STEM Update

Danny Nguyen - Dean, Science, Engineering & Mathematics
Ken Songco - Director, Federal Student Services Grants
Overview

- Mission College STEM
- AANAPISI Part F Grant
- STEM Pathway – Activities & Practices
- Student Testimonials
STEM @Mission College

• Seizing the Opportunity to Improve STEM Education
• College Strategic Plan goals to improve & expand STEM education
  • Expand offerings
  • ↑ degrees and transfers
  • Leverage resources & partnerships
• Effective STEM programs a holistic approach with integrated strategies
Mission College
STEM Degrees Awarded: 2011-12

Source: CA Community College Chancellor’s Office – DataMart
STEM Disciplines include Biological Sciences, Chemistry, Math, Physics, Engineering, Computer Applications, Graphic Arts Design, CSIT
Mission College
STEM Retention/Success Rates, 2011-2012

RETENTION BY STEM DISCIPLINES

RETENTION RATES

<table>
<thead>
<tr>
<th></th>
<th>Enrollment Count</th>
<th>Retention Count</th>
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</thead>
<tbody>
<tr>
<td>STEM Courses Spring 2012</td>
<td>5,631</td>
<td>4,692</td>
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<td>STEM Courses Fall 2012</td>
<td>5,753</td>
<td>4,746</td>
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SUCCESS BY STEM DISCIPLINES

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Source: California Community College Chancellor’s Office – DataMart

STEM Disciplines include Biological Sciences, Chemistry, Math, Physics, Engineering, Computer Applications, Graphic Arts Design, CSIT
Mission College AAPI Student Data
Disaggregated Enrollment and Transfer Data

SELF-DECLARED ETHNICITY

Fall 2010 First Census

AAPI TRANSFERS

UC and CSU System, Fall 2009

Sources: CA Community Colleges Chancellor’s Office – DataMart; CA Postsecondary Education Commission (CPEC)
AANAPISI Part F Grant

- **$2 million five-year project** to improve the transition, progression, transfer and graduation rates of historically underrepresented and underprepared AAPI students.

- A **comprehensive set of best practices strategies** include the following:
  - Boost success rates in all levels of mathematics and transfer level English composition courses
  - Centralize & strengthen academic assistance and student support services for STEM majors
  - Explore and implement innovative teaching methods to improve faculty/student engagement
Effective STEM Pathways

- Faculty Development
- Curriculum
- Outreach & Recruitment
- STEM Ecosystem
- Transfer & Career Pathways
- Partnerships
- STEM Pathways
New Associate of Science Degrees for Transfer in Math, Biology, Chemistry, Physics

↑ online science courses

Focused effort on high-risk math/science courses

New Honors Transfer Pilot Program

↑ opportunities for learning cohort models & engagement strategies

Smarthinking – 24/7 Online Tutorial Service
STEM Pathway: Faculty Development

UCLA Transfer Agreement Program (TAP) Conference

ASCCC STEM Conference

Future PD Opportunities though AANAPISI grant funding
STEM Pathway: Transfer & Career Pathways

Culturally-sensitive Counseling

Honors Transfer Pilot Program

MentorNet – Online STEM Mentorship Program

STEM Career Speaker Series

Internship & Service Learning Opportunities
STEM Pathway: Partnerships

MC2IT

Faculty Mentorship (Stanford Post-Docs)

HS Faculty Exchange with SCUSD, Milpitas

MESA (PG&E, Abbott)

NASA (Internships)

AANAPISI Advisory Committee
STEM Pathway: Outreach/Recruitment

- STEM Ambassadors
- STEM Summer Bridge/MathJam
- K16 Faculty Exchange
- STEM Marketing Campaign
- STEM Career Day
- STEM Web Resource
STEM Pathway: STEM Ecosystem

STEM Institution

- AANAPISI
- MESA
- MC2IT
- STEM Steering Committee
- STEM Learning Center
- STEM Club
- Honors Transfer Pilot Program
- STEM Instructional Programs
STEM Learning Environments
Summary

- Outcomes (Measures/Targets)
- Institutionalization & Continuous Improvement
- Mission College – not just a STEM institution
Student Experiences

- John Doan – AANAPISI / APASS Student
- Amy Snodgrass – MESA Student
QUESTIONS