SCUDEM V 2020

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Problem Statements

Due to the current health crisis we are offering SCUDEM this fall in a virtual approach. We all valued the local site version in the past in which colleagues can meet and share personal experiences and students can interact with fellow students from other schools. We will consider both virtual and in person approach for SCUDEM VI 2021. Grow your understanding of differential equations modeling by participating in SCUDEM - SIMIODE Challenge Using Differential Equations Modeling. Gather your local team of three students together or team up with students from around the world and tackle a real modeling challenge! SCUDEM V 2020 is an opportunity for students, in high school or undergraduate school, to engage in a differential equations modeling experience. Each team will have three weeks to work through one of three given real-world modeling problems. Teams can be from one school or SIMIODE will form teams from individual student and coach registrations from around the world. Imagine, a coach from Kyoto JAPAN with students from Lagos NIGERIA, Seattle WA USA, and Brno CZECH REPUBLIC working together and then being professional and personal friends for life! Teams will produce a 10-minute video presentation of their model which they will upload in Unlisted mode to YouTube for judging. Although participation from all countries is welcome the language of SCUDEM is English. See Modeling Guide for Student and Coach for practical advice on participation in SCUDEM.

Objectives:

- 1. Offer students modeling opportunities with differential equations and permit focus on modeling and mathematics.
- 2. Foster the value and applicability of differential equations.
- 3. Develop visual and verbal communication skills.
- 4. Connect faculty colleagues who teach differential equations.

SCUDEM Offerings:

- Create a supportive environment for modeling that builds camaraderie for students and faculty through teamwork.
- Work with team mates from around the world.
- Give students feedback through experiencing other group presentations, judges' feedback, and final awards.
- Offer faculty networking and activities for modeling in teaching.
- Recognize creativity and communication efforts of students.
- · Have an enjoyable experience for faculty and students.

Registration:

SCUDEM V 2020 Registration formally opens 1 September 2020 and runs through October 15,

2020. Teams are encouraged to begin meeting with coaches or use the SIMIODE webpage as a resource for past modeling scenarios. This is a chance to work with colleagues from around the globe and make new friends that could develop future opportunities! Team mentoring and coaching can begin once teams of students and coaches are assembled. In support of SCUDEM and SIMIODE we ask each team to contribute a registration fee of \$10US/student or \$30US/team at the time of registration through SIMIODE's PayPal SCUDEM registration portal using a credit card. Individual student registration is \$10US/student. Members in developing countries will not need to pay a registration fee as a courtesy to colleagues. **Direct all inquiries to** Director@simiode.org.

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