

## National Science Foundation

The MESA Programs at San Diego State University, San Diego City College and Southwestern College are joint-recipients of a National Science Foundation (NSF) - STEM (Science, Technology, Engineering, and Mathematics) Talent Expansion Program (STEP) award. The NSF-STEP supported project is titled the STEP Partnership of San Diego (SPSD).

The SPSP project is creating a regional partnership of educational institutions, industry, and government agencies that form a pipeline from community college to university to Science, Technology, Engineering and Mathematics (STEM) industry. SPSP incorporates the successful MESA model at each partner campus and enhances essential services that help students excel academically, develop leadership skills, and gain exposure to industry. The target population is economically and/or educationally disadvantaged students in STEM fields.

SPSP has three primary goals:

- Increase the number of students who pursue STEM academic and career pathways,
- Increase retention in STEM disciplines,
- Promote opportunities in STEM post-graduate studies.



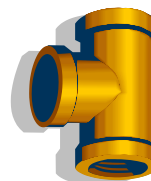
**MESA Legacy** — SDSU MESA students meet NASA astronaut & MESA alumnus Jose Hernandez.

Industry partners contribute to the development of a diverse MESA pipeline of future engineers and scientists. Learn more about becoming an Industry Advisory Board member and help the San Diego MESA Alliance to develop tomorrow's leaders.

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Grant# 0653291



Grant# 0653277



Grant# 0653234

June 2011. v1

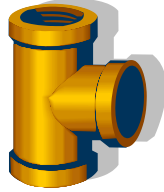
## SAN DIEGO MESA Mathematics Engineering Science Achievement ALLIANCE



*San Diego's pipeline for  
tomorrow's Mathematicians,  
Engineers & Scientists*

# Preparing Tomorrow's Mathematicians, Engineers & Scientists

Established in 2001, the **San Diego MESA Alliance** is a statewide model for intersegmental regional collaboration in STEM education for economically disadvantaged and underrepresented student populations. The Alliance serves over 2,200 students in San Diego County annually through a MESA educational "pipeline" of partner programs that includes:



- **Pre-college: MESA Schools Programs (MSP)** in San Diego and Imperial Valley assist pre-college students to succeed in math and science studies and go on to college in math-based fields.
- **Community College: MESA Community College Programs (MCCP)** at San Diego City College and Southwestern College assist community college students to excel in math, engineering and science majors and successfully transfer to four-year colleges and universities.
- **University: MESA Engineering Program (MEP)** at San Diego State University assists engineering, computer and physical science majors to excel and graduate with baccalaureate degrees.

## Industry Partners

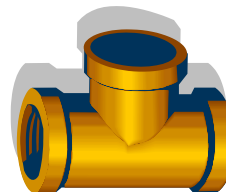
The San Diego MESA Alliance relies on the support of industry partners on the MESA Industry Advisory Board to provide industry exposure and professional development opportunities for MESA students. Examples of industry support include:

- Training academies
- Job shadows
- Internships & Scholarships
- Mentors
- Company tours
- Event volunteers & Speakers
- Donations of prizes for competitions
- Guidance to MESA Directors on program development

## Signature Alliance Events

**Summer Team Internships** – Provide MESA students with experience in the STEM fields either in an internship with a local company or by conducting research at an institution of higher education.

**Training Academies** – Local companies provide 'in-house' training for MESA students to learn technical skill sets and gain professional development to enhance their employability.



**Walk on Water Competition** – Teams of MESA students design "buoyancy shoes", and student "shoe pilots" race across the length of a pool. Competition allows students to gain experience of solving open-ended problems and applying the engineering design process.

**Leadership Summit** – Brings student leaders and emerging leaders from all participating MESA programs together for joint training and networking opportunities. StrengthsQuest training is provided to enhance the leadership development experience. Students are engaged to understand, develop and apply their strengths as individuals and within teams.

**MESA Olympics & Robotics Challenge** - Competition for all MESA program segments in problem-solving sessions and a robotics competition designed to promote teamwork, engineering and problem solving skill development.

**San Diego Region Joint Planning Conference for Engineering and Science Student Chapters** – Brings together professional and student leaders from diversity focused engineering & science organizations in the San Diego region to share expectations, goals, calendars and strategies.