Application for ThinkAchieve: *Beyond the Classroom (BTC)* **Experiential Learning Designation**

Experiential Learning at UTC takes students beyond the classroom to connect theory and practice through creative endeavors, research, internships, leadership, service-learning, and intercultural opportunities.

APPLICATION INSTRUCTIONS FOR FACULTY AND STAFF

Please complete the application and submit it to think@utc.edu. More information on ThinkAchieve, UTC's platform supporting Experiential Learning is at www.utc.edu/think. If you have questions, please call Bengt Carlson at (423)-425-5825.

Application Content Requirements
1) Complete the General Information section
2) Select the *Beyond the Classroom* experience category most applicable
3) Describe the experiential element in the course or program by responding to the two *Beyond the Classroom* Description prompts
4) Attach current Syllabus or experience description/program materials that clarify or highlight the experiential element of the course or program

GENERAL INFORMATION

Faculty/Staff Name: ABDUL R. OFOLI

Course/Experience Title (if course, please include course number): Interdisciplinary Design II (ENEE 4850)

Department or Office: Electrical Engineering Department

First Semester the Course/Experience will be Offered: Spring 2022

How often do you plan to offer this Course/Experience? Every Spring Semester

BEYOND THE CLASSROOM EXPERIENCE CATEGORIES (select one)

This application will be evaluated using a *rubric corresponding to one of the experience categories.* More information is available at www.utc.edu/think.

 X   **Creative:** Articulate, implement, and reflect on a substantive application of their academic foundations to solving a real-world problem or providing and interpretation or expression

_____ **Intercultural** (Domestic and International): Interact with a culture and/or region distinct from their own. Engage in academic inquiry and application afforded by the specific off-campus setting

_____ **Internship**: Practice skills or methods related to their field of study through supervised work in a professional or organizational setting

_____ **Research:** Work from a research question, hypothesis, or thesis statement, apply research design/methods to generate findings, communicate findings through presentation, publication, or other methods of dissemination

_____ **Service Learning:** Articulate, implement, and reflect on a substantive application of their academic foundations to a real-world service setting and/or need

_____ **Leadership:** Articulate, implement, and reflect on a substantive application of their academic foundations to develop skills for leadership

BEYOND THE CLASSROOM DESCRIPTION PROMPTS

Please specifically and concisely describe the experiential element of this opportunity in the three areas below. The experiential element should constitute ¼ of the credit or non-credit-bearing opportunity.

1. **Authentic Responsibility:** Student demonstrates initiative in the creation and/or execution of the experience; takes ownership of process and outcomes (see detail in category-specific rubric) This is the second-semester capstone design class for final-year students. The design phases of the engineering project include building a model, testing, evaluating, and reporting the design result. Student groups or teams comprised of 3 to 5 students. Each team is expected to come up with their Work-Breakdown-Structure (WBS) with tasks items for all members of the team. Individual team members' tasks are tracked during the semester through biweekly status reports by the teams. To make sure students take ownership of their tasks, additional individual reports are required to documents the work every student is doing including class presentations. In addition to documenting work in technical reports, teams are supposed to make poster presentations to engineers working in the field at the end of the semester. Teams also create a website to document their journey during the project and finally present at the College of Engineering Annual Technology Symposium.

2. **Reflection:** Share, using the table below, how the course or program requirements direct students to critically reflect before, during, and after the experience, integrating theory with practice and generating critical reflection on self and/or society. (e.g. student reflects on the activity; articulates personal, civic/social, and/or academic learning; identifies values and attitudes developed through the activity. See detail in category-specific rubric)

Description of <u>pre-experience</u> reflection activities	Survey Quiz prompts will include: 1. What do you think this course is going to be like? 2. What do you want to learn? 3. What skills do you bring to this course? 4. How will you deal with problems that might arise in completing your work? 5. What questions or uncertainties do you have?
Description <u>during the experience</u> reflection activities	Survey Quiz prompts will include: 1. What did you do for this project? What assumptions did you have about the experience? 2. How do you feel about it? What did it mean to you? What did you learn?

	3. What skills do you need? Were there skills required that you haven't developed yet? 4. How did you deal with problems that came up? What might you do differently next time? 5. What questions do you have? What are you uncertain about?
Description of <u>post-experience</u> reflection activities	Survey Quiz prompts will include: 1. What was this course like, especially the projects? Was it different from what you thought it would be? 2. Did you learn what you wanted to learn? What other things did you learn? Are these important to your UTC experience and future career? 3. What skills did you develop during this experience? 4. Are you satisfied with the way that you approached problems that came up? If not, how might you approach problems differently in the future? 5. What questions or uncertainties do you still have?

3. **Regular mentorship, supervision, and feedback:** Mentorship entails responding regularly to student work; supporting student reflection(more description below), integrating learning through the activity, and goal-setting for future involvement or inquiry (see detail in category-specific rubric)

This is one course in which students are constantly being mentored, supervised, and being given constant feedback throughout the semester. Students are supposed to be building and testing their final designs which can result in surprises for some students. Instructor meets 3 to four teams a week for a deep dive into their project discussing issues, troubleshooting problems and sometimes having to redefine the scope of the project. Students are required to demonstrate working subsystems of the project during these meetings to make sure they are on track to successfully complete their project. This is the first semester a reflection of their experience is required and this information will be valuable for the instructor in supporting and helping students in need based on the survey results. In addition to using students' experience reflection to support and help them during the course of the project, important notes from all reflections will be used in improving the project and learning experience in subsequent years this course is offered.