ASCE UESI Surveying Competition

2025 Rules and Regulations

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** Additional rules will be released for the Society-wide competition finals via an addendum in 2025. **

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Welcome

The goal of the ASCE UESI Surveying Competition is to highlight the importance of survey engineering within the civil engineering profession. Although survey engineering is a small part of most civil engineering curricula, it is fundamental to the entire civil engineering work life cycle, from project design, to construction, and through operational service. The American Society of Civil Engineers (ASCE) and the Utility Engineering and Surveying Institute (UESI) provide this competition as a pathway to learn more about surveying and its role through self-study, mentorship, and/or additional coursework prior to graduation.

ASCE and UESI support and encourage a fully inclusive culture that celebrates individual uniqueness, engenders a sense of belonging, and promotes equitable opportunity for all people to participate in the ASCE UESI Surveying Competition. (See ASCE Policy statement 417 - Justice, equity, diversity, and inclusion.) Participation should be inclusive, open, and fair to all interested and eligible students. Welcome!

Section 1: ASCE UESI Surveying Competition Overview

The educational and professional goals of this competition are to recognize the importance of basic surveying principles to the civil engineering practice. Students will be required to use standard field and office equipment and procedures to solve common problems encountered in industry. A clear understanding of and ability to apply basic surveying principles will assist the future civil engineer in communicating and working with the surveying professionals on the job site and during the civil engineering design process.

The following set of rules and regulations will be used for the 2025 ASCE Student Symposia.

Section 2: Participation and Eligibility

2.1 Team Member Requirements

Team members (those participating in the competition tasks) must be undergraduate students enrolled during all or part of the current competition academic year, members of an ASCE Student Chapter in good standing, registered participants of the student symposium, and Society Student Members of ASCE. (Society student membership is free; be sure to join.)

Graduate students are encouraged to serve as advisors.

2.2 Team Requirements

It is an expectation that teams will reflect diversity, foster an inclusive culture, and treat everyone with dignity and respect.

Only one team per ASCE Student Chapter may compete in the competition. A student chapter may compete in only one ASCE Student Symposium per year. Conference assignments and student symposium hosts are listed here.

Each team may consist of up to six (6) total team members for the field task components of the competition. All team members (up to six) may participate in the topographic mapping project presentation. Each team must designate at least one team captain.

ASCE Student Chapters hosting symposia may invite Official Guest teams, which are teams from Region 10 that have an official ASCE Student Chapter not yet assigned to any Student Conference. Official Guest teams are eligible to place and receive awards at the student symposium competition and be invited to the Society-wide competition finals (if they meet the other requirements, including eligibility requirements). Official Guest teams may compete in only one student symposium per year. ASCE Student Programs shall be notified by the ASCE Student Symposium host of an Official Guest team prior to the start of the student symposium via email to student@asce.org.

An ASCE Student Chapter team wanting to enter a competition that is NOT being hosted at their assigned student symposium, may request to compete at another ASCE Student Symposium as a guest team. If the student symposium host grants permission, the guest team may compete. The guest team will be scored but shall not win awards at the student symposium competition nor be eligible to advance to Society-wide competition finals based on competition placement. Guest teams that meet student chapter eligibility requirements may be considered for a Society-wide competition finals wildcard position.

2.3 Levels of Competition and Student Chapter Eligibility

There are two levels of competition: ASCE Student Symposia and a Society-wide competition finals. Eligibility criteria for student symposia participation and Society-wide competition finals are shown in Appendix B.

The highest-ranking eligible team at the student symposium-level competition will receive an invitation to the Society-wide competition finals.

The Society-wide competition finals current year host school will be invited to compete in the Society-wide competition finals. They will have the choice of either competing in the year that they host the Society-wide competition finals or the following year. They must:

1. compete at their respective student symposium competition and meet eligibility requirements within the same year that they intend to compete in the Society-wide competition finals; and

2. within seven calendar days of the end of their student symposium during the year that they host, notify ASCE Student Programs of which year they intend to compete at the Society-wide competition finals.

The ASCE UESI Rules Committee may invite additional participants to the Society-wide competition finals. If wildcards are used to invite additional participants, the wildcard selection process will be posted on the ASCE UESI Surveying Competition Collaborate Site.

The ASCE UESI Surveying Society-wide Competition Finals will be held in conjunction with other Society-wide competition finals at the 2025 ASCE Civil Engineering Student Championships, June 27-29, 2025 at California Polytechnic State University, San Luis Obispo.

2.4 Post-Symposium Verification of Competition Results

At the end of the student symposium competition, the Head Judge shall promptly upload the completed official scoring spreadsheet for a student symposium competition to ASCE's Cerberus ftp server. (See Appendix C for Cerberus Upload Guidance.) ASCE will provide the Head Judge with a secure submission link for ASCE's Cerberus ftp server in February 2025. Teams will not be invited to the Society-wide competition finals until this spreadsheet is received and eligibility is confirmed.

Section 3: Awards and Recognition

The top surveying team at each 2025 ASCE Student Symposium will receive a plaque.

The top three (3) teams at the 2025 ASCE UESI Surveying Society-wide Competition Finals will receive a plaque and monetary award to be given to their ASCE student chapter. The top three (3) teams of the combined field tasks and the top three (3) teams of the topographic mapping project at the 2025 ASCE UESI Surveying Society-wide Competition Finals will receive a plaque. A spirit of competition award may be given to the team that demonstrates integrity, teamwork, and the spirit of the competition.

Section 4: Request for Information (RFI)

Requests for information (RFI) must be submitted through the online 2025 ASCE UESI Surveying Competition RFI Form. Clarifications will be posted at the ASCE UESI Surveying Competition Collaborate Site approximately one week after being received starting September 27, 2024 until February 14, 2025. The cutoff date for submitting an RFI is Wednesday, February 5, 2025 at 11:59 p.m. Eastern Standard Time (EST). Those received after this date will not be acknowledged or addressed. **Teams are strongly encouraged to submit RFIs to avoid misinterpretation of the rules and project tasks. All RFIs will be made public**. All teams are responsible for all information provided in the Rules and Regulations and RFI responses posted to the Collaborate Site.

Section 5: Ethics and Required Conduct

This competition is to be conducted with the highest regard for ethical responsibility per ASCE's Code of Ethics. All members of ASCE, regardless of their membership grade or job description, commit to all of the ethical responsibilities in this Code. All ASCE members should make themselves familiar with ASCE's Code of Ethics.

All participants shall act professionally and respectfully at all times. Failure to act appropriately can result in sanctions, disqualification, and loss of invitations to future symposia competitions or Society-wide competition finals. The inappropriate use of language, alcohol, materials, and equipment, uncooperativeness, and general unprofessional or unethical behavior will not be tolerated.

Section 6: Safety

Safety is the highest priority and the risk of personal injury will not be tolerated. Judges and student symposium hosts, including the Safety Officers, are empowered to stop or

prohibit an activity which is deemed to be hazardous, or to postpone an activity until the hazard is rectified. All participants are responsible for complying with all campus/venue protocols and procedures, including those deemed necessary for public health purposes.

Given continually changing environments, virtual competition provisions may be provided and may be activated in coordination with ASCE.

If there is a thunderstorm, all outdoor activities shall cease and may not resume until at least 30 minutes have passed since the last observed occurrence of thunder or lightning.

Team members must have proper safety equipment (closed toe shoes and safety-colored shirts or vests) to participate in field tasks.

Section 7: Submissions, Deadlines, and Deductions

ASCE is using its Cerberus ftp server as a submission platform. All competition deliverables must be submitted on this platform. Submissions outside of this platform will be considered non-responsive and will not be considered. Deductions are limited to the items mentioned in these Rules.

7.1 Intent and Eligibility Acknowledgement Form

Teams must submit online Intent and Eligibility Acknowledgement Forms no later than **5:00 p.m. Eastern Time (ET) on November 1, 2024**.

By completing this form, a student chapter states:

- Their intent to have a team participate in the competition at their assigned student symposium; and
- Their acknowledgement of the eligibility requirements for student symposium competition participation and advancement to Society-wide competition finals (Appendix B).

The form must be completed and separately submitted by the:

1. Team Captain;
2. ASCE Student Chapter Faculty Advisor; and
3. Competition Team Faculty Advisor.

All three parties will use the same form to submit. If the ASCE Student Chapter Faculty Advisor and the Competition Team Faculty Advisor are the same person, the form has a field to indicate as such and only one faculty advisor submission is required.

Teams can verify that all three parties have submitted an Intent and Eligibility Acknowledgement Form by checking the Intent Form Status Report in Cerberus.

7.2 Topographic Mapping Project Plans

ASCE will provide each team captain and faculty advisor with a secure submission link for the Cerberus ftp server in February 2025 for submitting the Topographic Mapping Project. See Appendix C for Cerberus Upload Guidance.

The topographic mapping project is due electronically at 5:00 pm EST, Monday, February 24, 2025.

7.3 Deductions

Late Penalties

Topographic mapping projects submitted after the submission deadline shown in 7.2 above are subject to a late penalty. Late penalties will be assessed as follows:

Electronic File Submittals:

Submitted on February 24, 2025 after 5:00 pm EST = **10 point deduction**
Submitted on February 25, 2025 by 11:59 p.m. EST = **20 point deduction**
Submitted on February 26, 2025 by 11:59 p.m. EST = **30 point deduction**
Submitted on February 27, 2025 by 11:59 p.m. EST = **40 point deduction**
Submitted on or after February 28, 2025, at 11:59 p.m. EST = **0 points received** for the Topographic mapping project submittal. However, teams may still participate and get points for the topographic mapping presentations and field tasks.

Electronic File Submittals

Electronic file submittals submitted in a format other than a single PDF and an XML will not be judged. Missing files will **be scored as 0 points**.

Paper Copy Submittals

One (1) 24-inch by 36-inch paper copy set of the topographic mapping project will be used for public display at the student symposium. The paper copy set shall be submitted to the student symposium host at check-in. The sheets of the paper copy set must match the electronic submission. Judges will evaluate them for final product display. The host school will be the custodian of the paper copies during the competition and will be responsible for providing suitable accommodations to display the drawings throughout

the competition.

Failure to submit paper copy set at check-in = **10 point deduction**
Changes between the paper copy set and electronic submission = **10 point deduction**

Topographic Mapping Project Presentation
Failure to observe time limit: A 15-point deduction shall be assessed when the official time exceeds 5 minutes 5 seconds (5:05). An additional 15-point deduction shall be assessed for exceeding each additional minute or fraction thereof, i.e., 6:00, 7:00, etc.

Failure to have at least 2 presenters: 15-point deduction. Only team members that are presenting may answer questions from the judges during presentations.

Field Task Participation
10-point deduction for each team member that completes more than three (3) field tasks.

No assistance may be provided from team members or others not participating in the specific field task. Teams receiving outside assistance will be disqualified from the given task.

Team members without proper safety equipment (closed toe shoes and safety-colored shirts or vests) shall not be allowed to participate in field tasks.

Field Task Time Limits
No time extensions will be granted for the completion for any field task. All teams will be allotted the same maximum amount of time for each task.

The Head Judge has final say over deductions. The Head Judge may consult with the ASCE UESI Rules Committee regarding deductions, but the Rules Committee will not overturn their decision.

Any appeals related to eligibility for advancement to Society-wide competition finals must be initiated by a student chapter leader or team captain in disagreement with a ruling related to their own team within 7 days of notification of ineligibility and received through student@asce.org with subject line: ASCE 2025 Competition Eligibility Appeal. This email will initiate a request for an appeals form. The form will be used to explain the appeal.

7.4 Judging

The student symposium host shall recruit judges. Three to five judges are recommended. The topographic mapping project plans will be scored out of 200 total points. The topographic mapping project presentation will be scored for 100 total points. Each field

task will be scored for 75 total points. Therefore, each team will have the opportunity to achieve a total of 600 points. The decision of the judges is final.

Section 8: Competition Tasks

The competition consists of an office component (topographic mapping project) and a field component.

8.1 Topographic Mapping Project

The office component consists two tasks:

- Topographic mapping project plans
- Topographic mapping project presentation

The topographic mapping project plans will be completed using the data set provided by UESI.

The presentation will be a live professional presentation at the student symposium. Professional dress, as appropriate for a presentation with a client or owner, is expected from presenters. Presentations must not exceed 5 minutes and 5 seconds. Presentations must be in English. Presentations must be conducted in a professional manner. Teams are encouraged to create a slide deck or other visual aids to accompany their presentation. Topographic mapping presentations are closed to the public. Only the team presenting and those from their student chapter may be present in the room during presentations.

8.2 Field Tasks

The field component will involve four (4) separate field tasks, each comprising a minimum of two (2) members. On the day of the competition, the Team Captain must submit to the Head Judge the Field Task Resource Estimate Chart in Appendix A to determine how their team members will complete each task. At competition, the judges will randomly select team members for each task using the submitted Task Resource Estimate chart. Random selection will occur with all teams regardless of the number of team members.

The four (4) field tasks must include one task from each of the following four (4) categories:

Category I

A. Pacing
B. Navigate with Compass

Category II

C. Differential Leveling

Category III

D. Construction Stakeout
E. Find an Inaccessible Point

Category IV

F. Determine Proposed Sewer Depth and Cut
G. Calculate Area and/or Volume

The times to complete field tasks will be recorded by a judge and will be used as a tie breaker.

8.3 Scoring Breakdown

For each task, teams will be evaluated according to the parameters provided within the description of each task. The team with the highest number of points from the sum of all five (5) tasks will be the overall winner. In the event that multiple teams receive the same overall score, the shortest overall time for field tasks will be the tie breaker. Scoring rubrics will be provided with the topographic data for detailed scoring breakdowns of each task.

8.4 Materials and Equipment

The tasks are project-oriented problems; therefore, for the topographic mapping project, the use of any civil design software is recommended. ASCE UESI can recommend free educational civil design software and online training videos upon request.

For student symposium competitions, teams are responsible for all necessary safety equipment as specified by the student symposium host in the symposium mailers.

For field tasks, the field methods may vary amongst teams. The use of traditional surveying equipment (transits/theodolites/total stations, tapes, prisms, prism poles, conventional optical levels, level rods) is recommended for individual team practice and at the competition. At the student symposia, each team will bring and use its own

surveying equipment to complete the field tasks. Teams using equipment outside of the list shown in Appendix D will be disqualified for the specific task. Digital levels*, robotic total stations*, and GPS – RTK receivers are **NOT** permitted.

*Digital levels and Robotic total stations will be permitted to be used in **manual mode only**.

Field book pages and blank pages for calculations will be provided to each team. No notes or completed field books may be used during competition.

Following the NCEES model, the following calculator models are the only ones acceptable for use during the 2025 symposia competition:

- **Casio:** All fx-115 and fx-991 models (Any Casio calculator must have “fx-115” or “fx-991” in its model name.)
- **Hewlett Packard:** The HP 33s and HP 35s models, but no others
- **Texas Instruments:** All TI-30X and TI-36X models (Any Texas Instruments calculator must have “TI-30X” or “TI-36X” in its model name.)

At the Society-wide competition finals, ASCE UESI will provide all necessary surveying equipment in accordance with Appendix D. No additional team equipment will be allowed during the competition. ASCE UESI’s representative will provide training on the equipment at the event for the Society-wide competition finals only.

Section 9: Task Descriptions

9.1 Topographic Mapping Project Plans

To be submitted by 5:00 pm EST, Monday, February 24, 2025. A point file in a text format of PNEZD and a description of the map boundary will be provided by ASCE UESI on the ASCE UESI Surveying Competition Collaborate Site by 5:00 pm EST, Monday, January 6, 2025.

Each team will prepare a 1-foot contour topographic map with details specified by the competition committee. The final submittal will consist of a single PDF file and a landXML file. Each team will be expected to comply with all required items listed in the specifications. Specifications are listed in the judging form. Teams will be evaluated on the map accuracy and aesthetics. Teams may include up to five (5) sheets, including a cover sheet, in the PDF file to present their mapping project. The required PDF sheet size

for each sheet is 24 inches by36 inches. In the event that more than five (5) pages are submitted, only the first five (5) pages of the set will be reviewed.

9.2 Topographic Mapping Project Presentation

The focus of the symposium presentation will be to familiarize the client (judges) with the plan set contents and to discuss the possible uses and limitations on the property in question for development. Teams should address best uses for the property and any limitations that they see to development of the site.

A maximum five minutes five seconds (5:05) live professional presentation with at least two (2) presenters is required for the mapping project. Teams should demonstrate competency in mapping the topographic map, such as identifying the boundary, control points, breaklines, etc. The intent of this presentation is to showcase the understanding of topographic mapping and the discussion of property limitations or opportunities for development. Specifications are listed in the judging form which will be released in January with the mapping data set.

9.3 Field Tasks

Each student symposium judging team will choose 1 task per category, 4 total field tasks for the competition. The specific tasks to be used from each category will be announced at the Captain's meeting at each student symposium.

For all tasks:

1. Each team's overall time for each task will be recorded by a task judge.
2. The host will provide each team with a maximum time to complete each task.
3. Once submitted, field notes and calculations will become the property of the competition and will not be returned to teams.

9.3.1 Field Task A, Category I - Pacing

At the competition site, the competition judges will provide details for pacing. Up to three (3) participating members will compete in this task. Each team will submit a final recorded ground distance at the conclusion of their pacing. Teams will be evaluated on their accuracy.

9.3.2 Field Task B, Category I – Navigate with Compass

At the competition site, teams will be given a set of distances and directions. Up to three (3) participating members will compete in this task. With the given directions and distances, each participating member will navigate through each leg of the course. Teams

will be asked to perform necessary dimensional analysis calculations during the traverse. Each team will submit an overall distance to the benchmark. Teams will be evaluated on their accuracy and misclosure.

9.3.3 Field Task C, Category II – Differential Leveling

At the competition site, each team will be required to perform differential leveling operations, starting from a benchmark of known elevation and establishing the elevation of a temporary point of unknown elevation. Each team will submit field notes, calculations, misclosure, and a final recorded elevation for the temporary point of unknown elevation. Teams will be evaluated on their accuracy and misclosure.

9.3.4 Field Task D, Category III - Construction Stakeout

At the competition site, using appropriate stakeout techniques, teams will be required to stake out a proposed project with appropriate offsets. Two (2) designated control points for set up and backsight will be given to calculate and measure the angles and distances to the proposed project points. The angles and distances to be calculated and measured will be given on the day of the event. Each team will set hubs/tacks in accordance with the given project points and submit field notes and calculations. Hubs/tacks will be provided by the host. The judges will measure the hubs/tacks as set by teams. Teams will be evaluated on their accuracy.

9.3.5 Field Task E, Category III - Find an Inaccessible Point

At the competition site, using appropriate measurement techniques, teams will be required to calculate the height (elevation) of a distant object (for example: top of a building). Two (2) designated control points for set up and backsight as the baseline will be provided. The judges will help teams identify the 2 control points and target object. Teams are required to measure the necessary distances, horizontal and vertical angles to calculate the target height (elevation). Each team will submit the height or elevation (as specified by the task judge), field notes, and calculations. Teams will be evaluated on their accuracy. Team members will not be allowed to approach the distant object at any time during field tasks, nor do any premeasuring.

9.3.6 Field Task F, Category IV - Determine Proposed Sewer Depth and Cut

At the competition site, teams will find the centerline and offset stakes for a proposed sewer line. On the day of the competition, each team will be given the invert of the existing pipe where the proposed sewer line will connect. Teams will also be given the slope and size of the proposed sewer line. Teams will have to determine the amount of cut at each predetermined station location and the elevation of the invert at the opposite end of the proposed sewer line. Station numbers will be supplied on the centerline stakes. Each team will submit cut depths at each predetermined station location, invert elevation at the

upstream end of the proposed sewer, field notes, and calculations. Teams will be evaluated on their accuracy.

9.3.7 Field Task G, Category IV – Calculate Area and/or Volume

On the day of the competition, each team will be given a sketch of the plot of land or stockpile to be measured. Teams will be tasked with calculating the area of a designated plot of land or the volume of a stockpile using a conventional total station setup. Each team will be provided with the necessary equipment to complete the task. The objective is to accurately determine the plot's area or volume within a specified time limit. Each team will submit their final calculated area or volume, all field notes, and calculations. Scoring will be based on the accuracy of the calculated area or volume compared to the actual area or volume.

Appendix A: Field Task Resource Estimate

College/University Name: _____

Instructions: The Team Captain should fill in the unshaded table cells for team member names and how many team members should complete each task. If less than 6 team members, note with an "X". Submit to the Head Judge; they will select the participating members based on the team's decisions.

	Field Task 1	Field Task 2	Field Task 3	Field Task 4	
How many team members will complete each task? (Min 2)					
Team Member Name	*To be filled out by judge:*				Total # Tasks (Max 3)
I					
II					
III					
IV					
V					
VI					

Team Captain name: _____

Team Captain phone number: _____

Team Captain email address: _____

Appendix B: Eligibility for Student Symposium Competition and Society-wide Competition Finals

The purpose for student competitions is to provide student members career-enrichment opportunities to gain hands-on, practical experience and leadership skills. Society Competitions are an important and special opportunity to showcase the engineering and professional skills of student teams. As such, mutual respect is required for all stakeholders, including competitors, judges, hosts, and guests. Invitations to the Student Symposia and the ASCE Student Civil Engineering Championships/Society-wide Competition Finals are a privilege, not a right. Failure to act professionally can result in sanctions, disqualifications, and loss of invitations. Please note that the requirements for eligibility for Society-wide competition finals are more stringent than the requirements for participation at the student symposia competitions.

Student Chapter Eligibility for Student Symposium Competition

The following qualifications are required of all ASCE Student Chapters to compete at the Student Symposia Competitions:

An ASCE Student Chapter must:

1. Be in good standing with ASCE:

a. Have paid their annual dues, as received by ASCE, **no later than the start of their Student Symposium.**

b. Have submitted their student chapter's full Annual Report or EZ Annual Reporting Form **no later than February 1, 11:59 p.m. EST.**

Student Chapter Eligibility for Society-wide Competition Finals

The following qualifications are required of all ASCE Student Chapters in order to advance to the ASCE Society-wide Competition Finals:

An ASCE Student Chapter must:

1. Be in good standing with ASCE:

a. Have paid their annual dues, as received by ASCE, **no later than February 1, 11:59 p.m. EST**

b. Have submitted their student chapter's **full Annual Report**, **no later than February 1, 11:59 p.m. EST** and have received a minimum score of 25 points out of a possible 100. **Student Chapters that submit an EZ annual reporting form do not qualify** to advance on to competition finals; and

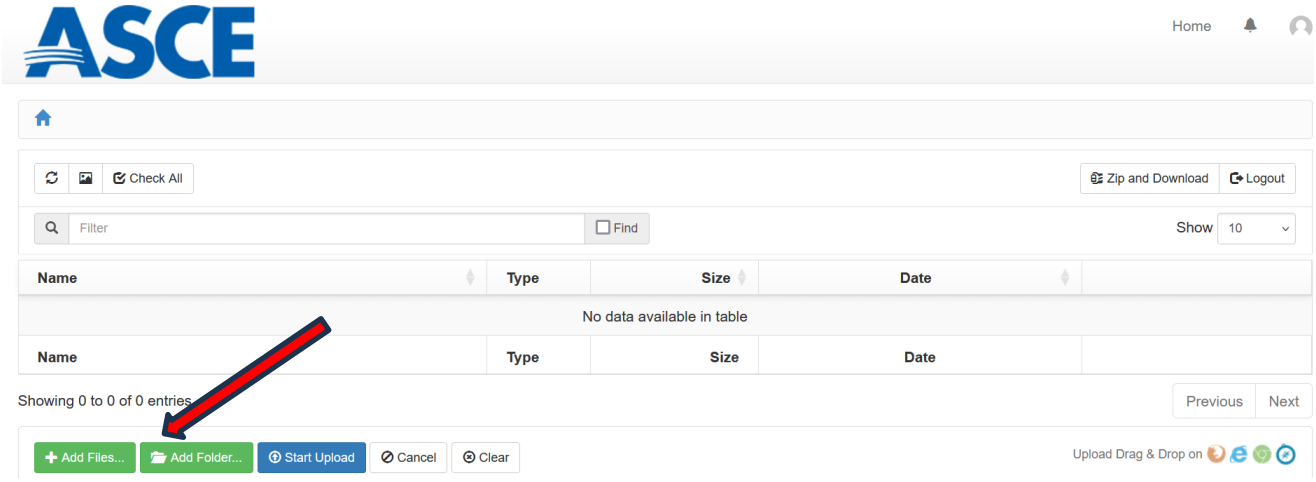
2. Attend and participate in their assigned Student Symposium as shown through their school's:

a. On-time attendance and active participation by a member of the ASCE Student Chapter at the Student Symposium Business Meeting.
b. Participation in the Student Symposium Paper Competition, including submission and presentation by a member of the ASCE Student Chapter. Note that any papers/presentations created for any other competition do not count as an entry into the Student Symposium Paper Competition.

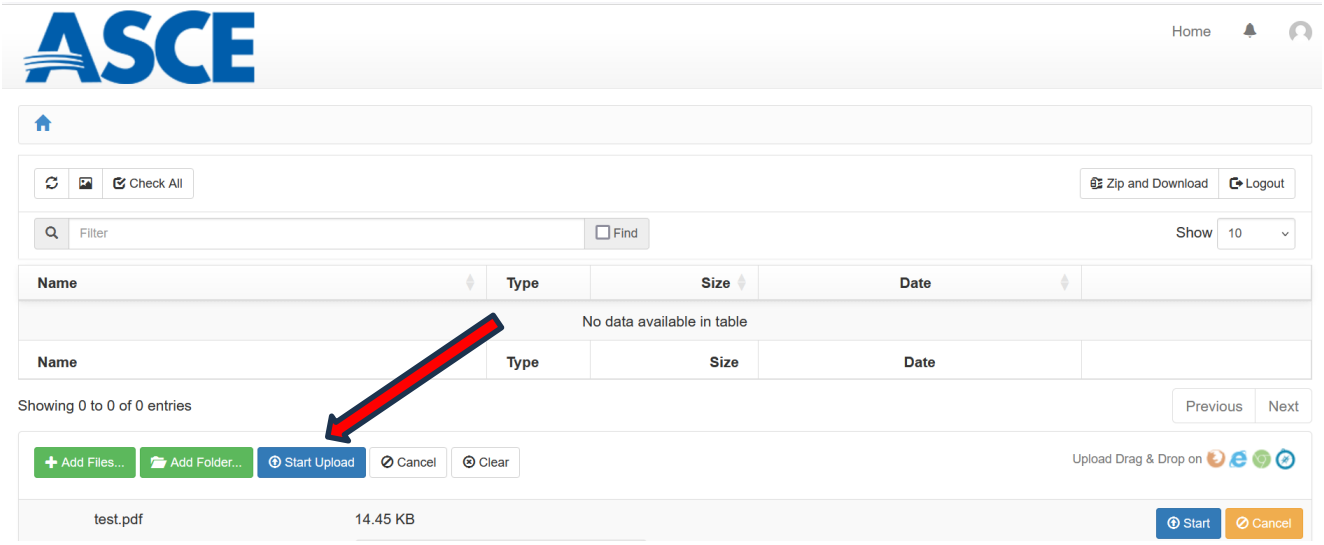
Questions regarding eligibility should be directed to student@asce.org.

Appendix C: Cerberus Upload Guidance

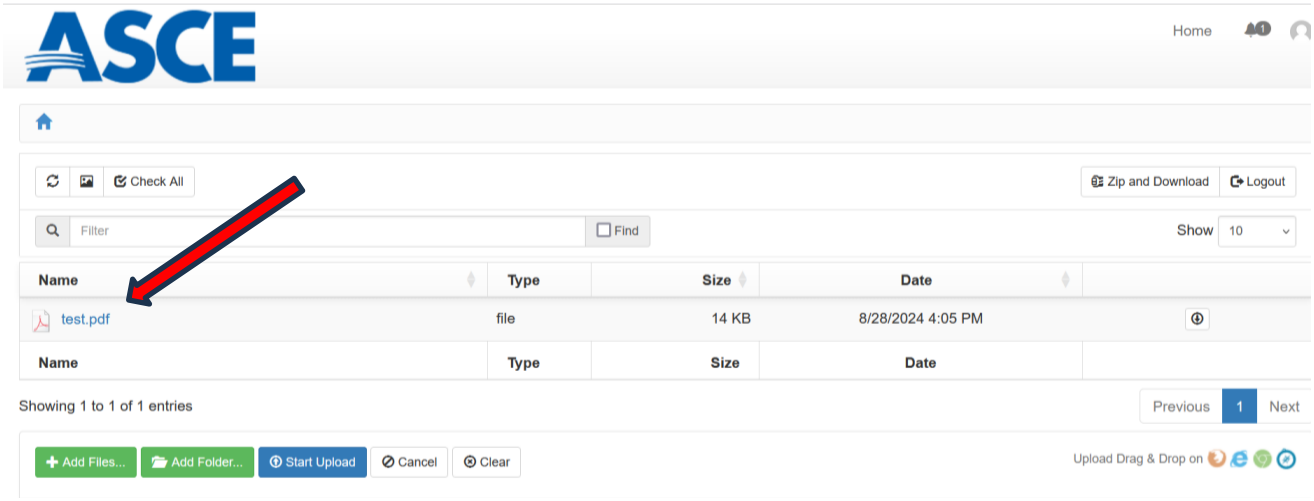
To add files to your Cerberus folder (secure link provided by ASCE), you can either click the **+Add Files** button and then browse to find the files to upload or drag and drop files to the area directly below the **+Add Files** button.



The selected (or dragged and dropped) files will appear in the upload area. To upload the file into the folder, click **Start Upload.** (To delete the uploaded file from the upload area, click **Cancel.**)



When the file has been successfully uploaded, the name of the file will appear under “name”.



Need help?

If you uploaded a file to the wrong folder or want to replace an uploaded file with a corrected version, send an email to jupmeyer@asce.org and ask that the incorrect file be deleted. Include both the location (folder path) and the **exact name** of the file you want deleted. (Files cannot be moved – you will have to upload the correct file to the folder after the incorrect version has been deleted).

Appendix D: Equipment List

Participating teams will use the following items for the competition. All items must be supplied by each individual team at the symposium competition.

	Field Task A	Field Task B	Field Task C	Field Task D	Field Task E	Field Task F	Field Task G
Material	**Pacing**	**Compass**	**Differential Leveling**	**Construction Stakeout**	**Find an inaccessible point**	**Determine Proposed Sewer Depth and Cut**	**Calculate Area and/or Volume**
Pencils[3]	X	X	X	X	X	X	X
Calculators [1]	X	X	X	X	X	X	X
Level[3]			X			X	
Leveling rod [3]			X			X	
Tripod [3]			X	X	X	X	X
Transit / Theodolite / Total Station [2] [3]				X	X		X
Prism and rod [3]				X	X		X
Mallet or hammer[3]				X			
Measuring tape (100 ft recommended) [3]		X		X		X	X
Compass[3]		X					

[1] Calculators must be NCEES FE calculators as listed in Section 8.4.
[2] Robotic total station will be only allowed while using in “Survey Basic” or equivalent, meaning only measuring horizontal angles and horizontal distance. Robotic mode, coordinates input and advance function are not allowed during competition and it will be grounds for disqualification.
[3] Will be provided by UESI at the Society-wide competition Finals.