

Santa Rosa Junior College

Program Resource Planning Process

MESA 2023

1.1a Mission

Rev 05/2023

The mission of the Mathematics, Engineering, Science Achievement (MESA) Community College Program is to serve first-generation, low-income STEM transfer students so they excel in math and science coursework, transfer, and earn baccalaureate degrees in STEM disciplines. At the State level, MESA is administered by the Intervention Programs and Grants subunit under the Educational Services and Support Division of Academic Affairs at the California Community Colleges Chancellor's Office and the University of California MESA Statewide Office.

1.1b Mission Alignment

Rev 05/2023

The MESA Community College Program's mission aligns with the District's Mission and Strategic Plan Strategies by

- Providing academic support services that enhance the District's teaching and learning mission in support of degree, transfer, and workforce preparation
- Creating enhanced student opportunities to improve the retention and persistence of students enrolled in STEM courses at SRJC
- Supporting the District's vision to cultivate an accessible and open environment for students presenting with an interest in STEM disciplines of study
- Creating STEM-specific student support services to improve student access, retention, persistence, and transfer
- Providing STEM career education to support the economic vitality and social equity of our county, state, and nation
- Challenging students to participate fully in the learning process, balancing course content mastery with relevant pre-professional work experience.

1.1c Description

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Established 50 years ago at the California statewide level, MESA programs serve students seeking math, science and engineering careers. Historically, MESA has demonstrated a strong connection between student success in STEM disciplines and campus engagement in major-specific enrichment opportunities.

Established in 1999, the Santa Rosa Junior College MESA Community College Program is a dynamic academic support program for transfer students pursuing a baccalaureate degree in a discipline within the college's STEM Cluster. MESA creates and provides a strong community of support for STEM students and is built upon the pillars of building community, academic success, leadership, and professional development.

Effective October 1, 2021 to January 31, 2027 CCCCO funding cycle, MESA services must align with the guiding goals of the CCCCO's Vision for Success. Vision for Success goals include:

- Increase degree and certificate attainment
- Increase transfer to four-year institutions
- Reduce excessive unit accumulation by students
- Close equity gaps
- Close regional achievement gaps
- Secure gainful employment.

MESA Programs funded through the CCCCO are required to provide the following student service and academic components:

- * Community building through a dedicated MESA Student Study Center, student computer laboratory, and small-group study rooms
- * Academic support, peer tutoring, and supplemental peer instruction
- * Envisioning through college campus visits and industry field trips
- * Counseling guidance to facilitate timely transfer from SRJC to a 4-year college or university
- * Counseling and academic course planning and the development of individual professional development plans
- * Career preview and professional development opportunities through project-based learning, guest speaker presentations, and internships and fellowships

The following grant-mandated administrative components operationalize the service components:

- An institutionalized MESA Director position
- Clerical support positions
- Student employee positions for peer-to-peer academic support
- Faculty sponsor positions
- Counseling and retention specialist support positions
- The creation and engagement of a Local Industry Advisory Board
- Ongoing professional development and attendance at CCCCO and MESA SWO Director meetings

The Santa Rosa Junior College MESA Program is a collaborative effort supported by the MESA Statewide Office at the University of California Office of the President, the California Community Colleges Chancellor's Office, local industry sponsors, and the Sonoma County Junior College District.

1.1d Hours of Office Operation and Service by Location

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The Avanzando MESA Student Study Center, located in the Lawrence A. Bertolini Student Services Center, provides in-person services Monday-Friday from 8:30 AM to 5 PM. Expanded hours are required to support Avanzando summer projects, outreach events, and student field trips.

1.2 Program/Unit Context and Environmental Scan

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Program-Level Environmental Scan

CCCCO MESA Program

The Mathematics, Engineering, Science Achievement (MESA) Community College Program provides academic and support services for economically and educationally disadvantaged students majoring in calculus-based fields who seek to transfer to a four-year institution through the collaborative efforts of college faculty, staff, business leaders, students, and four-year colleges and universities. MESA student outcomes are expected to close the achievement gap for first-generation, low-income students with performance outcomes linked to the CCCC's Guided Pathway and Vision for Success initiatives.

The 2022-23 California State Budget Act created an opportunity for all California Community Colleges (CCC) to have the option to receive state funds to create and/or sustain a Mathematics, Engineering, Science Achievement (MESA) program at their college. As a result, statewide MESA has expanded from the original 34 campuses to 85 program sites. All programs receive an ongoing annual base award starting with 2022-2023 of at least \$280,000.

To be a MESA program, there are specific expectations for a college. These are listed below:

1. Colleges must implement all the MESA components. These components may be reviewed at the following link. [MESA Components](#)
2. College must strive to achieve the MESA program objectives. These objectives may be reviewed at the following link. [MESA Objectives](#)

3. Colleges must meet the established MESA standards and expectations. These standards and expectations may be reviewed at the following link. [MESA Standards and Expectations](#)

2.1a Budget Needs

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MESA Core Data shows that the Avanzando MESA Program does not receive District unrestricted funds in the 4000s and 5000s expenditure categories.

2.1b Budget Requests

Rank	Location	SP	M	Amount	Brief Rationale
0001	Santa Rosa	02	05	\$5,000.00	FWS match; Student employees for clerical and peer tutoring functions

2.2a Current Classified Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Coordinator-STEM Student Success Programs	40.00	12.00	Under general direction, assists in the implementation of the District's Department of Education's Hispanic-Serving Institutions – Science, Technology, Engineering, and Under general direction, assists in the implementation of the District's Department of Education's Hispanic-Serving Institutions – Science, Technology, Engineering, and Mathematics (HSI-STEM) grant, the California Community College Chancellor's Office Mathematics, Engineering and Science Achievement (MESA) program, and District initiatives that support the academic and professional development of Health Science students.

2.2b Current Management/Confidential Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Director, STEM Student Success Programs	40.00	12.00	Under the direction of the Dean of Science, Technology, Engineering and Mathematics (STEM), the Director of STEM Student Success Programs is responsible for the planning, development, implementation, and administration of the federal Department of Education's Hispanic-Serving Institutions – Science, Technology, Engineering, and Mathematics (HSI-STEM) grant, the California Community College Chancellor's Office Mathematics, Engineering and Science Achievement (MESA) program, and other District initiatives that support the academic and professional development of transfer STEM and Health Science students. In addition, this position manages data submission, evaluation, budget monitoring, and reporting for each program and is responsible for guiding student success outcomes to increase STEM degree attainment for Hispanic, low-income, and first-generation students.

2.2c Current STNC/Student Worker Positions

Position	Hr/Wk	Mo/Yr	Job Duties
Student Peer Tutors (15)	40.00	9.00	Peer-academic support; drop-in tutoring and peer facilitated SI
Student Employee – clerical support	18.00	9.00	Provides clerical assistance to support MESA Center activities; SARS appointments

2.2d Adequacy and Effectiveness of Staffing

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Under expanded HSI-STEM grant obligations, the following areas require additional staffing.

1. The District must plan to sustain STEM support by institutionalizing the classified Coordinator, Student Success Program position, shifting SEA's categorical funding to District general fund support. SEA program funding is currently capped at approximately 55% of the position's total salary and benefit costs, a decrease from 67% in AY 2022-2023. This funding gap will only widen with time.
2. Under the CCCCO's Vision for Success and the HSI-STEM grant, greater emphasis is placed on designing, implementing, and maintaining a STEM workforce development project, specifically STEM internship and research employment opportunities for current SRJC STEM students. For this specialized work, a 50% Work Experience (job developer) faculty assignment is needed to address the adequacy of staffing.
3. Two faculty sponsor positions are needed under the current MESA CCCCO funding agreement. The positions should be set at a 5-10% reassign load and be open to all faculty.

2.2e Classified, STNC, Management Staffing Requests

Rank	Location	SP	M	Current Title	Proposed Title	Type
0001	Santa Rosa	01	05	None in STEM; See CE positions/Work Experience	STEM Internship/Job Developer (50%)	Classified
0002	Santa Rosa	01	05	Coordinator - STEM Student Success Program	Coordinator - STEM Student Success Program (100 %)	Classified

2.3a Current Contract Faculty Positions

Position	Description
None	

2.3b Full-Time and Part-Time Ratios

Discipline	FTEF Reg	% Reg Load	FTEF Adj	% Adj Load	Description
Does not apply	0.0000	0.0000	0.0000	0.0000	MESA has no faculty payroll

2.3c Faculty Within Retirement Range

Does not apply.

2.3d Analysis of Faculty Staffing Needs and Rationale to Support Requests

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MESA has no Academic Affairs faculty positions assigned to the program.

MESA currently has a shared counselor assigned to the HSI-STEM grant. With the current faculty staffing, MESA students have no counseling services from 2-5 PM on Thursdays and Fridays. Thursdays and Fridays are high-demand windows when students seek counseling services. MESA's CCCCO funding requires "*a dedicated MESA counselor...with an adequate number of hours to meet the needs of MESA students.*" To comply with MESA's long-term educational plan requirement for each student, to facilitate student personal counseling, to execute an early alert system, to coordinate with campus Matriculation and Articulation, and to work with the MESA Director to offer a MESA Orientation Program, the current shared assignment needs to be supplemented with a 40% dedicated MESA counselor assignment.

2.3e Faculty Staffing Requests

Rank	Location	SP	M	Discipline	SLO Assessment Rationale
0001	Santa Rosa	02	05	STEM transfer advising and workshop offerings	Enhanced Ed Plan w/ Individual Development Plan (P-SLO); Student enrichment activity (P-SLO); retention case management

2.4b Rationale for Instructional and Non-Instructional Equipment, Technology, and Software

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The existing equipment, technology, and software meet the needs of the Avanzando program.

2.4c Instructional Equipment Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
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2.4d Non-Instructional Equipment and Technology Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
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2.4f Instructional/Non-Instructional Software Requests

Rank	Location	SP	M	Item Description	Qty	Cost Each	Total Cost	Requestor	Room/Space	Contact
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2.5a Minor Facilities Requests

Rank	Location	SP	M	Time Frame	Building	Room Number	Est. Cost	Description
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2.5b Analysis of Existing Facilities

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MESA received dedicated space in the Lindley Center for STEM Education. With the District's Title III HSI-STEM award directed to service HOPE and MESA students, the Lindley Center space will be shared with two programs. The expanded staff has resulted in the conversion of two student study area to office space. Staff has expressed concerns the move to Lindley will not support study group meeting needs. This will be monitored over the upcoming semesters. The second floor of Lindley (STEM Success Center) has two identified student study group rooms; a room reservation system that gives priority scheduling consideration to Avanzando study groups will need to be implemented for these areas.

3.1 Academic Quality

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Under the Title III HSI-STEM grant:

- Avanzando created two STEM learning communities to address the focused course and engagement needs of first-year STEM and Health Science students and students transitioning to rigorous prerequisite math and chemistry courses.
- Health Science students benefit from case management services

- The grant has expanded embedded tutoring (PALS) to gateway STEM Courses
- Implemented a local, five-week REU with SSU.

3.2 Student Success and Support

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Under the Title III HSI-STEM and MESA grant:

- Implemented an Orientation Day for new Avanzando admitted health science and STEM students
- Created a MESA Honors and High Honors recognition program linked to an endowed Foundation Scholarship
- Host a September "Open House" highlighting MESA Quest of Excellence scholarship winners and the undergraduate research poster projects completed by students.
- Recognizes certificate, degrees, and transfer success in a spring semester Avanzando Sashing Ceremony

3.3 Responsiveness to Our Community

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Under the Title III HSI-STEM and MESA grant:

- Contributed to the community STEM workforce by supporting students to complete degrees, certificates or transfer.
- According to the CCCCO Datamart MIS Special Population Awards for AY 2021-2022, MESA students earned a total of 75 awards
 - 10 Associate in Science for Transfer Degrees

- 1 Associate in Arts for Transfer Degrees
- 31 Associate of Science Degrees
- 4 Associate of Arts Degrees
- 24 Certificates requiring 30 to 60 semester units
- 5 Certificates requiring 16 to fewer than 30 semester units.

3.4 Campus Climate and Culture

4.1a Course Student Learning Outcomes Assessment

Does not apply.

4.1b Program Student Learning Outcomes Assessment

Does not apply, for MESA does not offer certificates or majors.

4.1c Student Learning Outcomes Reporting

Type	Name	Student Assessment Implemented	Assessment Results Analyzed	Change Implemented
Service/Program	MESA	N/A	N/A	N/A

4.2a Key Courses or Services that address Institutional Outcomes

Course/Service	1a	1b	1c	2a	2b	2c	2d	3a	3b	4a	4b	5	6a	6b	6c	7
Collaborative skill development		X		X	X		X	X	X	X	X	X	X			X
Employee Students as Peer Tutors	X	X		X	X			X	X				X	X		
Field trip travel											X	X	X			
MESA Study Center				X											X	X
STEM Research (Literature Reveiw)		X	X	X	X		X		X	X		X				
STEM Shadow Day					X			X	X		X				X	
Supplemental Instruction in STEM	X	X		X				X	X	X	X			X		

4.2b Narrative (Optional)

Does not apply, MESA does not offer course, certificates or majors.

5.0 Performance Measures

Historic (2018) Performance Measures - Narrative

In order to increase the number of students transferring to a four-year institution with a calculus-based STEM major, MESA utilizes a variety of activities to build community, support academic success, and prepare students for STEM careers. These activities and intended outcomes are detailed below. The performance evidence is derived from: 1) MESA's end-of-year student program involvement student survey; (88% completion rate); (2) SRJC OIR SE Survey data (3) SRJC OIR SE academic and demographic outcome reports.

Activity: MESA Student Study Center

Intended Outcome: The MESA Student Study Center creates a community connection among MESA students, STEM faculty and staff. Students identify with a community of like-minded college students. The MESA Student Study Center is open to all SRJC students.

Performance Evidence: Based on Student Equity survey data, a higher percentage of MESA students feel guided and supported than general District students. Center hour usage demonstrates, MESA students spent over 11,400 combined hours in the MESA Student Study Center during academic year 2017-18.

Activity: Academic Support Services

Intended Outcome: Academic peer tutoring, self-directed study groups, small group webinars, a textbook resource library, and a computer lab with free printing, contribute to the academic success of MESA and STEM students. Provided in the MESA Center, these services enable students to better understand and master course content.

Performance Evidence: MESA Student Equity & Achievement Data, 2017-18 Academic Outcomes shows MESA students benefiting from: (1) an 80% course success rate in comparison to the District average of 74.8%; (2) a course retention rate of 89.1% and; (3) a fall to spring persistence

rate of 95.7%. When surveyed, 75% of MESA students evaluated MESA peer drop-in tutoring as very or extremely valuable. Additionally, 86% stated the drop-in assistance aligned with their coursework needs.

Activity: Transfer Assistance and Advising

Intended Outcome: Through dedicated counseling services, MESA sponsored college visit field trips, and alumni and faculty advising, MESA students are able to define the eligibility requirements for their transfer program. MESA students strive to create an individual development plan that works in concert with their long-term educational plan.

Performance Evidence: When surveyed, 95% of MESA students agreed or strongly agreed the dedicated counseling services in MESA worked with their schedule. 93% of MESA students agreed or strongly agreed they felt more confident making decisions with the help from MESA counseling.

Activity: Career Preview and Leadership Development

Intended Outcome: Through guest speaker presentations, conference participation, workshops to advance workplace skills, and exposure to internships and fellowships, MESA students role-play their future STEM profession, seeing first-hand how a STEM interest manifests first as a transfer major and later as a career path.

Performance Evidence: When surveyed, 97% strongly agreed they received timely messages regarding MESA and SRJC events and offerings. Specifically, 65% reported participating in a college or industry site visit; 63% attended a guest speaker presentation or STEM conference and 45% reported volunteering in a STEM discipline.

Overall, and in terms of MESA’s overarching goal of assisting STEM students to transfer and to improve the transfer success rate among District identified DI populations, MESA contributed to the College’s progress toward having equitable outcomes. MESA students present with a goal of transferring and earning a bachelor’s degree in a STEM discipline. MESA assists (guided and supported) students in order to achieve this multi-step goal: a) MESA provides strong academic advising and assistance, which supports progress in having equitable outcomes in course success (succeeding), for only if students succeed in completing their major preparatory courses are they competitive to transfer to a 4-year institution with a STEM major; b) MESA supports equitable transfer completion (completing), sending more students to universities in the highly competitive UC system than the District, even though MESA serves proportionally a greater number of disproportionately impacted students. The overarching impact of MESA’s activities is reflected in our transfer cohort outcome.

	MESA Students 2017 # of Students = 128 Transfer Cohort: n=28	MESA Students 2018 # of Students = 142 Transfer Cohort: n = 37	SRJC Transfer Students *
University of CA	54%	41%	16%

CA State University	32%	49%	60%
Out of State & Private	14%	10%	25%
Total	28	37	1,448

* SRJC Transfer Students 2016-2017: SRJC Office of Institutional Research

5.1 Effective Class Schedule: Course Offerings, Times, Locations, and Delivery Modes (annual)

Does not apply.

5.2a Enrollment Efficiency

Does not apply.

5.2b Average Class Size

Does not apply.

5.3 Instructional Productivity

Does not apply.

5.4 Curriculum Currency

Does not apply.

5.5 Successful Program Completion

Does not apply.

5.6 Student Success

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CCCCO MIS Datamark – Special Population Credit Course Retention /Success Rate

For AY 2021-2022, MESA enrolled students demonstrated the following Academic Outcomes:

- A Fall 2021 Retention Rate of 83.75%
- A Fall 2021 Success Rate of 73.68%

- A Spring 2022 Retention Rate of 93.56%
 - A Spring 2020 Success Rate of 85.90%
- Retention count is the number of enrollments with grade of A-F, NP,I.
Success count is the number of enrollments with grade A-C, P.

5.7 Student Access

Student Access - MESA.

Based on MESA student population data for AY 2021-2022, the program participants presented as 45% female and 43% Latino.

5.8 Curriculum Offered Within Reasonable Time Frame

Does not apply.

5.9a Curriculum Responsiveness

Does not apply.

5.9b Alignment with High Schools (Tech-Prep ONLY)

Does not apply.

5.10 Alignment with Transfer Institutions (Transfer Majors ONLY)

Does not apply.

5.11a Labor Market Demand (Occupational Programs ONLY)

Does not apply.

5.11b Academic Standards

Does not apply.

6.1 Progress and Accomplishments Since Last Program/Unit Review

Rank	Location	SP	M	Goal	Objective	Time Frame	Progress to Date
0001	Santa Rosa	01	01	To implement a STEM Learning Community that supports STEM and MESA students	By fall 2022, SRJC will offer linked gateway STEM courses, forming a STEM directed learning community	October 2021 - June 2023	Completed
0002	Santa Rosa	03	02	To enroll 125 fully eligible student in MESA for AY 2022-2023; integrate MESA with the HSI-STEM Avanzando initiative	Fall 2022 and Spring 2033 CCCCO MIS special population data will demonstate enrollment of at least 125 MESA students	07.01.2022 to 06.30.2023	Covid delayed
0003	Santa Rosa	01	02	As a CCCCO special population, secure priority registatation for Avanzando and MESA student groups	By spring 2023, Avanzando and MESA students will have the same priority registration as other district recognized learning communities (Puente, Umoja, Second Chance, etc.)	06.01.2022 - 11.1.2022	Completed

6.2b PRPP Editor Feedback - Optional

6.3a Annual Unit Plan

Rank	Location	SP	M	Goal	Objective	Time Frame	Resources Required
0001	Santa Rosa	01	01	To implement a STEM Learning Community that supports STEM and MESA students	By fall 2022, SRJC will offer linked gateway STEM courses, forming a STEM directed learning community	October 2021 - June 2023	None - Completed
0002	Santa Rosa	03	02	To enroll 125 fully eligible student in MESA for AY 2022-2023; integrate MESA with the HSI-STEM Avanzando initiative	Fall 2022 and Spring 2033 CCCCO MIS special population data will demonstate enrollment of at least 125 MESA students	07.01.2022 to 06.30.2023	None -- Rebounding after COVID
0003	Santa Rosa	01	02	As a CCCCO special population, secure priority registation for Avanzando and MESA student groups	By spring 2023, Avanzando and MESA students will have the same priority registration as other district recognized learning communities (Puente, Umoja, Second Chance, etc.)	06.01.2022 - 11.1.2022	None - Completed