ACI Spring 2022 Concrete Solutions Competition

# Objectives

Students must demonstrate and/or explain how their use of concrete could positively impact the world at large. This competition is broad in its scope – teams are encouraged to use creative means to present and explain their concrete approach or solution to a broad audience including why it should interest the public at large. The top 20 submissions will participate in team interviews with judges. Teams attending the in-person ACI Concrete Convention may be interviewed on-site on **Sunday, March 27, 2022, between 9:00 a.m.** – **3:00 p.m. ET**. Teams not planning to attend the convention, will be interviewed virtually prior to convention. Both the in-person interview and virtual interview schedule is subject to change. The winners will be announced at the ACI Student Lunch taking place on **Monday, March 28, 2022,** from **11:30 a.m. – 1:30 p.m. ET**. For examples of submission topics, see more in the rules below.

Two prize categories will be awarded:

1. Most innovative design/developmental use of concrete.
2. Overall highest score.

Note that only one team is allowed entry per school.

# Prizes

First, Second, and Third place entries in each category will each be awarded a certificate of recognition, will be recognized on the ACI Website, and will be recognized on ACI's website. In addition, the First-Place team will receive a $750 award, the Second-Place team will receive $500, and the Third-Place team will receive $250. Award of winning teams will be announced at the ACI Student Lunch taking place on Monday, March 28, 2022, from 11:30 a.m. – 1:30 p.m. ET.

# Background

Driven by the continued need for students to collaborate and combine their knowledge and insight despite the inability to gather in person, this wholly remote competition has been inspired by ASCE’s BlueSky Competition, ACI’s Concrete Projects and Concrete Construction Competitions, and discussions within and among members of the S-801 Student Competitions Committee. We endeavor to provide students with a means to exercise and display their creativity and knowledge while incentivizing students’ use of and learning about the world’s most-used building material, concrete.

The intention is to allow student teams to collaborate and submit entries in a completely remote setting, permitting even students attending schools remotely to participate. While team collaboration may be complicated in a remote setting, participants are reminded that this is a team event; presenting research, even potentially impactful research, is likely outside of the scope of this competition. Participation of the full team will be considered as part of the scoring for the competition.

# Rules

1. Eligibility

1. Each team must have a supervising faculty advisor who will see that the student team complies with the rules of the competition. The faculty member is permitted to advise more than one team.
2. Each team must consist of students in high school, technical school, trade school, or undergraduate students of a college or university at the time of the fall ACI convention. Undergraduate students on cooperative or internship work assignment are also eligible to compete. Although there are no restrictions on the geographical location of the school, all members of a given team must be from the same school.
3. A team may consist of a minimum of two and a maximum of up to eight students.
4. A graduate student may act in the role of advisor or consultant for the team, but work must be performed by the eligible team members detailed in item 1. b. above.
5. A student may not be a member of more than one team.
6. At least one individual (faculty advisor or student team member) must be designated to represent each team and be present during the potential interview portion of the competition. Participation by additional team members is both permitted and encouraged.
7. Each school will be permitted to enter no more than one team.

2. Judging

1. The judges will be appointed by the Chair of Committee S 801 and/or the lead judge of the competition. A lead judge will be appointed and will develop a scoring rubric to be used by all judges in evaluation of the entries.
2. The judges will determine whether or not the rules have been followed and interpret them.

1. Questions regarding the rules must be submitted via email to the ACI contact noted below. Questions will be filtered to the volunteer judging team with responses issued within 1 week of submittal. Responses will also be posted to the FAQ section on the competition website for availability to all competitors. ACI staff is not available off-hours and questions will be responded to as received.

1. The decision of the judges will be final, and appeals will not be considered.
2. All entrants must maintain ethical conduct and professional behavior at all times. Failure to do so will result in appropriate penalization or sanctions against the team in this competition and potentially future competitions.
3. Final competition results will be calculated based on the following breakdown:
Overall Score (100%):

Submission (60%):

10% clarity of presentation

20% creativity of presentation format

20% originality of the approach

10% potential impact on society

Interview (40%), *top 20 teams in the Submission category*

20% responses to questions and understanding of provided solution

10% clarity of responses and professional team demeanor

10% engagement of the whole team

1. In the instance of a tied overall final score, the team with the higher “potential impact on society” score will be ranked higher. In the unlikely event the teams are still tied, the team with the higher team engagement score in the Interview portion will receive the higher rank.

3. Submission Details

Teams must complete advance registration for the competition by the deadline of **February 20, 2022, by 11:59 p.m. Eastern Time.** Registration will be through the competition website at www.concrete.org/students/studentcompetitions.aspx. Advance registration serves to show the team’s intent to participate in the competition.

Submission consisting of a YouTube video URL, in English, no longer than 7 minutes, meeting the requirements on the competition webpage, shall be submitted through the competition webpage prior to **March 6, 2022, by 11:59 p.m. Eastern Time.** The YouTube video settings must be public, and “Made for Kids” option must be turned off. The YouTube Video should be uploaded in the following format:

a. Title: TEAM NAME - COMPETITION NAME

b. Description: Include the Team Name, University Name, and brief description of the solution presented in the video.

As directed on the competition webpage, Letter of Verification, Official Information Form, remaining team members, and PowerPoint slide of the team are also required to complete the team’s submission. Details of these required items will be included through the student registration website. It is suggested to avoid waiting to the last minute for submission to avoid delays with obtaining all parts of the required documentation. **Failure to provide the required documentation will disqualify a team from participating. Late entries will be penalized, up to and including possible disqualification from the competition.**

Content of the video submission is open, but creativity in presentation is both suggested and encouraged. The goal and findings of the solution presented and concrete’s involvement within it should be obvious to all viewers of the submission. Content should be understood by an English-speaking audience. Ethical and professional responsibility stated elsewhere in these rules must be followed.

Advance registration is required. All teams must register through the competition website by the deadline of **February 20, 2022, by 11:59 p.m. ET** and indicates your intent to enter the competition. Final submission of required information must be completed through the ACI competition website by **March 6, 2022, 11:59 p.m. ET.** See the ACI competition website for registration forms and additional information. Failure to meet the above deadlines due to technical problems or for any reason may result in the inability to participate in the competition or point penalties at the discretion of the judges.

**Summary of competition deadlines and key dates:**

Team Registration: **February 20, 2022, by 11:59 p.m. Eastern Time**

Final Submission of Competition materials: **March 6, 2022, by 11:59 p.m. Eastern Time.**

Notification of Teams for Interviews: From ACI by **March 21, 2022.**

**Interviews:**

In-person: **Sunday, March 27, 2022, between 9:00 a.m.** – **3:00 p.m. ET**.

Teams not planning to attend the convention: Interviewed virtually prior to convention.

Both the in-person interview and virtual interview schedule is subject to change

Award of winning teams: At ACI Student Lunch on **Monday, March 28, 2022,** **from** **11:30 a.m. – 1:30 p.m. ET**

4. Compliance with Competition Rules:

ACI reserves the right to perform detailed examination and check entries for compliance with the competition rules. Due to the complexity of this task, the examination may be done after the competition. If the examination shows that a team did not follow the rules, the team, their advisor and all his/her teams will be disqualified. S801 committee will further document recommendations to sanction the team and its advisor and/or the school/university's participation in future competitions. Failure to supply the required submittals or failure to meet the established deadlines may result in penalties, up to and including disqualification.

5. Examples of Potential Submissions

a.        Show how to reduce cracking through unique approach in mixture design or testing led to a breakthrough in concrete knowledge or a superior product.

b.         Show how to reduce cracking through the use of new products/product, approach, or innovative use of existing technology.

c.         Develop a new student competition to investigate how to reduce concrete cracking.

d.         Explain your finding of the canceled FRC Bowling Ball Competition results.

5. Contact Information

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