



California Community Colleges Chancellor's Office  
**Mathematics, Engineering, Science Achievement (MESA)**  
**Program Components - Procedures/Activities**



California Community Colleges Chancellor's Office (CCCCO) is authorized by the State of California to fund only community college MESA program applications that follow the 13 MESA Components. The following MESA program components were developed collaboratively by CCCCCO and the MESA Statewide Office of the University of California Office of the President.

MESA Program Components	*New	Existing State Funded	Existing Non-state Funded (locally funded)
1. Administrative Component	<b>X</b>	<b>X</b>	
2. Student Center	<b>X</b>	<b>X</b>	
3. Student Clustering		<b>X</b>	<b>X</b>
4. Academic Excellence Workshops (AEW) and/or other High Effective Practices	<b>X</b>	<b>X</b>	<b>X</b>
5. Academic Counseling	<b>X</b>	<b>X</b>	
6. MESA Orientation	<b>X</b>	<b>X</b>	
7. Student Support Services	<b>X</b>	<b>X</b>	<b>X</b>
8. Student Outreach and Recruitment	<b>X</b>	<b>X</b>	
9. MESA Campus Council		<b>X</b>	<b>X</b>
10. Professional Development		<b>X</b>	<b>X</b>
11. Student Organizations		<b>X</b>	<b>X</b>
12. Local Business and Industry Council		<b>X</b>	<b>X</b>
13. Pro-Active Liaisons with MESA College Prep/MESA University or similar programs		<b>X</b>	<b>X</b>

**\*NOTE:** For New programs, the table identifies the MESA components that must be in place by end of the 1<sup>st</sup> academic term. All 13 components must be in place by the end of the 1<sup>st</sup> academic year.

**1. Administrative Component**

- 1.1 Grantee will provide a MESA program housed under the Office of Instruction.
- 1.2 Grantee will provide the required full-time permanent MESA Program Director with no other responsibilities outside of directing the MESA Program (see Program Director's Job Description).



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- 1.3 Grantee will provide a clerical position used to meet all reporting requirements (data entry, student activities, local data, report preparation).
- 1.4 Grantee will provide a responsible administrator, including a faculty sponsor from the mathematics, science, computer science, or engineering departments that will collaborate with Program Director.
- 1.5 Grantee will ensure MESA Program Director attends required statewide meetings. Adequate time and resource allocation to support transportation, lodging, and meal costs for MESA Program Director to attend annual statewide meetings:
  - 1.4.1 CCCCO led Fall Statewide Training
  - 1.4.2 UCOP led/CCCCO collaboration of Spring Advocacy Training and Meetings
- 1.6 Grantee will provide appropriate staffing (tutors, facilitators, coordinator) to assist with AEWs.
- 1.7 Grantee will provide staff development activities that provide the MESA Program Director and other appropriate staff with a working knowledge of the MESA data collection and MIS reporting.
- 1.8 Grantee will ensure maintenance and completion of MESA and ASEM (if applicable) student files for each current/active student that consists of a MESA Student Enrollment form and MESA Student Participant Checklist, a complete *Student Educational Plan*, contact sheet, and other relevant information.

Components of the MESA student files (e.g. the complete Student Educational Plan or student transcripts) may be maintained electronically.

## 2. Student Center

- 2.1 Grantee will provide at least 500 square feet of facility (Facility space baseline = 4 sq ft./per student served) dedicated, multipurpose meeting space in or near the mathematics, engineering, and/or science Department.
- 2.2 Grantee will ensure dedicated MESA Center space for MESA students includes individual rooms for studying and tutoring, multipurpose meeting space for group study, gathering, lounging, a location to house student lockers or adequate space for students to store books and personal.
- 2.3 Grantee will ensure the MESA Center space includes offices for the MESA Program Director and MESA counselor(s).



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- 2.4 Grantee will ensure the MESA Center has the required posted hours of operation, be equipped with dedicated computers and provide (at a minimum) tutorial services, book and equipment loan activities, computer lab work, general communication and information on scholarships, internships, AEWs and etc.

### 3. Student Clustering

- 3.1 Grantee must cluster students together into the same mathematics, engineering, and science classes as well as labs, workshops and discussion groups.
- 3.1.1 Clustering is an important element of the MESA model used to problem solve the challenging and complex elements of the course as a group. One advantage is that students feel more accepted when there are other students just like them in the class. Clustering encourages and motivates the use of study groups while increasing critical thinking, conceptual understanding and reasoning skills, yielding self-confidence and higher achievement.

### 4. Academic Excellence Workshops and/or other High Effective Practices

Academic Excellence Workshop (AEW) is a small community of students working collaboratively to master course material with the guidance of a facilitator.

AEWs are designed to:

- enhance learning by focusing on problem solving the difficult elements of the course collectively, and
- foster an environment where students demonstrate the ability to perform, achieve, and/or excel.

- 4.1 Grantee will provide 3-5 AEWs for students during the fall and spring terms, identify type of training provided for the facilitators, and a description of AEWs content.
- 4.2 Grantee will ensure MESA student participants attend the required AEWs especially those MESA students identified with academic need.  
MESA students with personal responsibilities and/or schedule conflicts can develop an alternative plan with the MESA Program Director to meet this requirement.
- 4.3 Grantee will ensure AEWs are facilitated by peer facilitators or upper division/graduate students must facilitate.
- 4.4 Grantee will ensure faculty facilitators will be trained in, and follow, the same MESA AEW format, when a peer facilitator is not available.



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## 5. Academic Counseling

Grantee shall provide a designated MESA counselor(s) available for an adequate number of hours to meet the needs of the MESA students (not including ASEM), preferably at the MESA Center.

Grantee will ensure academic counseling services accomplish the following:

- 5.1 Complete Student Educational Plan that designates a clear curricular pathway, reduces unit accumulation and minimizes the amount of time necessary to transfer and complete their calculus-based STEM degree;
- 5.2 MESA staff and/or a designated MESA Counselor are required to meet with students at least once each semester to monitor progress and update academic plans;
- 5.3 MESA staff and/or a designated MESA Counselor schedules (clusters) MESA students together in classes, labs, and workshops, whenever possible;
- 5.4 MESA staff and/or a designated MESA Counselor establish an early alert system that identifies MESA students who are experiencing academic difficulty, and provide effective intervention strategies to ensure that these students succeed;
- 5.5 MESA staff and/or a designated MESA Counselor coordinate efforts with the campus Matriculation and Articulation Officers and Transfer Center Directors in order to facilitate community college MESA student transfers to four-year institutions;
- 5.6 MESA staff and/or a designated MESA Counselor coordinate efforts with the MESA Program Director to support the MESA Orientation sessions.

## 6. MESA Orientation

Grantee will provide MESA program orientation(s) for student participants and parents to share the program purpose, benefits, requirements and student responsibilities.

- 6.1 Grantee will provide orientations via a series of sessions/workshops throughout the semester/year or a course (one unit per semester/quarter for first year or new students) to reinforce the sense of community, identity and accountability.
- 6.2 Grantee will ensure MESA staff or faculty provide a student orientation the offers MESA networking, cultivates study skills, promotes personal and professional development, provides an overview of technical careers, corporations, and four-year institutions, and promotes timely completion of transfer programs.



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## 7. Student Support Services

Grantee will provide services and activities that will be beneficial to MESA participants that include, but is not limited to, the following standard MESA program student support services:

- 7.1 Tutorial services in the areas of mathematics, chemistry, physics, engineering, and computer science.
- 7.2 Personal advising to assist students with transitional, nonacademic problems that may impact academic performance.
- 7.3 Assistance regarding four-year institution applications for admission and completion of financial aid forms.
- 7.4 Local and regional level leadership and other skills development training.
- 7.5 Scholarship and internship information.
- 7.6 MESA Program Director coordinates information for student study groups and monitors student progress.
- 7.7 MESA Program Director encourages family participation in program activities.

## 8. Student Outreach and Recruitment

Grantee will outreach and recruit underrepresented students in the college service area who have the lowest eligibility for successful transfer to a four-year institution in the areas of mathematics, engineering, sciences and computer science and identify the number of high schools within the college service area.

- 8.1 Grantee will outreach/recruit, underrepresented students currently enrolled at the community college.
- 8.2 Grantee will outreach/recruit currently enrolled underrepresented high school seniors from a minimum of 5 low-performing high schools.
- 8.3 Grantee is not limited to using the following outreach/recruitment strategies:
  - 8.3.1 MESA Alumni or current MESA students present at high schools
  - 8.3.2 Current MESA students present in college mathematics, engineering, sciences and computer science classes



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- 8.3.3 Community College sponsors a high school Math, Science or Engineering Competition

## 9. MESA Campus Council

Grantee must establish/maintain a campus-wide MESA council that is convened at least once a year, at a minimum, to share program outcomes, solicit feedback for program planning and improvement, leverage resources and integrate MESA in the campus community.

- 9.1 Grantee is not limited to including the industry board members, MESA Program Director, faculty sponsor, administrators, student rep and representatives from the various campus departments such as Articulation, Matriculation, Counseling, Tutorial Services, Extended Opportunity Programs and Services (EOPS), Student Equity and Achievement and federal programs such as Talent Search, Upward Bound, Student Support Services (TRIO), Financial Aid, and any others which might contribute to the success of MESA students.

## 10. Professional Development

Grantee will provide staff development activities for professional level staff (faculty, workshop facilitators, mentors, student aides) involved with the MESA that will not exceed 10% of the state award.

- 10.1 Grantee will ensure MESA Program Director or responsible administrator attend the required professional development annual MESA statewide meetings. Other professional development activities like the Community College Association of MESA Program Directors (CCAMD) Retreat can be included in the program budget.

## 11. Student Organizations

Grantee will establish/maintain a MESA student club on campus, or other similar student organization that serves underrepresented students in mathematics, engineering and the sciences, such as NSBE (National Society of Black Engineers), SACNAS (Society for the Advancement of Chicanos and Native Americans in Science), SHPE (Society of Hispanic Professional Engineers), and SWE (Society of Women Engineers), among many others.

## 12. Local Business and Industry Council

- 12.1 Grantee will establish/maintain a local business and industry council that provides opportunities for internships, job shadowing, field trips, and exposure to the industry environment and tangential learning.



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12.1.1 The role of the council is to fund raise to support enrichment activities that contribute to creating a more comprehensive program for students for award banquets, conferences, special summer programs/competitions, and funding scholarships or equipment purchases.

12.2 Grantee will ensure the council includes small and large business industry leaders and potentially local politicians in the college service area and California Legislative representatives.

12.2 Grantee will collaborate with the CCCCO Career Technical Education Statewide and Regional Directors to provide additional opportunities for MESA students.

**13. Pro-Active Liaisons with MSP/MEP and similar programs**

Grantee will establish/maintain strong partnerships with four-year institutions serving historically underrepresented students in STEM areas and local MESA CSU and UC STEM programs, MESA University Programs and MESA College Prep Programs for a smooth transfer for MESA students to continue on the road to completing their educational goals.