STATE OF TENNESSEE
HIGHER EDUCATION COMMISSION
STUDENT ASSISTANCE CORPORATION
312 ROSA L. PARKS AVENUE, 9TH FLOOR
NASHVILLE, TENNESSEE 37243
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Memorandum

TO: Bernie Savarese, Acting Vice President for Academic Affairs and Student Success
            The University of Tennessee System

FROM: Julie A. Roberts, Chief Academic Officer
            Tennessee Higher Education Commission

SUBJECT: University of Tennessee, Knoxville
            Letter of Notification: Innovative Transdisciplinary Studies, Bachelor of Science (BS)

DATE: September 15, 2023

Thank you for the submission of the Letter of Notification (LON) for the Innovative Transdisciplinary Studies, Bachelor of Science (BS) program. Per THEC Policy A1.0 New Academic Programs: Approval Process, the LON is evaluated on the following criteria: alignment with state master plan for higher education and institutional mission; need; feasibility; institutional capacity to deliver the proposed academic program; and program costs/revenues.

After reviewing the LON, I approve UTK's plan to develop the New Academic Program Proposal (NAPP) for the Innovative Transdisciplinary Studies, Bachelor of Science. It is understood the proposed program will be developed in accordance with the mission of UTK and will meet the Master Plan for Tennessee Postsecondary Education 2015-2025 degree completion and workforce development objectives.

As UTK continues to develop the proposed program, all concerns italicized on the attached LON evaluation must be reflected in the NAPP, the most significant of which are highlighted here.

- Align the data presented in the local and regional need, and employer data section more directly with the training provided by the proposed program, and clarify how the curriculum of the proposed program will prepare students for the jobs listed in the proposal.
- List existing interdisciplinary programs at UTK and other state institutions, along with three years of enrollment and graduation data in the existing programs section. Describe how the proposed transdisciplinary program is distinct from the existing interdisciplinary programs, and explain why the proposed CIP code was selected.

The attached evaluation provides more detailed questions regarding these concerns. Upon receipt of the NAPP, THEC will evaluate the NAPP to ensure all questions outlined in this LON evaluation are addressed before external review can be scheduled.

Attachment

cc: Randy Boyd, President, UT System
      Robert M. Smith, Interim Executive Director, THEC
      Donde Plowman, Chancellor, UTK
      John Zomchick, Provost and Senior Vice Chancellor, UTK
      Karen Etzkorn, Director of Academic Affairs, UT System
      Ozlim Kilic, Interim Vice Provost for Academic Affairs and Dean, College of Emerging and
      Collaborative Studies, UTK
      Ryan Korstange, Director of Academic Affairs, THEC

The evaluation of the Letter of Notification (LON) is in accordance with the THEC Policy A1.0 New Academic Programs: Approval Process. The evaluation is conducted by interested parties and THEC staff. The LON is posted on the THEC website for a 15-day period of comment by interested parties. Based on the internal and external evaluation, THEC will make a determination to support, not to support, or defer a decision based on a revised LON.

Institution: University of Tennessee, Knoxville	**LON Submission Date:** August 7, 2023
Academic Program, Degree Designation: Innovative Transdisciplinary Studies, BS **Concentration(s):** NA	
Proposed CIP Code and Title: 30.0601 (Systems Science and Theory) A program with a multidisciplinary approach to the analysis and solution of complex problems, requiring a combined approach using data and models from the natural, social, technological, behavioral and life sciences, and other specialized fields.	
Proposed Implementation Date: August 2024	
Time Period Posted on Website for Public Comment: August 7 – August 21, 2023	
Academic Program Liaison(s): Karen Etzkorn, Director of Academic Affairs, UT System; etzkorn@tennessee.edu Ozlem Kilic, Interim Vice Provost for Academic Affairs; Dean, College of Emerging and Collaborative Studies, UTK; okilic@utk.edu	

Note: Comments in italics within this document should be addressed in the development of the New Academic Program Proposal (NAPP).

Letter of support from President/Chancellor	▪ A letter of support addressed to Interim Executive Director Bob Smith dated August 4, 2023 from UT System Acting Vice President of Academic Affairs and Student Success, Bernie Savarese, is included. ▪ A campus letter of support addressed to UT System President, Randy Boyd, from UTK Provost, John Zomchick, dated July 29, 2023 is also included.
Section I: Overview	
Academic Program Liaison	▪ Karen Etzkorn, Director of Academic Affairs, UT System; etzkorn@tennessee.edu ▪ Ozlem Kilic, Interim Vice Provost for Academic Affairs; Dean, College of Emerging and Collaborative Studies, UTK; okilic@utk.edu
Section II: Background	
Background on academic program development	▪ The proposed program is designed to be a customizable degree to prepare students for future employment opportunities that require interdisciplinarity. The program curriculum is designed to be modular, catering to student interests across disciplines and

	incorporating several 12 credit stackable certificates. Stackable certificates can be combined to develop a customized skill set. ▪ The Innovative Transdisciplinary Studies program has been developed as the flagship bachelor's program in the new College of Emerging and Collaborative Studies (CECS) at UTK, which was approved by the Board of Trustees in Spring 2023. ▪ The purpose of the proposed degree program is to engage students in emerging new fields of study, which are more interdisciplinary and may not fit within one department or college. ▪ The campus would like to centralize offerings of inter- and trans-disciplinary subjects such as data science and artificial intelligence, thereby reducing redundancy and allowing student access to emerging interdisciplinary topics that are relevant to many disciplines.

Purpose and nature of academic program	▪ The proposed program will allow students to design their own transdisciplinary undergraduate degree, including internship and service experiences, with guidance from faculty and advising staff based on their career goals.
	▪ The customizable curriculum allows for flexibility and timely adaptation to workforce demands and student interests and is intended to teach students basic design skills.
	▪ Students will benefit from cross-disciplinary training and conversation with students in other CECS programs. ***Please include a list of potential occupations for which the customizable training proposed in this program would prepare graduates.***
	▪ The proposed program includes 120 total credit hours, broken down as follows:
	  ○ 27 credit hours of CECS core courses taught by CECS full-time faculty and CECS Faculty Fellows.
	  ○ 6-12 credit hours in research, service, and internships to strengthen skills and employability, taught in partnership between CECS faculty and the UTK Center for Career Development.
	  ○ 21-37 credit hours will be earned from stackable 12 credit hour certificates and minors or approved campus electives.
	  ○ Additionally, each certificate will include a three credit hour gateway 101 course, plus three additional three credit hour disciplinary courses. ***Please clarify if students will be required to select certificates AND minors, a combination of both, or just one or the other.***
	  ○ 50-60 credit hours will be for completion of the VolCore, UTK's general education curriculum.
	▪ ***Figure 1 on pg. 9 includes 123 credits in the CECS BA/BS, please revise. Also, please define what "program plan" means in that graphic.***
	▪ ***In the program of study section of the NAPP, please provide several possible program of study examples, illustrating different***

	ways student can construct an appropriate pathway to degree completion. ▪ The proposed program will have a hybrid delivery method and will include in-person and online instruction. ▪ Each student will take an introductory course, ITS-101: Design Your Degree Design Your Career, at the start of their program. ▪ Stackable certificates and minors will be developed by leveraging existing UTK courses and developing new courses in partnership with industry. CECS plans to launch 10 certificates in Fall 2024 as part of the proposed program, including: Cybersecurity, Data Science, Applied Artificial Intelligence, Human-Computer Interaction, Emerging Design Studies, User Experience and Game Design, Law Tech, Connected World, One Health, and Sustainability. ▪ The target student population includes students interested in a specific, interdisciplinary career path, students who are uncertain about their ideal career and want to explore options, and those who have completed community college TTPs and/or have work experience and would like to pursue a four-year degree in an emerging field. *In the articulation and transfer section of the NAPP, please detail which TTP's will be accepted and how students who have completed a TTP will be matriculated into the program?*
Alignment with State Master Plan and Institutional Mission	▪ The program aligns with UTK's mission, which states: "We are a diverse community with a shared commitment to discovery, creativity, learning, and engagement. At UT Knoxville, we: Empower learners of all ages and backgrounds to achieve their dreams through accessible and affordable education and state-of-the-art research training opportunities. Advance the prosperity, well-being, and vitality of communities across Tennessee and around the world through our research, teaching, service, and engagement. Commit to excellence, equity, and inclusion within the university, across the state, and in all our global activities." ▪ More specifically, the proposed BS-ITS will allow students to "advance the prosperity, well-being, and vitality of communities across Tennessee" through internship placements, research courses, and capstone projects that affect their communities. ▪ The program also aligns with UTK's mission to "empower learners of all ages and backgrounds" by offering an innovative and customizable curriculum designed to capture a significant portion of TTP students annually. ▪ The proposed program aligns with the Drive to 55 objective in THEC's Master Plan for postsecondary education by enabling students from diverse backgrounds to customize their own bachelor's degree, and specifically furthers this goal by providing a pathway to a bachelors degree for TTP students. The program also aligns with postsecondary achievement goals by providing

	opportunity for community college transfers to complete a vertical transfer.
Institutional capacity to deliver the proposed academic program	▪ Stackable certificates and minors will be developed by leveraging existing UTK courses and developing new courses in partnership with industry. CECS has centralized administration to handle the development and oversight of collaborative certificates and minors out of existing UTK offerings. ▪ CECS will maintain a drop-by advising office for students planning their program. ▪ CECS has developed a rubric for revenue sharing via semester credit hour (SCH) allocation aligned with UTK's new budget allocation model, allowing for 80 percent of the SCH going to the college teaching a given course, and 20 percent going to the student's home college. ▪ ***Please address how the proposed program will impact the overall capacity of the institution, including potential lost enrollment to other majors/programs, collaborative agreements, between departments, etc. Include positive impact where applicable.***
Existing programs offered at public and private Tennessee institutions	▪ ***Please revise to include interdisciplinary undergraduate programs with similar curricular flexibility at East Tennessee State University (30.0000); Middle Tennessee State University (30.9999); Tennessee State University (30.0000); Tennessee Technological University (30.0000); University of Tennessee, Martin (30.0000); and the University of Memphis (30.0000). There are also degrees offered by private institutions in CIP 30.9999 that should be included. Describe how the proposed program differs from these interdisciplinary or integrated studies degree programs.*** ▪ ***UTK offers an Interdisciplinary Programs, BA with a concentration in Data Science. Please include this degree program in the list of existing programs and describe how the proposed program differs from this existing degree.*** ▪ A doctoral program in Data Science and Engineering exists in the proposed CIP code at the Bredesen Center at UTK, and faculty fellows at the Bredesen Center will collaborate on the proposed program. ***Please offer more details about this proposed collaboration in the institutional capacity section.***
Accreditation	▪ The proposed program will be regionally accredited by SACSCOC. There is no accrediting body for undergraduate transdisciplinary programs. ▪ UTK SACSCOC liaison, Heather Hartman, will be responsible for keeping accreditation up to date.
Administrative Structure	▪ The proposed program will be housed in the newly-created College of Emerging and Collaborative Studies, and will have program directors and program coordinators to oversee curriculum, enrollment, course scheduling, assessment, accreditation, and capstone and research course contents. ***Figure 3 on page 14 does not seem to match Figure 2 or the description of the***

	administrative structure of the CECS in the Institutional Capacity section above, please reconcile.
Section III: Feasibility Study	
Student interest	▪ A survey of current undergraduate students in July-August 2023 and resulted in 281 responses. 34 percent of respondents indicated that they would have been interested in a major with opportunities for multidisciplinary education had it been available. ▪ Respondents indicated the most interest in Artificial Intelligence (99, or 35 percent) and Game Design (97, or 35 percent) as potential areas for study, but selected Artificial Intelligence (73, or 26 percent) and Data Science (62, or 22 percent) as the certificates they'd be most likely to choose.
Local and Regional Demand	▪ Lightcast, a labor market analytics firm, conducted a study of local and regional demand. No programs in the entire Southeast region graduate students in the category of the proposed program. Target occupations from the proposed program are projected to increase by 14 percent from 2022-2027. ***Please provide a more direct connection between the customizable training proposed in this degree program and these employment opportunities. That is, clarify the way that the proposed training will prepare graduates for these occupations. Many occupations listed figure 4 require industry certification, or specialized education – please clarify how graduates of this program will be well qualified for jobs in the areas indicated in the local and regional demand section.*** ▪ ***What jobs/occupations make up the proposed field identified in Figure 5? Which jobs were included in the 5-year projection table (Table 5)?***
Employer Demand	▪ The proposed program seeks to graduate students with in-demand skills in the region. ▪ From July 2022 to June 2023, there were 307,329 unique job postings for in fields related to the proposed program. ***Please provide information on how the proposed program connects with the workforce fields and skills, and provide data for fields/jobs not requiring experience or additional training.*** ▪ Research was also conducted on the employer demand for the stackable certificates in Artificial Intelligence, Game Design, and Human/User-Centered Design.
Community and Industry Partnerships	▪ CECS is engaged in discussions with community colleges, such as Roane State, to work out TTP arrangements and a potential partnership with Oak Ridge Enhanced Technology and Training Center. ▪ ***Please provide additional details about the potential industry and educational partnerships mentioned in this section.***
Section IV: Enrollment and Graduation Projections	
Projected Enrollment and Graduates	▪ Enrollment projections are as follows, and reflect a 10 percent attrition rate, which is in line with UTK-wide retention, as well as graduates in Year 2 due to students transferring through a TTP.

Year	Academic Year	Projected Total Fall	Projected Attrition	Projected Graduates
1	2024-2025	10	1	0
2	2025-2026	21	2	1
3	2026-2027	37	3	2
4	2027-2028	55	4	9
5	2028-2029	60	5	20

Section V: Projected Costs to Deliver Proposed Program

Faculty	▪ UTK estimates the number of FTE Lecturers needed based on a 4/4 teaching load. Lecturer salary and benefits costs are estimated at $90,000 and $28,800 (32 percent), respectively. Five courses will be taught in years 1 and 2, six in year 3, seven in year 4, and eight in year 5. ***Please specify the number of lecturers who will be needed starting in year 1 and through year 5, and clarify if they are already in place or will need to be hired. Additionally, this description makes it seem like tenured or tenure track faculty will not regularly teach in the program – is this accurate?*** ▪ ***Figures for total compensation do not match the Financial Projections Form. Please reconcile. Does the increase in costs reflect an increase in the number of courses being taught? If so, please explain in the narrative.*** ▪ The program may have tenure-track faculty teach occasionally, and the two CECS program directors could teach. ***Please estimate the costs required to pay adjuncts if the tenure-track and/or program directors teach a course.***
Non-Instructional Staff	▪ The program intends to hire undergraduate graders, starting with one grader in year 1, and increasing to four graders in year 5 across all gateway courses. Graders will be compensated $20 per hour. ***Please clarify if each grader will complete 66 hours of grading per semester, or if the total number of grading hours will be 66 per semester. Costs listed in the narrative do not match the Financial Projections Form. Please reconcile.***
Graduate Assistants	▪ NA
Accreditation	▪ There are no costs associated with accreditation for this program.
Consultants	▪ $1,500 has been allocated for external review.
Equipment	▪ No additional costs associated with equipment needed for this program. ***If the lecturer position is to be hired, please revise to include any equipment needed for the new hire.***
Information Technology	▪ No additional costs with information technology are needed for this program. ***Given the focus of several of the certificates, will additional information technology resources be needed?***
Library Resources	▪ No additional library resources are needed for this program.
Marketing	▪ $500 has been allocated for marketing expenses. ***Specify how funds will be spent in the Marketing section of the NAPP.***
Facilities	▪ No additional facilities costs are associated with this program.
Travel	▪ No travel expenses are requested.
Other Resources	▪ No other resources are requested.

Section VI: Projected Revenues for the Proposed Program

Tuition	▪ Tuition revenues are calculated as $378 per SCH for Tennessee residents and $759 per SCH for non-residents. The campus estimates that 20 percent of students will pay out-of-state tuition. ***Please revise the projected revenues section to include total estimated figures.*** ▪ The proposed program is not expected to be revenue positive in its first five years of implementation.
Grants	▪ NA
Other	▪ NA
Appendices	

Letters of Support	▪ Letters of support were received from:
	  o Dr. Flora W. Tydings, Chancellor, Tennessee Board of Regents
	  o Edward Chiang, Co-founder and CEO, Moment Energy
	  o Dr. Iman Tahamtan, Senior UX Researcher, JPMorgan Chase and Lecturer, UTK
	  o Patrick M. Hanley, Jr. Esq., Head of Government Affairs, Viridi Parente—***Please provide a signed copy of this letter.***
	  o Ryan Herring, Sales Director, Partnerships and Alliances, Quantum Computing, Services, and Solutions, IonQ
	  o Britton Garett, CEO, iO Urology
	  o David Morgan, Chief Strategy Officer, Carbon Rivers
	  o Dr. David G. White, Interim Dean, Herbert College of Agriculture, UTK
	  o Dr. Matthew Mench, Dean and Wayne T. Davis Dean's Chair, Tickle College of Engineering, UTK
	  o Diane Ward, Vice President of Student Learning and Chief Academic Officer, Roane State Community College
	  o All letters can be found in Appendix A.

THEC Financial Projections Form	▪ The THEC Financial Projections Form is located in Appendix B. ▪ The program has relatively low start-up costs, but will not be self-supporting in the first five years. ▪ ***Please put the costs associated with external review under one-time expenditures rather than recurring costs. The cost estimates in the version of the financial projections form included in the appendix do not match those in the excel file submitted as part of the proposal packet, please reconcile.***
Public Comment	
Public Comments Received	▪ No public comments were received.