

Workshop D - Planting the SEED for Success: Easing Transitions through Living & Learning Communities

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ABSTRACT

The object of this presentation is to inform the audience of practices used by the Successful Engineering Education and Development Support (SEEDS) Program at the Clark School of Engineering. Funded through the National Science Foundation, the SEEDS program offers several opportunities to impact success and create community for engineering students. Of these programs Flexus: The Dr. Marilyn Berman Pollans Women in Engineering Living & Learning Community and Virtus: A Living and Learning Community for Success in Engineering have proved particularly helpful in easing the transition for students into their first year of engineering course work. Flexus and Virtus provide 117 first and second year students access to engineering, gender based, living and learning environments. There are many components of Flexus and Virtus including:

Summer Orientation

New Resident Orientation

Common Resident Hall

Mid-semester Advising

1-credit Seminar & Course Clusters

SUMMER ORIENTATION

Students participating in the LLC's attend a specific 2-day new student orientation session. On the first day of orientation the students are introduced to the LLC staff and the advising liaison that will work with them through the duration of the program. On the second day of orientation the students are separated into rooms based on their specific LLC program and are advised to take their Math, Science, and Engineering courses together.

NEW RESIDENT ORIENTATION (NRO)

Prior all-campus move in for the fall semester Flexus and Virtus students move into the residents halls. Students participate in welcome activities and team builders. During this time students are introduced to the other members of their

cohort. NRO is a pivotal time to start the community aspect that is carried throughout the program.

COMMON RESIDENT HALL

Flexus and Virtus students reside on common floors in a residence hall. While the living component assists in community building it also helps with academic success. Students have classmates living on the same floors. Additionally, there is a tutoring center and lounge located in the resident hall. Students have several academic resources at their disposal through Flexus and Virtus.

MID-SEMESTER ADVISING

Flexus and Virtus participate in mandatory intrusive mid-semester advising if they earn a D, F or unsatisfactory on their early warning grades which are released mid-way through the semester. LLC staff meets with students with potential solutions to their academic challenges. This advising techniques has garnered positive results for students.

Flexus & Virtus Early Warning Grades, fall 2011 Cohort: 35% of Flexus students and 11% of Virtus students were identified as at risk by fall 2011 early warning grades. 91% of Flexus students and 95% of Virtus students earned a GPA of 2.0 or better in fall 2011. 38% of Flexus students and 27% of Virtus students were identified as at risk by spring 2012 early warning grades. 94% of Flexus students and 84% of Virtus students earned a GPA of 2.0 or better in spring 2012. In fact, 97% of Flexus students and 95% of Virtus students earned cumulative first year grades of 2.0 or higher (91% of Flexus and 87% of Virtus earned a GPA of 2.5 or better). This trend continued in fall 2012; 97% of Virtus earned a GPA of 2.0 or better.

Flexus & Virtus Early Warning Grades, fall 2012 Cohort: 11% of Flexus students and 14% of Virtus students were identified as at risk by fall 2012 early warning grades. 97% of Flexus and 96% of Virtus students earned a GPA of 2.0 or better in fall 2012.

1-CREDIT SEMINAR & COURSE CLUSTERS

LLC participants take their first semester mathematics, chemistry and introduction to engineering design or mechanics classes together along with a one-credit seminar course. The Flexus and Virtus Seminars provide additional

support for the concepts introduced in Introduction to Engineering Design (ENES100) and Mechanics I (ENES102). Faculty helped to identify undergraduate teaching fellows to deliver the material and provide additional help sessions outside of regular class time.

In addition to the aforementioned aspects, Flexus and Virtus also offers leadership experience through a student led executive counsel, research fellowships, and exposure to a variety of engineering related opportunities.

The impact of these programs is evident in student performance and retention. Student that participate in these programs are retained at a higher rate than non-participants. The following tables shows retention for Flexus/Virtus students compared to those not participating:

		Retained after	
Cohort		1 Year	2 Years
Fall 2010	Flexus (n=46)	98%	96%
	Non-Flexus (n=103)	90%	83%
Fall 2011	Flexus (n=34)	94%	
	Non-Flexus (n=121)	92%	
	Virtus (n=44)	91%	
	Non-Virtus (n=546)	87%	

Generally students seemed to be retained at higher rates if they participate in Virtus or Flexus compared to the students that do not participate. While data collection for the programs are still in the early staged, there are initial promising results.

During the session the presenter will outline the program components, shared current data and participants will discuss best practices and ways to establish/improve LLC efforts at any institution.