

GCCCU Seminar Notification

Miami University, Center for the Enhancement of Learning, Teaching and University Assessment (CELTUA)

Contact Person at Sponsoring Institution:

Alicia Miller

Contact Person's Phone Number:

513-529-9266 ext 4

Contact Person's E-mail Address:

mille226@muohio.edu

Event Name/Title:

"Enhancing Academic Success of Underrepresented Student Groups in STEM Disciplines"

Brief Description:

<http://www.units.muohio.edu/celt/events/index.php?type=item&item=397>

Presented by **Joyce Fernandes**, Zoology and **Jerry Sarquis**, Chemistry and Biochemistry. This presentation will highlight three initiatives at Miami University directed toward increasing the diversity of science, technology, engineering and mathematics (STEM) students at Miami University. A faculty learning community (FLC) on Enhancing Academic Success of underrepresented student groups in STEM disciplines, which has spanned 3 years, has provided valuable perspectives in guiding the progression of these initiatives.

The National Science Foundation (NSF) funds the Undergraduate Research & Mentoring program directed by Joyce Fernandes and Phyllis Callahan (Zoology). The goal of this program is to engage students in undergraduate research beginning in their first year, and continuing through their four years at Miami. Faculty members from four departments participate in the research and mentoring activities- Botany, Chemistry and Biochemistry, Microbiology, or Zoology. URM Scholars also take courses that familiarize them with the scientific endeavor, proposal writing, and current topics in the Biological sciences. They participate in monthly meetings of the group and in outreach activities aimed at recruitment. Since 2008, the program has grown to 19 URM scholars.

The NSF also funds a second program directed toward underrepresented/underserved students who major in Chemistry or Biochemistry. The first cohort of six students came as freshmen in Fall, 2008 and became known as Chemistry Scholars. This original group of six

expanded to eleven during the 2008-09 academic year. Goals included recruitment of students from target school districts and retention efforts once students arrived on campus. Jerry Sarquis (Chm) has supervised the retention efforts. Two Chemistry Scholars from the first cohort and two peer mentors who have played a major role in helping the Chemistry Scholars both academically and socially at Miami University will participate. These students also participate in research activities offered by the URM program.

The First Year Research Experience (FYRE) program grew out of efforts of the STEM learning community and serves as an avenue to sustain the research and mentoring components of the NSF funded programs. A proposal drafted by Linda Dixon, Joyce Fernandes and Michael Kennedy, members of the STEM FLC, was funded by the Offices of the Provost and the President and is being administered through Office for Advancement of Research and Scholarship (OARS). The FYRE program was developed to give first year students an opportunity to conduct undergraduate research in the STEM disciplines as individual or as part of an undergraduate student-led team. A series of workshops and colloquia with outside speakers are an integral part of this program. FYRE was implemented in Fall 2009 and currently has 24 first year students.

Joyce Fernandes, CELTUA Faculty Teaching Associate, Zoology, teaches undergraduate and graduate courses in Developmental Biology, Cell Biology and Neurobiology. She is particularly interested in interdisciplinary approaches to learning and teaching science, and has facilitated a learning community on that topic. Joyce is facilitating the 2007-08 Faculty Learning Community on Enhancing Academic Success of Under-Represented Student Groups in STEM Disciplines. Joyce's research laboratory conducts projects in the area of neuromuscular development, which are funded by the National Institutes of Health and the National Science Foundation.

Jerry Sarquis, CELTUA Faculty Teaching Associate, Chemistry, has expertise in the areas of peer-led team learning (PLTL), structured group work, and teacher education in science. He also is interested in how multimedia technology can be used to effectively supplement and enhance lecture and laboratory experiences. He is co-facilitating the Faculty Learning Community on Enhancing Academic Success of Under-Represented Student Groups in STEM Disciplines and working with Theodore Wagenaar to set up a Student Teaching Consultant Service for Miami faculty.

Date:

Tuesday, March 30, 2010

Start Time:

2:00 pm

End Time:

3:15 pm

Location:

Bystrom Reid, Shriver Center

Directions and Parking:

A campus map can be found at:

http://www.miami.muohio.edu/about_miami/campusmap/ We recommend that you park in one of the two campus garages. They are .50 per hour.

Who is the intended audience?:

All faculty are welcome