# TENNESSEE STATE UNIVERSITY

COLLEGE OF ENGINEERING

INDUSTRIAL PARTNERSHIP

PROGRAM

EMBRACE
THE
LEGACY

Excellence is our Habit!

# THE COLLEGE OF ENGINEERING

College of Engineering (COE) at Tennessee State University (TSU)has been offering a high-quality education in engineering, technology, and computer science for over 50 years. The college maintains approximately 1000 students between the undergraduate and graduate levels. Recognized as the "Best STEM Program for 2017" by the HBCU Digest, the college has six undergraduate programs (Applied and Industrial Technology, Architectural Engineering, Civil Engineering, Computer Science, Electrical Engineering, and Mechanical Engineering), four Master of Engineering programs (Electrical, Mechanical, Civil and Environmental), three Master of Science programs (Computer Science, Data Science, and Computer Information Systems Engineering), and one Ph.D. program (Engineering Systems and Computational Sciences).

The college's vision, mission and partnership goals guide the yearly plans of the College of Engineering.

#### VISION

The College of Engineering strives to be a leading institution for engineering, computer science, and technology education that fosters innovation in design, instruction, research, and service.

#### **MISSION**

The College of Engineering aims to teach and motivate every student to analyze problems, pursue continuous education, and apply their skills in their career. (Analyze, Pursue, Apply)

#### PARTNERSHIP STRATEGIC PRIORITIES

- 1. Aim for a yearly scholarship fund of 1 million dollars.
- 2. Attract more students by offering more full scholarships.
- 3. Seek out high-performing students from all fields and levels of higher education.
- 4. Enhance the college's reputation in the industry by fostering more engagement, internships, and job opportunities.
- 5. Provide students with a better learning experience by ensuring they have access to modern and well-equipped labs and technology, experienced and qualified instructors, comfortable learning spaces, and sufficient academic support such as tutoring, mentorship, and guidance.
- 6. Assist faculty and students in their technical and professional growth by organizing and supporting workshops, trainings, and conference attendance.
- 7. Boost student involvement and visibility by creating and supporting active student organizations and groups that participate in design contests.
- 8. Increase the awareness of the College of Engineering, its students, faculty, and industry partners in the local and national community.
- 9. Promote faculty research output by funding graduate students, research projects, partnerships, and using industry adjuncts to reduce teaching load.

# INDUSTRY PARTNERSHIP PROGRAM

The IPP is a program of the COE that connects industry partners with the college. It allows them to hire skilled students, work with faculty and departments, influence the engineering profession, and promote their brand with one of the best HBCU engineering colleges in the nation.

By collaborating with specific engineering departments, supporting student organizations, and joining collegewide programs and initiatives, industry partners can build strong relationships with students, the college, and the community. The college offers exclusive branding benefits to partners who sign a Memorandum of Understanding (MOU) that pledges financial support at the bronze, silver, or gold sponsorship levels. Partners who donate a gold-level amount before the new academic year begins are automatically welcomed as members of the TSU Engineering Dean Industrial Cluster (EDIC) for that year. This sponsorship package explains the different options for partnering and reaching the desired sponsorship level.

The COE will set the college event schedule for the next academic year by the end of Spring semester. Established partners can choose their preferred days/events based on their benefit level by the last Friday of June. The company will assign days and events according to the sponsorship level: Gold Level Partners get first choice, Silver Partners get second choice, and Bronze Partners get third choice. Industry that are not eligible for a partnership level can pick from the remaining days after the partners have chosen.



# **INDUSTRY PARTNER LEVELS AND BENEFITS**

Partner Level is defined by the summation of contributions (money and time) committed to the College over the course of a year.

#### Bronze \$15,000 - \$34,999

- Quarter Page advertisement in annual College Impact Magazine
- Bronze Level recognition on the College Industry Partner Website
- · Advertisement on sponsored event publications or gifts
- Automatic table at one College of Engineering Career Fair
- One corporate Monday for the year
- One Tabletop Thursday per semester
- Advertisement of Company with 8"x10" poster on Industry Wall in COE Building
- One Social Media Takeover Day for the year
- Third Consideration for targeted events on National Months or weeks

#### Silver \$35,000 - \$64,999

- Half Page advertisement in annual College Impact Magazine
- Silver Level recognition on the College Industry Partner Website
- · Advertisement on Sponsored event publications or gifts
- Automatic table at Fall and Spring COE Career Fair
- Two Corporate Day (Monday or Friday) per year
- Two Tabletop Thursdays per year
- Advertisement of Company with 16"x24" poster on Industry Wall in COE Building
- One Social Media Takeover per semester
- Second Consideration for targeted events on National Months or weeks and in classrooms
- · Invitation to serve on Department Industry Advisory Board

#### Gold \$65,000 and up

- Full Page advertisement in annual College Impact Magazine
- Gold Level recognition on the College Industry Partner Website
- Advertisement on Sponsored event publications or gifts
- Automatic table at Fall and Spring COE Career Fair and priority informational session and interview space during fair
- Three Corporate Days (Monday and/or Friday) per year with first priority on choice Tabletop Thursdays per year
- Advertisement of Company with 24"x36" poster on Industry Wall in COE Building
- Two Social Media Takeover per semester
- First Consideration for targeted events on National Months or weeks and in classrooms
- Invitation to serve on Department Industry Advisory Board
- Invitation to serve on Engineering Dean Industrial Cluster

# ANNUAL COLLEGE EVENTS

The College of Engineering has identified key events that will occur annually and are perfect for Industry to partner with and/or sponsor. Please contact the development team if you would like to know more details about ant event listed below. Contact information is at the end of the package.

#### 1. College of Engineering Student Welcome Events (\$5,000+ for each event)

- a. COE Freshmen Welcome Event every Fall during Freshman Move-In Week
- b. COE All Student Welcome Back Event at the Start of Fall and Spring Semester
- c. Departments will also host Welcome Events for only students in Department Fall and Spring
- d. Needs: T-shirts, goodie bags, food, branding materials, scholarship awards, organized activities.
- e. Corporate receives: Name on t-shirts, materials in bags, table set up to engage with students, name on flyer and advertisement lead sponsor chance to speak at event or organize activities.

#### 2. College of Engineering Week in Fall and Spring

- a. Fall College of Engineering Week Tentative Events (Week Sponsors \$10,000+)
  - i. <u>Joint Workshops</u> with Departments and/or student organizations around professional or skill development (partners get first consideration)
  - ii. College of Engineering Career Fair (COE students Only): \$750 for two representatives, \$75 per additional representative, \$250 for reserved interview room and time slots, \$500 organized informational or \$250 to visit a class for 20-30min during the week of career fair. **Event Sponsors \$3000+**
  - iii. Networking Event (COE Students, Faculty, and industry): Off campus, informal, social/networking event in the evening, need to purchase venue, food, etc. Event Sponsors \$3000+
  - iv. Community Service or Outreach Event

#### b. Spring National Engineers Week Tentative Events (Week Sponsors \$15,000+)

- i. <u>Joint Workshops</u> with Departments and/or student organizations around professional or skill development (partners get first consideration)
- ii. <u>College Scholarship Gala/Corporate recognition:</u> **\$5000/table** (\$2500-\$3000 of table cost will be given as a scholarship to a student of your choice that day, remaining will help with venue, food, awards, event media, entertainment, etc.)
- iii. <u>College of Engineering Career Fair (COE students Only):</u> \$750 for two representatives, \$75 per additional representative, \$250 for reserved interview room and time slots, \$500 organized informational or \$250 to visit a class for 20-30min during the week of career fair. *Event Sponsors* \$3000+
- iv. <u>TSU Regional Science Olympiad Competition:</u> need volunteers to plan and run events, need food for participating students and volunteers, t-shirts for participants, materials for events, companies can brand themselves to middle school, high school, collegiate students. **Event Sponsors \$3000+**







# **ANNUAL COLLEGE EVENTS**

#### 3. College of Engineering Symposiums (Annual or Bi-Annual) (\$3,000+)

- a. Built Environment Symposium 1-2 days (open to the public): Guest speakers needed, event advertising and gift bags needed, purchase of food and possibly space needed, etc.
- b. Advanced Computation & Technology Symposium 1-2 days (open to the public): Guest speakers needed, event advertising and gift bags needed, purchase of food and possibly space needed, etc.

#### 4. Engineering Dean Industry Cluster (EDIC)

- a. Gold partners automatically invited to join the cluster.
- b. Industry can buy-in \$10,000/year to join the cluster.
- c. EDIC meet twice annually and provide insight to the Dean on industry direction, student development, opportunities for students, new program and existing program needs, and in general contribute to molding the college for success.

# 5. College of Engineering Spring End of Year Banquet and Top Capstone Presentations to Industry (\$2500+)

a. Sponsor a table for \$2500 and get access to graduating seniors, observe and evaluate students work and capabilities, recognition on event advertisement and awards given to faculty and students during the banquet.

#### 6. College of Engineering Homecoming Activities (\$3000+)

- a. COE Homecoming Breakfast
  - i. Meet Alumni, students, faculty,
  - ii. Chance to speak, set-up table, sponsor food, name on awards, t-shirts and/or goodies provided to alumni etc.
- b. Company can host a <u>tailgate event</u> (pay Athletics). This can be at any football game not just homecoming.
- c. Company can host an <u>event in sky boxes</u> (pay Athletics). This can be at any football game not just homecoming.

#### 7. College of Engineering Summer Programs Appearance and Support (\$3000+)

a. Sponsor one-student to participate in a two-week residential camp or support scholarships awarded to incoming freshman who participate in the bridge program or help with purchasing camp materials/paying salaries of workers and counselors. Companies can be guest speakers, invite **programs** to their offices or to tour facilities, organize activities for skill or professional development, set-up a table, get company logos on shirts/goodies for the summer participants and advertisement.

#### 8. Corporate Mondays and Fridays (\$500 for half day, \$1000 for a full day)

- a. Offered Bi-weekly and on days other College Specific events are not scheduled.
- b. Must be scheduled a month in advance to reserve space and advertise for attendance.
- c. Company can design the day to their liking and the College will help plan, prepare, and advertise.
- d. Date Selection first consideration is given to established partners before the start of semester. Dates assigned after the start of the semester are on a first come basis.

#### 9. Tabletop Thursdays (\$150/table)

- a. Offered Bi-weekly and on days other College specific events are not scheduled.
- b. Must be scheduled two weeks in advance.
- c. College will only set up a table and chairs in either the Engineering Building, Computer Science building, and/or Applied and Industrial Technology building. Company brings all other components and determines their time at the table.

# **IDEAS FOR ADDITIONAL EVENTS**

The below ideas can be considered when trying to determine what type of events or activities to host or other ways to partner with the college. The college would prefer the chosen for events be planned on a corporate day for efficiency. These events may have a monetary value or time correlated to a monetary value to contribute to sponsorship levels. Further discussion with the development team may be required.

- Targeted Presentations or Events to honor Holidays or National Months
  - Examples: Black History Month, Women's Month, Asian/Pacific American Heritage Month, etc. (Consideration and invite given first to partners)
  - o Partners can help organize events, speak, provide food, etc.
- Alumni Targeted Events
  - Can partner with TSU Engineering Alumni Association
- Mentorship Program with targeted students
- Badge and/or Certificate Programs for skill and professional development
- Support Student Competitions
- Contribute funds to Department or College depending on if it is department or college organized team.
- Host Virtual Office hours where students can come for resume review, interview prep, professional mentorship.
- Company Office, Project, or Plant Tours
- Industry Lunch and Learns
- Conversation and Coffee
- Host an event for faculty.
- Donate or sponsor the purchase of equipment for student learning and/or research.
- · Provide research opportunities.
  - Via collaboration or company sponsored funding.
- Support Student Organizations (see page 8)
- Support Departments (see page 13)
- Support Student Competitions
  - Contribute funds to Department or College depending on if it is a department or college organized team.
- Provide Scholarships (see page 14)
  - To support effort to increase diversity in the workforce we need assistance financially getting excellent students to degree completion.
- Contribute to the New Engineering Building Fund
  - COE is currently in the design phase of a new 191,694 g. sf. Engineering Building. The building is designed to be constructed in 2 phases and will cost an estimated \$190 million. Construction of phase 1 is slated to start in 2025.
  - The new building will be a staple to the TSU campus, housing all COE programs in one location, providing elite education and research labs to recruit elite students and faculty to the program. We believe this building will have a direct impact on the recruitment, retention and completion of students, which will directly impact the quantity of quality students that we will produce to work in your companies.
  - TSU has charged the College of Engineering with raising approximately \$10 Million to contribute to the cost of equipment and furnishing. We welcome industry to support the college in reaching this goal by sponsoring labs, study spaces, offices, giving annual donations, etc. Please discuss with the development team ways you can give to the building fund.

The student-led organizations at TSU Engineering are hubs where many of the college's most capable, spirited and entrepreneurial students volunteer their time and energy. These organizations provide students with hands-on design opportunities, peer tutoring and mentorship, professional and skill development, industry exposure, access to national conferences, and encourage participation in national and international competitions to develop new skills and engage in the broader engineering world.

The COE welcome companies to connect and support the activities of student organizations. Ways to partner with respective organizations can be found by using the provided QR codes. The college asks all companies to make sure to include organization advisors in all communication with students so that proper chains of command are maintained and the advisor can make sure to assist the students in planning activities.

# Society of Women Engineers (SWE)



For more information Contact Advisor Dr. Armwood-Gordon, carmwood@tnstate.edu

or

Mr. Davenport, @ddaventp@tnstate.edu

Sponsorship: \$500 - \$5,000+

- SWE empowers women to succeed and advance in the field of engineering with an array of training and leadership development programs, networking opportunities, scholarships, outreach and advocacy activities.
- SWE's signature Evening with Industry event provides many valuable benefits for sponsors and partner.

## **National Society of Black Engineers (NSBE)**



For more information Contact Advisor Dr. Armwood-Gordon, carmwood@tnstate.edu

or

**Sponsorship: \$1000 - \$5,000+** 

Mr. Davenport, @ddaventp@tnstate.edu

The National Society of Black Engineers (NSBE) is the largest non-profit, student-run organization in the US. NSBE has developed into a powerful influence in the lives of minority engineering students, motivating them to consistently pursue excellence in all facets of their lives. "To increase the number of culturally responsible Black engineers who excel academically, succeed professionally, and positively impact the community" is our organization's mission.

# **Architectural Engineering Institute (AEI)**



For more information contact Advisor Dr. Armwood-Gordon, carmwood@tnstate.edu

Sponsorship: \$1000 - \$5,000+

The Architectural Engineering Institute (AEI) was established in 1998 and is the premier organization for architectural engineering. Architectural Engineering is defined as the application of engineering principles and technology to building design and construct. Architectural Engineers work together with architects and civil engineers but are unique in both their skills and role as part of the building design team. As an organization, AEI provides its members with timely technical information, professional advocacy, continuing education, and opportunities to excel in their careers.

## The Institute of Electrical and Electronics Engineers (IEEE)





For more information contact Advisor Dr. Ghosh, sghosh1@tnstate.edu

Sponsorship: \$1000 - \$5000+

IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. IEEE's core purpose is to foster technological innovation and will be essential to the global technical community in improving global conditions. IEEE sponsors over 2,000 annual conferences and events worldwide, curating cutting-edge content for all of the technical fields of interest within IEEE.

# **American Society of Mechanical Engineers (ASME)**



For more information contact Advisor
Dr. Fasoro, afasoro@tnstate.edu
or
Dr. Akbar, makbar@tnstate.edu

Sponsorship: \$1000 - \$3000

American Society of Mechanical Engineers (ASME) is a not-for-profit membership organization that enables collaboration, knowledge sharing and skills development across all engineering disciplines. ASME codes and standards, publications, conferences, continuing education, and professional development programs provide a foundation for advancing technical knowledge and a safer world.

**Construction Management Association of America (CMAA)** 



For more information contact Advisor Professor Du, kdu@tnstate.edu

Sponsorship: \$1000 - \$3,000 and up

CMAA is delivery method neutral; seeking to ensure that all professionals are prepared to succeed regardless of the scope, scale, or complexity of any project or program. CMAA is the leading society for accreditation of professional degree programs in construction management by ABET. Working through ABET, CMAA can make a significant contribution to developing a qualified, professional workforce.

<u>American Society of Heating, Refrigerating and Air-Conditioning</u>

<u>Engineers (ASHRAE)</u>

ASHRAE TENNESSEE STATE UNIVERSITY

For more information Contact Advisor
Dr. Wang
zwang@tnstate.edu

Sponsorship: \$1000 - \$3000

ASHRAE is a global society advancing human well-being through sustainable technology for the built environment. The Society and its members focus on building systems, energy efficiency, indoor air quality and sustainability within the industry.

## **Association for Computing and Machinery (ACM)**



For more information Contact Advisor
Dr. Rogers
trogers3@tnstate.edu

Association for Computing and Machinery, known as ACM, is an organization dedicated to bringing the best minds working in computer science and machinery together. ACM currently boasts 100,000 individuals from all over the world. Active in both research and public policy issues, this association is a membership that all professionals in computer science strive for.

## **American Society of Civil Engineers (ASCE)**



For more information contact Advisor Dr. Ranganathan, raparthas@tnstate.edu

ASCE stands at the forefront of a profession that plans, designs, constructs, and operates society's economic and social engine – the built environment – while protecting and restoring the natural environment. The Society advances civil engineering technical specialties through nine dynamic institutes and leads with its many professional- and public-focused programs.

# Career Building



# **Social Activities**



# Competitions



# **Academic Success**



# **Community Service**





**Fundraising** 





**Public Relations** 





**Professional Development** 





## PARTERING WITH DEPARTMENTS

The COE's five departments work closely with industry partners to provide career opportunities for students, collaborate on directed research initiatives, and ensure that the departments' educational curriculum and research missions are aligned with the needs of industry. Each department has a formal Industry Advisory Board (IAB) that meets with the department faculty once or twice a year and that participates in advising and evaluating students designs in various classes. Membership in department IABs is by department invitation only.

#### **College of Engineering Departments**

- Department of Applied and Industrial Technologies
- Department of Civil and Architectural Engineering
- Department of Computer Science
- Department of Electrical and Computer Engineering
- Department of Mechanical and Manufacturing Engineering

#### Departmental Sponsorships: \$2000-\$15,000+

- Departments may need funds for the following:
  - Provide Department Level Scholarships
  - o Purchase equipment and supplies for labs, design projects, research
  - Support faculty travel and student travel
  - Support activities for students such as internal welcome events, tutoring, mentorship, etc.
  - Hire additional Teacher Assistants and Research Assistants
  - Contribute to New Faculty Start up funds (\$30,000+ needed for competitive offer to new faculty)
  - Support faculty Research
  - Support student competitions
  - Provide resources for students less fortunate such as books, laptops, business cloths, etc.
  - Purchase software for teaching and research
  - Ability to buy-out time for faculty professional or research release



# SCHOLARSHIPS AND FELLOWSHIPS

TSU College of Engineering offers scholarships for undergraduates and fellowships for graduates to uphold its academic excellence, foster diversity, and give access to anyone who wants to major in engineering, technology, and computer science. Donors can support the school's best students by allocating scholarship funds, which help them concentrate on their studies and engage in extra skill development and industry related activities. Scholarships and fellowships can be given based on financial need, academic merit, field of study or any other criteria. Industry can also create an endowed scholarship account with TSU Foundations for a one-time \$25,000, which links the donor's name to TSU Engineering forever and allows students to receive funds from the account's yield. Alternatively, scholarships and fellowships can be made on a one-time basis.

The cost of tuition, fees, and room and board for students shows the importance of Scholarships and Fellowships. Many students in the College of Engineering at TSU come from other states, which increases their financial burden. The COE Scholarship Goal aims to provide more full-ride scholarships to both undergraduate and graduate students.

- Undergraduate: in-state \$14,000/year, tuition/fees and room/board
- Undergraduate: out-of-state \$27,000/year, tuition/fees and room/board
- Graduate Students: \$36,000/year stipend and \$12,500/year tuition



TSU is designated as a
"Doctoral University- High
Research Activity" by the
Carnegie Classification of
Institutions of Higher
Education.



#### **COE Undergraduate Programs**

Applied and Industrial Technology
Mechatronics and Aviation Management
Architectural Engineering
Minor in Construction Management
Civil Engineering
Electrical and Computer Engineering
Mechanical and Manufacturing Engineering
Computer Science
Minor in Computer Science

**COE Graduate Programs** 

Master of Engineering

Biomedical | Civil | Electrical |
Environmental | Manufacturing | Mechanical
Master of Science in Computer Science

Bioinformatics | Cybersecurity | Data Science

Master of Science in Data Science (online)
Master of Science in Computer & Information
Systems Engineering
Doctor of Philosophy in Engineering &
Computational Sciences

Computational Sciences | Engineering Systems



#### **ABOUT TENNESSEE STATE UNIVERSITY**

Tennessee State University (TSU) is a comprehensive, urban, coeducational land-grant university, founded in 1912. The 500-acre campus is in Nashville, the state capital of Tennessee. TSU has nine academic colleges and schools and offers 83 comprehensive degree programs from the baccalaureate through doctorate degrees. It has been designated as "R2 Doctoral/Research University" by the Carnegie Foundation. The College of Engineering has EAC ABET-accredited undergraduate programs in Architectural, Civil, Electrical, and Mechanical Engineering, as well as CAC ABET-accredited program in Computer Science, ATMAE-accredited program in Applied & Industrial Technologies. The college hosts M.S. in Computer Science, M.S. in Data Science, M.S. in M.S. in Computer & Information Systems Engineering, Master of Engineering, and Ph.D. in Engineering & Computational Sciences. The college has TIGER institute to focus on interdisciplinary graduate engineering research in advanced materials, clean energy, and AI.

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If you are interested in making a lasting impact on the College of Engineering through funding of scholarships, technology, design labs, in-kind donations, or any other high impact contribution, we are happy to discuss this with you further.

#### **CONTACTS**

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TSU\_CoEngineering



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