

**Southwest Center for Microsystems Education (SCME)
University of New Mexico**

BioMEMS Topic

BioMEMS Overview
Learning Module

BioMEMS = Bio MicroElectroMechanical Systems

This learning module includes three units:
Primary Knowledge (PK) – Reading Materials
BioMEMS Overview Activity
Final Assessment

A Learning Module Map is included as a suggested outline on how to use this learning module.

This learning module explains what “BioMEMS” are and how they are used today in different fields. An activity provides the opportunity to reinforce the importance of BioMEMS, where they are used, and the endless possibilities of future BioMEMS devices.

Target audiences: High School, Community College, University

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Website: www.scme-nm.org

Learning Module (LM) Map for BioMEMS Overview

This learning module explains what “BioMEMS” are and how they are used today in different fields. An activity provides the opportunity to reinforce the importance of BioMEMS, where they are used, and the endless possibilities of future BioMEMS devices.

Learning Module units (3):

- Primary Knowledge Unit (Reading unit)
- BioMEMS Overview Activity
- LM Assessment

Following is a suggested map on the implementation of this learning module.

IMPORTANT STEPS	KEY POINTS	REASONS
<p>Inquiry Exercise Ask the participants questions to get them thinking about bioMEMS.</p>	<p>What are bioMEMS? What are some medical items that you have seen in science fiction movies and shows that would be considered “bioMEMS”? Which of these devices do you think exist today? Which of these devices are possible with today’s technology?</p>	<p>This exercise will get the participants thinking about bioMEMS devices, what they are, and what they possible could be.</p>
<p>Present the <u>BioMEMS Overview PK</u></p>	<p>Participants should read the PK. A PowerPoint presentation can be downloaded by the instructor from scme-nm.org and presented to all participants.</p>	<p>After reading the PK, the participants will be better equipped to develop a bioMEMS tree in the supporting activity.</p>
<p>Complete the <u>BioMEMS Overview Activity</u></p>	<p>Participants are asked to develop a graphic that illustrates the areas in which bioMEMS are currently used and have the potential to be used and to identify applications in each of these areas.</p>	<p>This activity reinforces the current growth of bioMEMS and its possibilities. It shows the areas of manufacturing and research in which jobs are and will be available. It also allows participants to begin research specific bioMEMS.</p>

BioMEMS Assessment	Give the participants the assessment.	Participants are evaluated on what they have learned about bioMEMS, their current applications and possibilities.
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