

The University of Nebraska at Omaha



IT Innovation Cup

***Responding to Emerging Infectious Diseases***

2021

# **UNO IT Innovation Cup Guidelines**

## **University of Nebraska at Omaha**

### **2021: “*Responding to Emerging Infectious Diseases*”**

#### **Introduction**

The UNO IT Innovation Cup is an annual competition for high school students in Nebraska and Iowa High Schools. Schools compete each year to determine who can create the most innovative, creative and best IT-based solution given the current year’s problem requirements. For 2021, the challenge area is “*Responding to Emerging Infectious Diseases*” The winning team is awarded the IT Innovation Cup (a traveling trophy) for their school and cash prize of \$2,500. Additionally, there will be three \$500 prizes for each of three captions. Each high school team can have at least one but no more than three faculty coaches, and each team coach will receive an honorarium of \$100 and free tuition to one College of Information & Technology (CIST) IT Professional Development Workshop. All participating students will receive free tuition to one CIST summer workshop and a CIST t-shirt.

#### **2021 Problem Requirements**

We have all seen how difficult the response is to an international pandemic. Problems like this must be approached from multiple points by cooperating agencies. Your team should look at the problem of responding to infectious disease as a complex system but your solution should focus on one sub-area of the global response.

#### **Possible sub-topics:**

- Spread
- Modeling and Simulation
- Privacy
- Uptake of Vaccinations and other factors
- Supply Chain Management in a Crisis

Teams should create a compelling solution that meets the identified need, through a series of project milestones:

1. Initial Problem Statement
2. Finalized Problem Statement & Potential Solution
3. Initial Technical Demo & Paper

The project must result in a useful, IT-based solution and must be communicated in a variety of media including written papers, oral presentations, and online project portfolios. The solution needs to include new or novel software development, hardware configuration, and/or system setup.

#### **Available Resources**

All teams will be assigned a mentor from current UNO School of Interdisciplinary Informatics (Si2) students. These mentors will offer guidance, encouragement, and assistance for each team. The mentors may not provide direct development work, but can assist with idea generation,

debugging and problem solving, and clarifications of guidelines. They can also provide feedback on videos, papers and presentations prior to submission.

We will also provide a sample list of known web services and APIs. This will not be comprehensive, but should give teams a place to start. Teams are encouraged to look for other web services or ways to utilize these in novel ways.

Materials (hardware, etc.) for projects will be reimbursed up to \$200 per team and itemized receipts are required for these reimbursements. Reimbursements should be requested from Janice Fink ([jfink@unomaha.edu](mailto:jfink@unomaha.edu)). Upon request we will provide scheduled access to PKI computer labs, and will coordinate with the UNO Speech Center for any help required for presentation development.

Finally, all teams may have at least one but no more than three faculty members from their high school to serve as coaches, but all software, artwork, multimedia presentations, music, etc. must be performed by the high school students. Faculty coaches can provide basic debugging help and advising, but not code or development. Any team that is determined to have active development work from a faculty coach will be disqualified.

### **Judging Criteria**

All of the points for the final submission will be determined at the final presentation. The milestone check points must be completed on time to be eligible for final awards. The milestone submission will be used to provide feedback and guidance to the teams from UNO faculty and IT Innovation students.

Teams will submit their final reports & business plans in advance of the final presentation. This will allow our expert and industry judges to have the opportunity to read and prepare questions prior to the presentation. The final points will be generated from this document and the final presentation.

### **Key Dates**

- January 29, 2021 – Email of Intention to Compete Due
- February 5, 2021 – Kickoff Webinar / Q&A Session
- March 1 - 5, 2021 – Problem Statements & Potential Solution
  - Scheduled time via video conference
- March 26, 2021 – Technical Demo Submission
- April 16, 2021 – Final Report
- April 30, 2021 – Demonstration presentations and awards

### **Eligibility**

- For 2021, competing high schools must be in Nebraska or Western Iowa
- Each high school can have multiple teams but each participant can only be on one single team.
- Each team must consist of no more than ten students, not including faculty coaches
- Diverse teams are encouraged; a great team will usually involve artists, programmers, project managers, marketers, etc.

## How to Enter

To apply, student teams must submit a brief email to [dvbabb@unomaha.edu](mailto:dvbabb@unomaha.edu) by January 22, 2021.

The email should state:

- The high school the team represents
- Contact information of the faculty coaches
  - Full name
  - Best contact phone number
  - Best email address
- For each student team member:
  - Full name
  - Email address
  - Expected graduation date
- The number of the student team members that plan to attend the workshop on 4 November.

## Submitted Materials

- Email of Intention to Compete Due
  - This will be an initial e-mail with the school, coach(s) and how many teams will be competing from that school.
- Problem Statement & Potential Solution
  - Present via web conference (Zoom or similar).
  - This will be an overview of the problem the team has selected along with who is affected by this problem.
  - The team should also have possible solutions included in their presentation.
  - Written report should include a comparison to similar products/services.
  - Submission should also identify the group of people who will be most impacted by this innovation.
- Initial Technical Demo
  - Video presentation of the technical work being done on innovation.
  - Supplemental materials should also be submitted (code samples, hardware configurations, etc.)
- Final Report Submission
  - Based on all of the earlier submissions and feedback.
  - Documents your innovation journey with technical details, photos, early prototypes, and final designs.
  - Detailed description of the problem statement as well as your solution.
- Demonstration presentations and awards
  - Live via video demonstration of problem and innovation to judges.
  - Judges will have read your final report prior to event.
  - Demo of any technology you've implemented in your innovation.

## Prizes

- **Grand Prize** - Best project overall based on the judging. Team will receive \$2,500 and a traveling trophy.

**Caption Awards** - The grand prize winner is not eligible for the caption awards. Each caption award comes with a \$500 prize. A team may win multiple caption awards.

- **Cyber Security Innovation** – The cyber security judges will pick the innovation that best implemented the core practices of cyber security.
- **Biomedical Informatics** – The biomedical informatics judges will select the innovation that best captures their core principles.
- **Biggest Overall Impact** - Team whose project would have the most impact on the targeted group if it were successfully implemented. IT Innovation is really about helping people and communities through technology and not interested in developing technology for its own sake.

## Scholarships

Any participant in IT Innovation Cup is eligible for a scholarship. Scholarship is only for IT Innovation majors. There will be four students selected for a \$1000 scholarship, renewable for up to two years of successful participation in the IT Innovation degree program at UNO for a total possible value of \$2000.