Textile Engineering & Technology Senior Design

In the Department of Textile Engineering, Chemistry and Science (TECS), students have expertise in engineering fundamentals, information systems, medical textiles, product development, supply chain management, and consumer behavior. Students in TECS are expected to graduate with the skills necessary to conceive (design and create), specify, implement, test, produce, and market complex engineering systems. The textile engineering & technology senior design course provides students the opportunity to work with industry to creatively synthesize solutions to relevant problems. The students work on teams to solve technical problems, study commercialization processes, utilize project management tools, think globally, understand/develop intellectual property and apply patent mapping principles.

As a project sponsor for a senior design project, you will work closely with the student team (3-4 members) for two semesters (Fall & Spring; mid-August through mid-May), through a design process (illustrated below) to develop an innovative product that meets the criteria and constraints of the project definition.


To have a project considered, please return the attached document to Dr. Jesse Jur via email: jsjur@ncsu.edu. If there are any questions about the project viability, please call at 919-515-1676 to discuss.
Textile Engineering & Technology Senior Design Project Proposal

Please return this document to Dr. Jesse Jur (jsjur@ncsu.edu)

The form may be found online at https://textiles.ncsu.edu/tecs/student-experience/senior-design/

<Date>

<Insert Project Title Here>

<Insert Sponsor Organization Here>

Sponsor Contact

<Provide name of contact person(s), phone number(s), email, and preferred method of communication>

Project Description

Background/ Motivation: <Provide background of problem, the motivation for the project, the importance of the project >

Design Objective: <State what design should accomplish, including any criteria and/or constraints, and your desired outcome for project.>

Proprietary Information: <Are there any constraints with respect to intellectual property that might be generated in the project?>

Resources: <Describe and additional resources that your company will be able to supply: supplies, special apparatus, software, guidance/ consultation by engineers or other technically-trained individuals, etc.>

GENERAL DISCLAIMER

Student engineering design projects are a valuable part of the undergraduate education program. Those sponsoring projects must be aware that the primary objective of the projects is to give the students a view of “real world” engineering design practice. Technical success of the projects is, of course, not guaranteed, although every effort on the part of the sponsors, faculty, staff, and students is made to provide a safe learning experience that result in a successful project. Submitting a project does not guarantee it is selected by a student team.
Other Notes

Sponsor’s Roll in Project: While the majority of the project management education is provided by the senior design faculty, the project sponsor is an integral part of the senior design project! The sponsor should be available to help define the project criteria & constraints and communicate with the student teams to make sure that the project is going in the right direction for you. Most often this requires video conference meetings on a periodic basis and review written documents that are sent to you by the team. It is most often that an involved the sponsor results in engaged students that yield success of the project. If needed, the senior design faculty will be available to communicate any issues.

Funding: Financial support is requested for the senior design project and facilities use. A funding level of $10,000 is requested and is able to be negotiated between the senior design faculty and the sponsor. The preferred funding method is by donation.

Intellectual Property: If the project is funded by a donation, the intellectual property generated from the project is owned by the students unless otherwise agreed upon with the sponsor. N.C. State University does not exert IP ownership unless an N.C. State employee is involved. Existing inventions and technologies are the separate property of the sponsor company or NC State. Sponsored research agreements are also available.