Introduction

The COVID-19 pandemic impacted UTDesign during the Spring 2020 semester, shutting down the studio for access by Makerspace, EPICS, and capstone students on March 16 and continuing until Fall 2020. This policy states the process for opening the UTDesign Studio to EPICS and capstone students for limited access starting August 17 and ending on November 25.

All users are required to read this policy.

School Policy Statement

The Jonsson School at The University of Texas at Dallas recognizes that the UTDesign Studio serves as a critical resource for students designing, building, and testing their engineering projects. It is important that we provide design space, machine shop access, 3D printing capabilities, and other resources for our students. We also understand our responsibility to provide a safe environment.

This policy provides process, guidance, and assessment recommendations to ensure students will design, build, and test their UTDesign projects in a safe environment.

Each faculty director will communicate the policy to their students and work with UTDesign staff to assign teams to project workstations and ensure the students comply with the schedules.

UTDesign Space Utilization

Wherever possible, the UTDesign Studio has been redesigned and scheduled to restrict users such that each person should occupy at least 200 square feet when following the 6-feet social distancing guideline.

The physical location of the UTDesign Makerspace (SPN 2.220) will be closed to clubs during the Fall 2020 semester to remove risk of violating social distancing protocols after hours when UTDesign staff will be unavailable to enforce safety requirements. This includes the space used by students to design and build projects, workshops and presentations, and the volunteer tutoring area.

All student club activities, workshops, weekend build-a-thons and hack-a-thons, K-12 outreach, peer-to-peer tutoring, and student organization meetings/project work will be cancelled in the UTDesign Makerspace for Fall 2020.

Conference rooms are not available.

UTDesign EPICS and capstone students may be assigned unique lab tables/benches for the semester or be able to reserve shared tables. Only two students will be able to access the project space at a specific time and must exactly follow the schedule described in the dedicated table schedule. Each team will have access of a minimum of 15 hours per week. Students are encouraged to use their cameras (e.g., smart phones, laptops, etc.) so team members (students, corporate partners, and UT Dallas advisors) can observe the work.

Two typical work scenarios are:
• Large work table (4’x8’), two project members working on opposite sides and corners.

![Diagram of a large work table with restricted area highlighted]

• Small lab bench (3’x5’), only one person should be at the bench at a time.

![Diagram of a small lab bench with restricted area highlighted]

If work requires two people to do an activity within the 6-foot social distance, both people must sanitize their hands, wear a face covering, wear a face shield, and limit their close interaction to less than 15 minutes accumulated time per day.

**Compliance and Reporting Requirements**

- UTDesign faculty and staff will monitor student compliance.
- UTDesign staff will remind students of the safety protocols using signs and verbal reminders.
- UTDesign staff will give department faculty directors the names of students ignoring the safety protocols, assigned table usage, or schedule. Faculty directors will remove access to the studio for repeat offenders (after the second documented violation).

**Project Working Space**

EPICS and capstone projects may be done remotely (if small) or at the studio. Students need to discuss options of working remotely with their faculty director. If project work is done in the studio, faculty director will decide if a team will be assigned a dedicated table for the semester or if they will reserve shared tables.
For Remote Projects

- One student is designated as the “hardware engineer” (HE) and has responsibility to set up a test instrumentation suite, which includes any or all of the following equipment: scope, multimeter, wave function generator, power supply, USB hub, computer, protoboard, and associated cables.

- The HE sets up the test instrumentation in their home, orders all parts and materials and picks them up at the outside locker center at the UTDesign Studio loading dock. They are responsible for building the device under test (DUT) and the testing setup.

- At the direction of the course instructor, the team may complete the “Student Project Hazard/Risk Assessment” and have it reviewed and approved by the UT Dallas advisor. Projects done remotely may need additional consideration for hazardous and risk assessments as the project is not done on campus where resources are available.

For In-Studio Projects

Studio users will follow all safety protocols required by the university. The following websites provide the most current information and practices to provide the safest environment possible:

- Comets United - https://www.utdallas.edu/comets-united/
- Student Guide - https://www.utdallas.edu/fall-2020/

In addition, the UTDesign Studio has fundamental guidelines that each person must always follow.

- Do not enter the studio if they are not feeling well.
- Check in to the UT Dallas campus per the current access processes required by the university.
- Check in to the UTDesign studio per the current process required by the studio.
- Disinfect their workspace before and after each work session.
- Wash and/or sanitize their hands often.
- Wear face coverings at all times. Users are recommended to bring their own coverings. Face shields will be offered at the UTDesign Studio. Review “Safe Use of Face Coverings in Laboratory Areas.”
- Follow standard social distancing recommendations and stay 6 feet away from others. Follow the floor markings – small dots represent work locations for students, meeting the 6-foot restriction.
- When needing to work side-by-side, wear an additional face shield and ensure cumulative exposure per person inside the 6-feet social distancing is low (prefer 5 minutes) but no more than 15 minutes cumulative exposure per day. Follow the floor markings – red tape outlines the area where an additional person can enter for no more than 15 minutes. Exposure times are to reduce transfer of infectious particles.
- All social areas have been removed. Do not gather, socialize, take breaks, etc. Get in, work, and get out.
- At the direction of the course instructor, the team may complete the “Student Project Hazard/Risk Assessment” and have it reviewed and approved by the UT Dallas advisor.
- When working with chemicals or dangerous machinery, pay close attention to any additional health and environmental risks. Do not wear anything that could get entangled in machinery or absorb chemicals. Ensure all additional equipment is free of ties or strings and wear a face shield in addition to a mask when working with chemicals.
- The following additional resources will be provided to all users of the studio.
  - Face shields (UTDesign staff will provide up to 3 shields per semester)
  - Sanitizer
  - Disinfecting cleaner and wipes located at disinfecting stations. Teams are required to disinfect their workstations before and after each work session.
• The following have been added to each station:
  o Small dots indicate where students should spend most of their working time.
  o Red floor tape outlines represent restricted space. If help is needed, each person should limit their cumulative exposure to less than 15 minutes per day within this space.
  o A summary of the key safety and health requirements.
• To gain supervised access to the fabrication shop and open lab, students must pass a series of online training courses: PPE (Personal Protective Equipment), General Safety Orientation, Shop Safety (Hand and Power Tool Safety), Fire Extinguisher Course, UTD Design Studio Guidelines, and UTD Design Studio Restart Policy. The online training courses are located in Galaxy or https://utd.bioraft.com, under “Training/Course Directory.”
• Students will not have 24-hour badge access. Students not arriving within the 30-minute window prior to their shift will have to call the phone number of the UTD Design staff listed to request access.
  • Enter the building via the main entrance at the beginning of your shift and complete the check-in process.
  • Exit the studio via the main entrance and make sure to check-out.
• All building doors will be open, and lights turned on in available rooms. Students are not to touch anything but their project table equipment, project, borrowed tools, and restrooms. If accidentally touching a surface outside of your workstation, place a sticky note on the area to inform staff that spot needs disinfecting. Sticky notes are located at the disinfectant table. Restroom doors and fixtures are disinfected several times each day.
• Disinfectant tables (DT) are located throughout the studio and provide a place for disinfectant cleaner and wipes. All worktables are to be sanitized before and after use. All materials are to be returned immediately after use. Any tools borrowed during a working session must be returned to the DT immediately after the shift, sprayed with disinfectant on both sides, and allowed to air dry. Students should not share utensils – e.g. pens, pencils, etc.
• Students must sanitize their hands upon entering and before leaving the UTD Design Studio. Students are also encouraged to wash their hands often (at least once per hour) using the sinks in the pantry area or restrooms.
• Students should follow the main hallway to the restrooms. Do not touch any handles, walls, etc., except within the restroom.

**Dedicated and Shared Tables**

**Dedicated Tables**

Dedicated (assigned) tables will be provided to those teams designated by their faculty director and that will be their working space for the entire semester. They are color coded for shifts, limited to 2 students per space per time slot.

Three-hour time slots are available Monday–Friday, with a half hour in between shift start times dedicated to clearing and cleaning the workspace. For example, students on the first shift can arrive at 8:15, start using the table at 8:30, end at 11:30, then clear and clean their table by 11:45. The team using the table during the first shift should be out of the studio by 11:45.

**Note:** EPICS tables will be scheduled to align with their Wednesday, 3 to 4:40 class schedule, i.e., EPICS tables will follow the yellow schedule.

Students in need of dedicated (assigned) tables will be instructed by their instructor to submit an electronic form with their choices of preferred color-coded shifts.

**Tip #1:** Each team with an assigned table should determine the day and time that best accommodates the schedule for their entire team to meet and request the color that aligns with that time slot. The team can meet on location during any time the color appears on the schedule. For example, if the best time to meet is 5 to 6:30 pm on Tuesdays, the team would request the blue schedule. In addition to that time slot, 2 team members can work at the assigned table on Monday from 12 to 3 pm, Wednesday from 7 to 10 pm, etc.
Tip #2: Teams should consider other color schedules and provide second or third choices on the request form. Continuing with the example above, perhaps the second-best time to meet is the same time on Thursday, which makes the green schedule the second choice, etc.

<table>
<thead>
<tr>
<th>Shift</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td>8:15 – 8:30 am</td>
<td>1st shift students arrive</td>
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<tr>
<td>8:30 – 11:30 am</td>
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<tr>
<td>11:30 – noon</td>
<td>1st shift students clear and clean; 2nd shift students arrive</td>
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<td>12:00 – 3:00 pm</td>
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<tr>
<td>3:00 – 3:30 pm</td>
<td>2nd shift students clear and clean; 3rd shift students arrive</td>
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<td></td>
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<td>3:30 – 6:30 pm</td>
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<td>6:30 – 7:00 pm</td>
<td>3rd shift students clear and clean; 4th shift students arrive</td>
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<td>7:00 – 10:00 pm</td>
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<tr>
<td>10:00 – 10:30 pm</td>
<td>4th shift students clear and clean</td>
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</tbody>
</table>

Students must complete the table assignment schedule request (a Qualtrics form found at [https://utdesign.utdallas.edu](https://utdesign.utdallas.edu)) in which they will select their table schedule by prioritizing the order of their color preference. The UTDesign staff will assign tables based on these forms on a first-come, first-served basis. See Tip #1 and Tip #2 above.

- Only 2 students are permitted from each team to work at a station.
- Both can be at a 4’x8’ table – on opposite sides and corners – see the green square in figure 1.
- One can be at the 3’x5’ lab bench – with the other at least 6 feet away – see the yellow square in Figure 1.

**Shared Tables**

Shared tables are project tables that can be reserved by any capstone or EPICS team. Project team leaders may reserve shared table space for their teams, [https://labresources.utdallas.edu](https://labresources.utdallas.edu). Reservations are available in three-hour blocks, Monday through Friday. After work is done, students must leave the table ready for the next team. No tools or project material must remain on the table. These shared tables are located in the UTDesign Studio open lab, Makerspace, and two first-floor conference rooms. Only two team members can be present at a time and are required to practice social distancing. Project materials will need to be removed from the shared table at the end of each reservation. The link to the schedule tool will be available at [utdesign.utdallas.edu](http://utdesign.utdallas.edu) under Student Resources. Shared tables are indicated in orange in Figures 1, 2, and 3.
Figure 1: UTDesign Studio Open Lab. Note the green, blue, red and yellow squares are representative of the 400 square feet footprint allocated for a table. When scheduling restrictions are followed, all CDC and UT Dallas social distancing guidelines are exceeded.

Open Lab

- Only 2 students are permitted from each team to work at a station.
- Both can be at a 4’x8’ table – on opposite sides and corners – see the green square in figure 1.
- One can be at the 3’x5’ lab bench – with the other at least 6 feet away – see the yellow square in Figure 1.

Repurposed Conference Rooms

- Conference rooms 1.107 and 1.109 are repurposed to support 2 more tables.
- Only one team can be in the conference room at any given time, and only two students from that team.
- Both rooms have a full suite of test and measurement equipment.

Repurposed Makerspace

- Repurposed space from the UTDesign Makerspace will yield 5 shared project spaces for EPICS and capstone teams.
- Tables must be disinfected prior to use, totally cleared at the end of the shift, and sanitized prior to the team leaving.
Figure 3: The Makerspace, SPN 2.20, is repurposed, yielding 5 shared project spaces.

Use of Other Resources

Fabrication Shop

• The fabrication shop can support 1 instructor (full time staff or student assistant) and 3 students.
• The circle indicates a 6-foot radius and the square a 200-square-foot space.
  o Only instructors and students previously certified to use the tools will be able to use the shop tools.
  o No training will be provided for first-time users during fall semester.
• If certified students require consultation, they can request an instructor to quickly view their work by entering the 200-square-foot space. Both instructor and student must wear a face covering and a face shield and limit their interaction to no more than 15 minutes cumulative time per day.

Soldering and CAD Programming Stations:

• Only one person can be at the soldering station at any one time.
• Only two people can be at the CAD stations (south wall of the open lab).
• Follow the instructions provided at the stations.