



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.

| NEW PROGRAM components in place by 1st Academic Term or LOCALLY FUNDED PROGRAM |
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| 1. Administrative Component |
| 2. Student Center |
| 4. Academic Excellence Workshops and/or other High Effective Practices |
| 5. Academic Counseling |
| 6. MESA Orientation |
| 7. Student Support Services |
| 8. Student Outreach and Recruitment |
| EXISTING PROGRAM = components in place by 2nd Academic Term (in addition to above) or STATE FUNDED PROGRAM |
| 3. Student Clustering |
| 9. MESA Campus Council |
| 10. Professional Development |
| 11. Student Organizations |
| 12. Local Business and Industry Council |
| 13. Pro-Active Liaisons with MSP/MEP and similar program |

1. Administrative Component

- 1.1 The MESA Program Director is a full-time permanent position with no other responsibilities outside of directing the MESA Program. The MESA Program Director position is required as part of the district/college match.
- 1.2 MESA State funds may be used to support a clerical position used to meet all reporting requirements.



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



- 1.3 A responsible administrator, including a faculty sponsor from the mathematics, science, computer science, or engineering departments.
 - 1.3.1 Faculty sponsor will collaborate with MESA Program Director to meet the needs of the students.
- 1.4 MESA Program Director must attend statewide meetings:
 - 1.4.1 CCCCCO led Fall Statewide Meeting
 - 1.4.2 UCOP led Spring Statewide Meeting
- 1.5 Appropriate staffing required (tutors, facilitators, coordinator) to assist with Academic Excellence Workshops (AEWs).
- 1.6 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.
- 1.7 Maintenance of MESA and ASEM (if applicable) student files for each current/active student that consists of a MESA application and intake form, a complete *Student Educational Plan*, student transcript, contact sheet, and other relevant information. ASEM student files that include program application must also be in place. Aspects of these files (e.g. the complete Student Educational Plan or student transcripts) may be maintained electronically.

2. Student Center

- 2.1 The campus is required to provide a dedicated, multipurpose meeting space in or near the mathematics, engineering, and/or science Department for MESA students (minimum of 125 students) with at least 500 square feet of facility per student served. This space includes individual rooms for studying and tutoring. In addition to space for the MESA Program Director and MESA counselor office(s).
- 2.2 The MESA Center must have posted hours of operation and be equipped with dedicated computers.
- 2.3 The MESA Center is a place for individual quiet time and group study, tutorial services, book and equipment loan activities, computer lab work, general communication center, gathering area/lounge, and a location to house student lockers or adequate space for students to store books and personal items.



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



3. Student Clustering

- 3.1 Students must be clustered together into the same mathematics, engineering, and science classes as well as labs, workshops and discussion groups.
- 3.2 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 Highly Effective Practices

- 4.1 An Academic Excellence Workshop (AEW) is a small community of students working collaboratively to master course material with the guidance of a facilitator. The AEW is designed to enhance learning by focusing on problem solving the difficult elements of the course collectively. The AEWs foster an environment where students demonstrate the ability to perform, achieve, and/or excel.
- 4.2 AEWs are available for all MESA student participants but those MESA students identified with academic needs are required to attend. MESA students with personal responsibilities and/or schedule conflicts can develop an alternative plan with the MESA Program Director to meet this requirement. Peer facilitators or upper division/graduate students must facilitate AEW's. Faculty facilitators may be utilized when a student is not available, but they must be trained in, and follow, the same MESA AEW format.
- 4.3 The AEW plan for MESA students must include 3-5 AEWs per term, peer facilitator, type of training provided for the facilitators, and a description of workshop content for the Spring and Fall terms.

5. Academic Counseling

A designated MESA counselor shall be available with an adequate number of hours to meet the needs of the 125 required MESA students (not including ASEM), preferably at the MESA Center.

- 5.1 Each MESA student shall have a 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 degree;



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



- 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

- 6.1 The orientation environment provides MESA students with the greater MESA network, cultivates study skills, promotes personal and professional development, provides an overview of technical careers, four-year institutions, corporations, promotes timely completion of transfer programs and program requirements.
- 6.2 The student orientation can be accomplished via a series of sessions/workshops throughout the semester/year or a course. During orientation MESA staff or faculty review program requirements, benefits and student responsibilities to reinforce the sense of community, identity and accountability.
- 6.3 The parent orientation will share program requirements and student responsibilities to facilitate student support.

7. Student Support Services

The MESA program will provide services and activities that will be beneficial to MESA students and include the implementation plan, responsible staff, timelines, processes, procedures, etc. The following student support services represents standard MESA practices across the state:

- 7.1 Tutorial services in the following areas: mathematics, chemistry, physics, engineering, and computer science.



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



- 7.2 The MESA Program Director acts as a coordinator who assists students with the information on student study groups and monitors their progress.
- 7.3 Personal advising is available to assist students with transitional, nonacademic problems that may impact academic performance.
- 7.4 Assistance is offered to students regarding four-year college and university applications for admission and completion of financial aid forms.
- 7.5 Scholarship information is available to students.
- 7.6 Leadership, and other skills development training is offered both at the local and regional level.
- 7.7 MESA Program Director encourages family participation in program activities whenever possible.

8. Student Outreach and Recruitment

Implement an outreach and recruitment plan to enroll underrepresented students who have the lowest eligibility for successful transfer to a four-year institution in the areas of mathematics, engineering, sciences and computer science that identifies the number of high schools within the college service area.

- 8.1 Outreach must include both efforts to recruit underrepresented students currently enrolled at the community college, and high school seniors from low performing high schools within the college service area.
- 8.2 Identify outreach and recruitment events at a minimum of 5-7 high schools within the college service area and include the number of students and student population ethnicity for those high schools to be visited.
- 8.3 Outreach/Recruitment Examples:
 - 8.3.1 MESA Alumni or current MESA students present at the high school
 - 8.3.2 Current MESA students present in community college mathematics, engineering, sciences and computer science classes
 - 8.3.3 Community College sponsors a high school Math, or Science or Engineering Competition

9. MESA Campus Council

Establish or maintain a campus-wide council that includes the MESA Program Director, faculty sponsor, students, and representatives from the various campus departments such as



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



Articulation, Matriculation, Counseling, Tutorial Services, EOPS (Extended Opportunity Programs and Services), and federal programs such as Talent Search, Upward Bound, Student Support Services (TRIO), Financial Aid, and any others which might affect the success of MESA students.

- 9.1 Council meetings should be convened at least once a year, at a minimum, to share program outcomes and solicit feedback for program improvement. Input from the participants will assist the director in planning for subsequent semesters or for the renewal process.
- 9.2 Other participants can include administrators, industry board members, and student representatives. This is an opportunity to coordinate with program areas such as Student Equity and Achievement to leverage resources and integrate MESA in the campus community.

10. Professional Development

- 10.1 Identify Professional Development activities that will be offered to professional level staff (faculty, workshop facilitators, mentors, student aides) involved with the MESA program. All professional development activities must be reflected in the program budget and accommodate travel and lodging.
- 10.2 All MESA programs are required to include Professional Development activities for the MESA Program Director or responsible administrator to attend the annual MESA statewide meetings.
Other professional development activities like the Community College Association of MESA Program Directors (CCAMD) Retreat can be included.

11. Student Organizations

Establish or maintain a MESA student club on campus, or other similar student organization to create connections with groups that serve 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 Establish or maintain a local business and industry council that includes small and large business industry leaders and potentially local politicians in the college service area as well as California Legislative representatives.



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



This council is designed to provide opportunities such as internships, job shadowing, field trips, and exposure to the industry environment and tangential learning. The council support for enrichment activities contribute to creating a more comprehensive program for students such as award banquets, special summer programs, and funding scholarships or equipment purchases.

- 12.2 Collaborate with the CCCCCO Career Technical Education Statewide and Regional Directors to provide additional opportunities for MESA students.

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

Establish or maintain clear lines of communication with four-year institutions serving historically underrepresented students in Science, Technology, Engineering and Mathematics (STEM) areas. Such programs can include local MESA CSU and UC STEM programs, MESA University Programs and MESA College Prep Programs. Strong linkages with these programs allow for a smooth transfer for MESA students to continue on the road to reaching their educational goals.