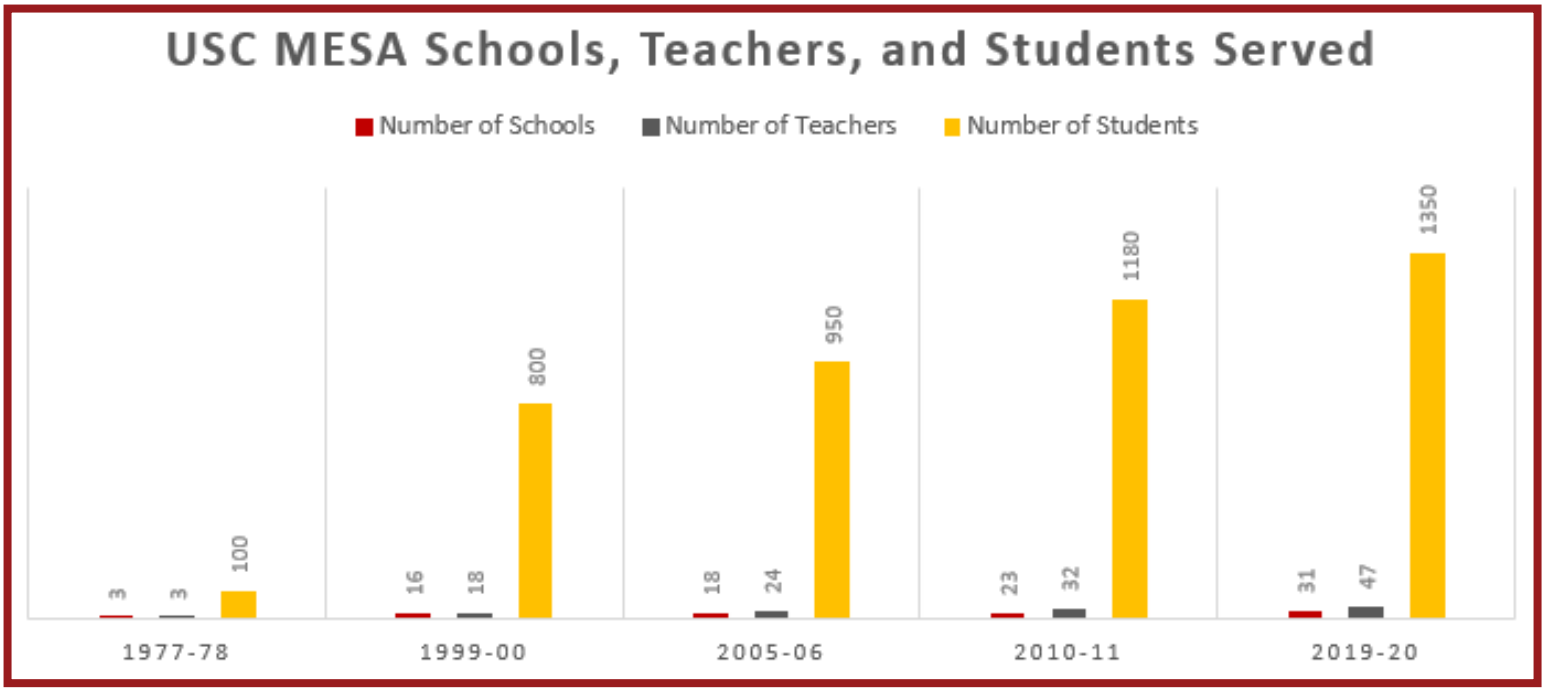
USC Viterbi School of Engineering
K-12 STEM Center

MESA 50 YEARS
Celebrating student diversity and achievement in STEM

MESA (Mathematics, Engineering, Science Achievement) Mission:

To increase the number of educationally and economically disadvantaged students in STEM.



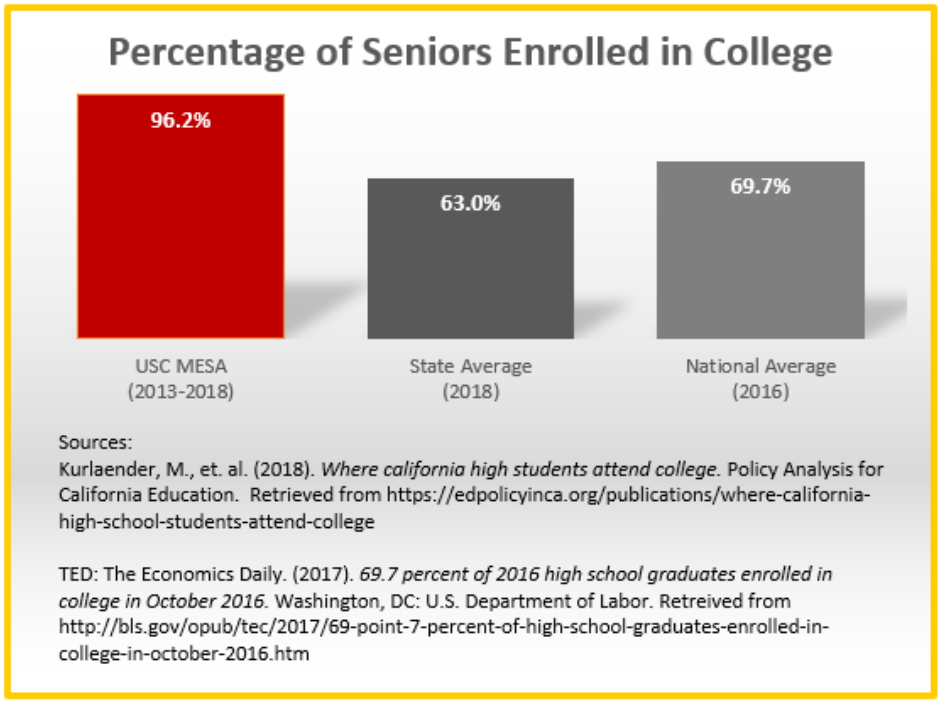
Program Goals:

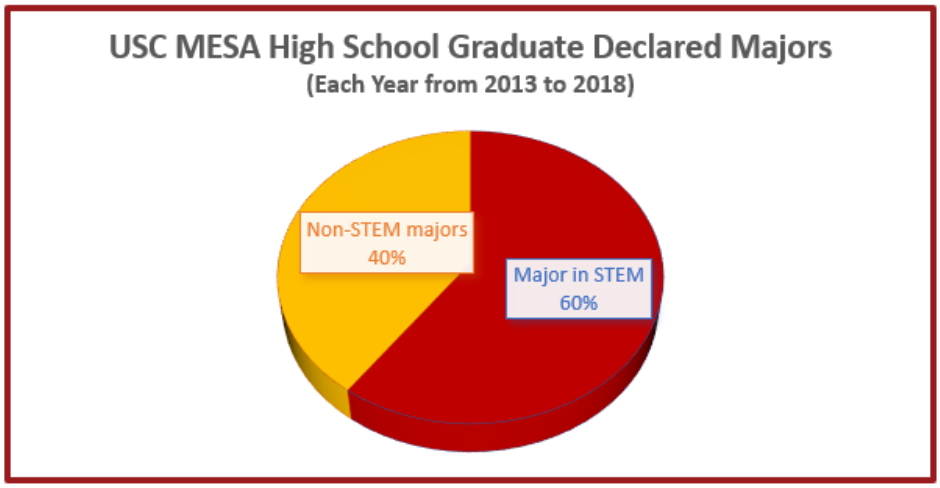
- To foster motivation and engagement in STEM.
- To increase students' beliefs in their capabilities to succeed in STEM domains.
- To prepare students to pursue STEM majors at four-year colleges and universities.

Program Activities:

- Hands-on STEM activities and projects
- Project-based learning
- Leadership development
- College exploration and preparation
- Career exploration
- Field trips
- Recognition events
- Parent engagement
- Teacher professional development

Impact:





Research

- Study determined MESA provided study participants opportunities to increase self-efficacy and motivation to persist in STEM.[1]
- Study determined MESA inspires students' interest in STEM and prepares students to become college bound, using 10 subscales (e.g., science efficacy, challenge, curiosity, etc.).[2]
- Tierney, W. G., Corwin, Z. B., and Colyar, J. E. (2005). *Preparing for college: Nine elements of effective outreach.* Albany, NY: State University of New York Press.

[1]Haramis, R., Jung, J., and Parmar, N. (2017). *The effectiveness of MESA on the persistence of educationally disadvantaged students in STEM: An executive summary of MESA from secondary to postsecondary education.* Retrieved from http://digitallibrary.usc.edu/cdm/singleitem/collection/p15799coll40/id/370082

[2]Ragusa, G. (2013). MESA science program motivation for science questionnaire results grades 6-12.