

## Community College Students Attitudes toward Scanning Electron Microscopy

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Scanning Electron Microscopy (SEM) courses are usually reserved for graduate level students. When graduate students enroll in an SEM course they have an expectation of how mastering SEM skills may benefit their education and career path. College freshman and sophomores enrolling in a SEM course have expectations that are not so easily defined.

Schoolcraft College is a community college located in Livonia, Michigan. The total student enrollment is 36,000. Schoolcraft serves the southeastern Michigan counties of Wayne, Oakland, Washtenaw and primarily the surrounding Detroit suburbs. In September 2008, the College opened a 55,000 square foot Biomedical Technology Center and began offering Scanning Electron Microscopy, Biology 140. A Zeiss EVO LS-15 scanning electron microscope was purchased and science faculty and staff were given training to operate the instrument. Biology 140, Scanning Electron Microscopy was created to give students an opportunity to learn SEM theory and operation. Course competencies were written recognizing that many of the skill sets would be applicable to diverse scientific technologies. The course is formatted with one lecture hour and three laboratory hours each week. Students earn four hours of transferable biology credit. No prerequisites are required. Class size is limited to 12 students and is team taught by two instructors.

While data examining student success rates has been collected, student attitudes have not been researched. Information gathered informally from students during class has provided the only basis for instructors to assess student attitudes. A more candid assessment was sought. In February 2011, letters were mailed to students who had successfully completed the course asking if they would be willing to share their SEM experiences with others. Students were asked to speak openly in an informal dialog. Topics ranged from their decision to enroll, to classroom experiences, to immediate and future benefits from having had an SEM experience. Discussions included likes, dislikes and suggestions for course improvement.

While responses varied, a portrait of today's community college science student emerged. Several common themes arose during the interviews, providing information from which to further research. SEM curriculum will be examined and a collection tool for data will be developed from the information gathered during the student interviews.