Welcome to AIMS²(HSI-STEM Grant) Meeting # 43 JD 1568

COLLEGE OF
ENGINEERING AND
COMPUTER SCIENCE

CSUN

2 PM - 4 PM, May 19, 2016







- Welcome
- Project Assessment and Evaluation Nathan (20 minutes)
 - HSI-STEM Validation Study Presentation
- Academic Progress of Cohorts (10 minutes)
 - Glendale Community College Jan Swinton, Scott Rubke and Richard Cortes
 - College of the Canyons David Martinez and Eric Lara
 - CSUN Bob Ryan
- Review Draft Proposal for March 2016 Competition* All (90 minutes)
- Upcoming events/Meeting Calendar
- Adjourn



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LOGIC MODEL FOR BRIDGING THE GAP: ENHANCING AIMS2 FOR STUDENT SUCCESS

PROBLEMS

Current Conditions

- Students challenged to balance coursework, work, and family
- Students challenged by course management, time management
- Low math prerequisite course completion rates
- Pre-transfer students experiences disconnected from CSUN campus and CECS departments
- Transfer students challenged to navigate, negotiate campus services/processes
- Students lack connections to successful role models in business and industry

Current Practices

- Minimal student contact with faculty and between students outside of class
- Limited opportunities for students to develop meaningful relationships with faculty and peers
- Undergraduate research participation and academic support restricted to small group of students
- Few student careerrelated connections business and industry

RESOURCES/ INPUT

Financial Support

- Student incentives to participate in research
- Faculty and staff support for project activities

Intellectual Resources

- PI/Co-Pi training and disciplinary backgrounds
- Faculty mentor research and teaching expertise
- Student backgrounds
- Tech expert training
- Advisory Board member affiliations

Physical Resources

- Print/digital books
- Interactive material
- Social media
- iPads/tablets with engineering apps
- Student academic and social space

Business Partners

- Advisory board members
- Regional employers

ACTIVITIES

Faculty Mentoring

- Faculty mentoring students groups by site/ department
- Faculty-led student meetings, talks, workshops
- Faculty-student participation in professional events

Peer Mentoring and Tutoring

- Pre- and post-transfer peer-peer mentoring and tutoring
- Transfer-ready and senior-standing students mentor incoming students

Academic Support

- Programming fundamental crash course
- Calculus interactive materials/course section
- Academic advisors/ tech expert workshops
 Customized workshops
- in math and English
- Dedicated library books
- Online video tutorials

Student Research

 Faculty summer and academic term research

Career Preparation

- Student participation in career workshops and professional associations/events
- Summer job internships

OUTPUTS

Student-Faculty Mentoring Relationships

- Increased contact between faculty and students
- Weekly meetings with faculty mentors who guide/support students
- Faculty communication via email, LMS, etc.
- Student-faculty interaction in professional settings

Transfer Student Support

- Peer mentors associated with each faculty mentor student group
- Peer tutors assigned to each site/department
- Frequent/quality social interaction at events
- Support for calculus prerequisite course completion
- Transfer video resources

Student Design Projects

 Student development of Senior Design Projects and engineering projects across sites

Career and Pre-Professional Experiences

- Career workshops
- Professional association events/activities

OUTCOMES: SHORT-TERM

Student Attitudinal and Behavioral Changes

- Enrollment, next-year retention, gateway course success, and successful transfer
- Development of academic self-confidence, self-efficacy, and validation
- Development of course success skills

Transfer Student Socialization and Transfer Shock Mitigation

- Enrollment, gateway course success, on-track completion, and actual completion
- Skills and knowledge to successfully navigate transfer process
- Calculus course success

Student Research Skills

 Development of research skills and attitudes about research in engineering and computer science

Career Preparation Skills

 Development of skills and professional contacts to apply for and successfully secure entry-level employment

IMPACTS/OUTCOMES: LONG-TERM

Student Transfer. Completion, and Post-Graduation Success

- Development of long-lasting, meaningful relationships with faculty and students (transitioning to colleagues) to support successful student outcomes and graduate school/early career needs.
- Internalization of a suite of student success skills—cognitive and non-cognitive—that guide students into postgraduation career and/or academic activities
- Development of long-term support/ value for engineering and computer science education and research

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Career Placement and Development

- Successful placement and promotion in careers in local and regional engineering and computer science fields
- Network of alumni who serve as role models for the next generation of students preparing for careers in engineering and computer science

Current Assumptions:

- Current AIMS² project model development
- 2. Partnership engagement and institutional interest and support

Context (External Factors):

- Disciplinary training/lesearch orientation of CSUN and community college faculty
 Institutional changes across collaborative partnership sites and CSU-HSI STEM network
- 3. Market specialization of local/regional businesses/nonprofit organizations

Assessment Date

- Pre- and post-test survey data of engineering majors
- Institutional data on enrollment, achievement, transfer, and completion
- 3. Interview data on student-faculty and peer interaction

Assessment Dat

- Pre- and post-test survey data of engineering majors
- Pre- and post-test survey data on undergraduate research participation
- Interview data on career placement/experiences

Priorities

Absolute Priority 1

An application that proposes to develop or enhance tutoring, counseling, and student service programs designed to improve academic success, including innovative and customized instruction courses (which may include remedial education and English language instruction) designed to help retain students and move the students rapidly into core courses and through program completion

Priorities

Absolute Priority 2

An application that proposes activities to increase the number of Hispanic and other low-income students attaining degrees in the STEM fields and proposes to develop model transfer and articulation agreements between two-year HSIs and four-year institutions in STEM fields.



Competitive Preference Priorities

Competitive Preference Priority 1

- Applications supported by evidence of effectiveness that meets the conditions set out in the definition of "evidence of promise."
- Worth one additional point.



Competitive Preference Priorities

Competitive Preference Priority 2

Applications supported by evidence of effectiveness that meets the conditions set out in the definition of "moderate evidence of effectiveness."

Worth three additional points.





Review and Evaluation Categories

- Quality of Project Design (30 points)
- Quality of Project Services (20 points)
- Significance (20 points)
- Quality of Management Plan (10 points)
- Quality of Project Evaluation (20 points)

A. Quality of Project Design (maximum 30 points)

- 1. The extent to which the design of the proposed project is appropriate to, and will successfully address, the needs of the target population of other identified needs. (up to 10 points)
- 2. The extent to which the design of the proposed project includes a thorough, high-quality review of the relevant literature, a high-quality plan for project implementation, and the use of appropriate methodological tools to ensure successful achievement of project objectives. (up to 5 points)
- 3. The extent to which the proposed project is supported by strong theory. (up to 5 points)
- 4. The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition. (up to 10 points)

- B. Quality of Project Services (maximum of 20 points)
 - 1. The extent to which services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice. (up to 10 points)
 - 2. The likely impact of the services to be provided by the proposed project on the intended recipients of those services. (up to 10 points)



c. Significance (maximum 20 points)

- 1. The potential contribution of the proposed project to increase knowledge or understanding of educational problems, issues, or effective strategies. (up to 5 points)
- 2. The likelihood that the proposed project will result in system change or improvement. (up to 15 points)



- D. Quality of the Management Plan (up to 10 points)
 - 1. The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks. (up to 5 points)
 - 2. The extent to which the time commitments of the project director and principal investigator and other key personnel are appropriate and adequate to meet the objectives of the propose project up to 5 points (HSI-STEM Grant) Meeting #

- E. Quality of the Project Evaluation (maximum 20 points)
 - 1. The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measureable. (up to 5 points)
 - 2. The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project. (up to 5 points)
 - 3. The extent to which the methods of evaluation will, if well-implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse Evidence Standards with reservations. (up to 10 points) M Grant) Meeting #

Allowable Activities (20 U.S. Code § 1101b)

- Purchase, rental, or lease of scientific/laboratory equipment for educational, instructional, and research purposes.
- Construction, maintenance, renovation and improvement of instructional facilities.
- Support of faculty exchanges, fellowships and development; and curriculum development
- Purchase of library books, periodicals, and other educational materials.
- Tutoring, counseling, and student services designed to improve academic success.
 - Articulation agreements and student support programs designed to facilitate the transfer from two-year to four-year

- Joint use of facilities, such as laboratories and libraries.
- Establishing or improving a development office.
- Establishing or improving an endowment fund.
- Creating or improving facilities for Internet or other distance education technologies.
- Establishing or enhancing a program of teacher education.
- Establishing community outreach programs that will encourage elementary and secondary students to pursue postsecondary education.
- Expanding the number of Hispanic and other underrepresented

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Meeting Calendar for Spring 2016

- ✓ Jan 21, 2016*
- ✓ Feb 18, 2016*
- Mar 24, 2016*
- ✓ April 21, 2016*
- ✓ May 19, 2016*
- *Monthly meetings above are scheduled from 2 PM 4 PM in JD 1568.
- June 9, 2016**
- ** External Advisory Committee Annual Meeting Year 5 Orange Grove Bistro (luncheon followed by meeting)