Student AIChE/CACHE National Mobile Device APP Competition (2016)

Student teams will create an APP for a mobile device. This APP must be deemed to be useful for an AIChE member. Possible application areas include scientific, engineering, teaching and professional meeting organizers. For example, teaching apps could include a game designed to teach chemical engineering concepts. The APP must be able to run on a mobile device such as a smartphone (iPhone, Android, Blackberry etc.) The App can either run native on the operating system or operate through a browser-side technology (HTML, CSS or Javascript) but have a mobile appearance.

Student teams can consist of **any discipline**, but the team must have at least one student belong to AIChE. Student teams can have a mix of undergraduate and graduate student members.

The competition at the AIChE annual meeting will consist of a poster competition where finalists will be selected to give a short presentation to a general audience.
There will be two prizes, with monetary awards given to the **student team's AIChE chapter**:
1) $500 from CACHE for the first place winner of the best mobile device APP
2) $500 from a corporate sponsor for the best mobile device APP that has a major focus on aspects of safety.

Timeline:
- Intent to submit starting 31 January 2016 Send an email to Hesketh@Rowan.edu stating that you have formed an undergraduate student team that is participating in this competition. (Only one email per team required). Submission on this date will insure timely emails to assist you with your App development.
- Preliminary APP Description Submission 31 March 2016. This submission should be in the form of an email to Hesketh@Rowan.edu. In this email please include the following:
  i) paragraph describing the APP,
  ii) listing of undergraduate students working on the APP,
  iii) mobile device and operating system,
  iv) University represented by students.
  This information is only preliminary and will be used for planning purposes. Since this information is preliminary, **changes in all the above information will be allowed** at this point in the competition.
- Final APP and Technical Documentation Submission 10/31/2016
  Technical documentation will consist of a word document or pdf and App code files.
  Documentation must have the following:
  1. listing of undergraduate and graduate students working on the APP, University or Universities represented by students
  2. mobile device and operating system if running native on the mobile device,

3. Details describing the APP similar to that found on itunes or android or amazon etc. This section should contain a description of the APP with screen shots.
4. Sources of technical information and physical properties. This section should include any equations that were used.
5. Sources of software components that were used in APP
6. Flow chart illustrating how the APP works
7. Sufficient worked-out examples to verifying the utility of the APP
8. Description of broad impacts of chemical engineering on society
- Poster Competition 11/14/2016 San Francisco, CA

Judging of the overall competition will be based on:
- Creativity and uniqueness (15%)
- Usefulness of the APP (20%)
- Ease of use of the APP(15%)
- Professional and/or Societal Impact (20%)
- Poster Presentation which includes demonstration of APP on a mobile device at AIChE Annual Meeting (30%)

Poster and APP Demonstration Competition at AIChE National Meeting:
At this session a poster board must be displayed along with the APP working on a mobile device. This poster should outline the unique features of the APP and the programs structure. Please note that between 10/31/16 and the AIChE National Meeting the student team is allowed to further develop the software to improve its performance on the mobile device.

Intellectual Property of the APP remains with the students who developed the APP.

The objective of this competition is:
- To give students practice at developing their creative skills.
- To enhance and promote student's interest in new mobile device APPs for use in professional activities.
- To provide chemical engineering students with the opportunity to participate in a multidisciplinary team-oriented software design competition.
- To encourage students to become actively involved in their professional society.
- To show the connection between chemical engineering and society needs.
- To create useful mobile applications for the chemical engineering community

Suggested features of a winning APP for AIChE members
- APP enhances student or professional performance/quality of life.
- APP is built using high quality content of ChE/Chemistry/Engineering
- APP functions with few to no errors
- APP should be more than just a handbook

- APP may be a game to promote chemical engineering to society

Rules[1]

- Student teams must consist of fulltime students during the 2015-16 Academic Year
- Student teams can consist of any discipline, but at least one student must be a member of the AIChE
- Student developed APPs can be constructed using existing software templates and components.
- The final APP must be an original creation of the team.
- Submissions must comply with intellectual property rules (e.g. copyright etc.)
- The student team must have at least one team member presenting at Annual Meeting.
- The App must be able to run on a mobile device that uses one of these operating Systems: Android, BlackBerry, iPhone, Palm, Symbian, or Windows Mobile. The App can either run native on the operating system or operate through a browser-side technology (HTML, CSS or Javascript) but have a mobile appearance.

AIChE/CACHE APP competition Committee:
Jason Bara, Cory Jensen, Nemoy Rau, Scott Fogler, Robert Hesketh

Questions about this competition can be directed to
email: *Hesketh@Rowan.edu*
Robert P. Hesketh
Professor of Chemical Engineering
Rowan University
Glassboro, NJ 08028
Phone: (856) 256-5313

---

[1] Rules subject to change. See AIChE Website