three 3s (exemplary); Ph.D. candidates pass the prospectus defense with minor revisions.

Dissertation Defense thresholds

Acceptability: Ph.D. candidate passes the dissertation defense in no more than two attempts; candidate answers to defense questions, but answers may lack some of the desired complexity/depth; dissertation and defense presentation address all the required elements (study context, problem description, study purpose, significance, theoretical lens, connections to relevant literature, research methodology, findings, conclusions, and implications), but may need additional information; major revisions may be required before submitting to Graduate Studies and ProQuest.

Expectation: Ph.D. candidate passes the dissertation defense on the first attempt; Ph.D. candidate adequately answers defense questions; dissertation is thorough and well-crafted, addressing all required elements in sufficient detail; minor revisions required before submitting to Graduate Studies and ProQuest.

Exceptionality: Ph.D. candidate passes the dissertation defense on the first attempt; candidate's answers to defense questions are exceptional and demonstrate deep understanding of and connection to the work; defense presentation is engaging, informative, and shows Ph.D. candidate's expertise as a scholar and appropriate professional skills; dissertation displays thoughtful organization, relevant study purpose, clear significance, excellent methodology, clear findings, and insightful, nuanced conclusions and implications; minimal, if any, revisions are required before submitting to Graduate Studies and ProQuest.

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1.A Experiential Learning,1.C Diversity,1.D High Impact Practices,1.E Stackable Credentials,2.A Technology Infused Programs,2.B Research, Scholar, Intellect, and Creativity,2.C Adult Learners,4.B Programs, Certificates, and Training,4.C Network of Scholars

List of Appendices:

Appendix 1: Curriculum Map

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Higher Ed PhD Core & Research Curriculum Map

I = introduced R = reinforced M = mastery A = assessment

Core Course Alignment with Program Goals & Student Learning Outcomes

Course	*Title*	*High Quality Course Instruction (PG 1)*	*Data Science & Quantitative Research Methods Mastery (PG 2, SLO 1)*	*Content Mastery & Skill Integration (SLO 2)*	*Professional Preparedness (SLO 3)*
HRED 7000	Seminar in Higher Education	I			I
HRED 7010	Trends & Issues in Higher Education			A	
HRED 7020	Ethical Aspects of Higher Education			A	
HRED 7030	College & University Finance			A	
HRED 7040	Public Policy & Higher Education Law			A	
HRED 7050	Educational Technologies, Design, & Innovation in Higher Education			A	
HRED 7110	Trends & Structure of Higher Education Administration				
HRED 7130	Leadership Development & Transformation				
HRED 7140	College Access, Affordability, & Student Success				
HRED 7150	Program Planning, Evaluation & Assessment in Higher Ed Administration				

Research & Data Science Course Alignment with Program Goals & Student Learning Outcomes

Course	*Title*	*High Quality Course Instruction (PG 1)*	*Data Science & Quantitative Research Methods Mastery (PG 2, SLO 1)*	*Content Mastery & Skill Integration (SLO 2)*	*Professional Preparedness (SLO 3)*
EDU 7420	Quantitative Inquiry in Education I	I	I	I	I
EDU 7430	Quantitative Inquiry in Education II	R, M	R, M, A	R	R
EDU 7300	Research Design	M	M, A	M, A	M, A
HRED 7160	Fundamentals of Data Science	I	I	I	I
HRED 7170	Applications of Data Analysis	R	R	R	R
HRED 7180	Data Manipulation, Analytics, & Visualization	R, M	R, M, A	R, M	R, M
HRED 7190	Predictive Analytics	R, M	R, M	R, M	R, M, A
EDU 7920	Research Seminar in Education	M	M, A	M, A	M, A