Welcome to AIMS² (HSI-STEM Grant) Meeting # 32

12/11/14
AIMS(HSI-STEM Grant) Meeting # 32

JD 1568
2 PM - 4PM
Jan 29, 2015
Future AIMS$^2$ scholars
Congratulations to..

Dr. Richard Cortes and Mirna  Dr. Eric Lara and family

Welcome
Nathaniel Ymanol Cortes

Welcome Ms. Lara
Engineers Week Honorees from the AIMS² grant

Congratulations Dr. Gloria Melara
Distinguished Educator Award 2015
Engineers Week Banquet – Feb 28, 2015

Congratulations Dr. Anwar Alroomi
Outstanding Merit Achievement Award 2015
Engineers Week Banquet – Feb 28, 2015
Meeting Calendar for Spring 15

✓ January 29th, 2015
• February 19th, 2015
• March 19th, 2015
• April 16th, 2015
• May 21st, 2015
• June 18th, 2015**

*All meetings above are scheduled from 2 PM – 4 PM in JD 1568.

** External Advisory Committee Annual Meeting – Year 4
AGENDA

Information Items
  - Annual Performance Report – Ramesh
  - AIMS Social - Tesha

Project Assessment and Evaluation Update – Nathan

Academic Progress of Cohorts
  - Glendale Community College – Jan Swinton, Scott Rubke and Richard Cortes
  - College of the Canyons – David Martinez and Eric Lara
  - CSUN – Bob Ryan, and Tesha

Presentation on proposed project involving CCC’s, CSUN, and NASA – Nhut Ho (Time certain 3 PM)

Project Activities
  - Ongoing Research Projects/Group Meetings – Reports by CSUN Faculty Mentors
    - ME – Vidya Nandikolla
    - MSEM – Behzad Bavarian
    - ECE – Bruno Osorno
    - COMP Sci – Gloria Melara
    - CECM – Anwar Alroomi

Upcoming events

Adjourn
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Invitation to Team with CSUN CECS to Participate in NASA Challenge

Dr. Nhut Ho, Jeremy Friedman

01/29/2015
Challenge Requirements

• Aimed at providing STEM outreach for minority students
  • Increase completion rates of undergraduate degrees in underrepresented groups of students
  • Disseminate ‘best practices’ to STEM programs
  • Available to students nationally and integrate with local organizations

• 3-4 year curriculum culminating in senior design-type project
  • Designed to complement and supplement a standard 4 year bachelor’s program in engineering/other STEM majors (in FY16, FY17, FY18)
  • Develop and implement processes to capture the impact of the activities

• Topic must be aligned with NASA goals/directorates
Planetary Mapping with Human-Autonomy Teaming

- Inspired by NASA Armstrong’s Autonomy and Ames’ Human Automation Teaming Programs
- Students design a Human-Autonomy Team of a scout, rover, and operator
  - Task: planetary mapping
  - Rover is capable of traversing exoplanet-like landscape, charging UAV
  - Scout is a UAV capable of flight and image capturing
  - Autonomous cooperation between Rover and Scout (Autonomous team)
  - Operator (e.g., astronaut) sets goals and assists autonomous agents
  - Interface and communication methods (w/ delays) for operator teaming with autonomous agents
- Student teams must do outreach activities
- High commitments from NASA Armstrong and Ames
  - Host competition at Armstrong airspace
  - Provide technical support (e.g., videos/interviews with NASA scientists)
CSUN Implementation

• A CECS multidisciplinary senior design project (ME, EE, CS, CE, MSEM, Psychology, Art, Geography) will be offered and dedicated to participate in this challenge

• Incorporate Mentorship and best practices
  • “Cohort Experience” and “genuine” mentorship
  • Tap into existing mentorship programs at CSUN (University 100, ME 101, EOP)
  • Work with Dr. Efrat's Title V grant team: existing mentors and mentees
  • Provides social web, impetus for staying in school

• Collaboration and outreach
  • Community colleges, and students from Northridge and Granada Hills High Schools
  • IEEE’s EPICS Program (Dr. Ramesh) and organizations
Invitations to AIMS CoC and Glendale CC

• Work with CSUN CECS Multi-Disciplinary Senior Design
  • CSUN students provide requirements to CoC or Glendale students to build prototypes (hardware or software) or do analysis and make presentations at CSUN
  • CSUN students spend time at CoC or Glendale, or vice versa
  • Joint outreach activities to local K-12 schools and communities
  • Span multiple semesters
  • Incorporate projects into CoC/Glendale’s courses that are transferable to CSUN
• Mentorship for CoC/Glendale students by CSUN seniors
• Proposal due March 1st, 2015
Backup Plan: Integrate Simulated and Live Unmanned system Research Platform (ISLURP)

With AFOSR equipment funding, we’ll build the system without the grant!
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