Strategic Plan – Initiative Work Plan FY2016

Initiative: Increase Retention and Graduation through Math Intervention in COT. May 31, 2015

Goal # 1 Goal Chairs: Josh Powers, John Beacon

Initiative # 2 Initiative Chairs: Bob English, David Sivley

Thesis Statement: Improve COT student success by intervening to build up the math skills needed for each major.

---

1. Introduction/Background – What?

Many students who want technology majors do not have the math skills needed for success. For some, it is the time lapse since they last took a math class. Others did not adequately develop math skills in high school but now want to become engineers. These unprepared students struggle in their classes. They may drop or get deficient grades. Tragically, the university gets both the blame and poor result for the student's lack of success.

2. Proposal/Purpose/Justification – Why?

Three years have now been completed with Math Intervention. From a small pilot group of transfer students in fall 2012, the program has grown to support and strengthen the entire COT student body. Some students "volunteer" by signing up online, working the program as distance students before their arrival for classes. Most COT students encounter Math Prep in their 100-level tech classes where basic analytical skills are first needed. Successful completion of math preparation is given as a course requirement within the class. Finally, a catch-up program has been added for struggling students who dropped a course to give them a boost and get them back on track for graduation.

3. Discussion of Past Years Results – Benchmark Successes?

For COT Transfers:

1-Year Retention: Improved from 49% to 84%, excluding a large number of graduates.

2-Year Retention: Improved from 28% to 54%, excluding graduates.

2-Year Graduation: Improved from 16% to 25%

2-Year Total Success (Retention + Graduation): Improved from 44% to 79%

These results include the great work of the Student Mentor Team and many others in the College of Technology who have focused on improving student retention and graduation.

Strategic Plan – Initiative Work Plan FY2016

4. Work Plan, Next Fiscal Year – Action Steps – Process – How?

Every year brings a new set of students with similar deficiencies for technology majors. We are pushing forward with the program to reach any COT student with inadequate analytical skills for their major.

5. Reporting and Deliverable Schedule – When?

The improvement of math skills is recorded for each student upon completion of the prep course. With approximately 600 students participating in Math Prep this year, the amount of specific data on each student is abundant. Summary reports of student progress for the year should be available each fall.

6. Budget – How Much, a General Discussion of Funds Use?

The entire program is operated with 1 full-time professor. There are also licensing fees (per student) for the advanced training system being used to personalize training for each individual student's need.

7. Stakeholders and Management Plan – Who?

Bob English and David Sivley

8. Outcome Assessment & Future Testing

Success has been observed in the broad view by improved retention and graduation. More specific to math skills, it is best gauged by focusing on student need and student improvement. These critical values are measured for each student with tests at the beginning and end of every Math Intervention. Success is also achieved by the sheer number of students assisted, even though those gains vary from student to student. To meet cost efficiency for a full-time position, the goal has been to work with 500 students each year. To declare success of impact, if just 30 students were significantly improved (rescued), the program would more than pay for itself in increased tuition (retention).

9. Line Item Budget Discussion that tracks Budget Templates …

The math skills program is administered and run completed by David Sivley. He manages the system which gives testing and instruction personalized to each student's need. He interacts with students who sign up for Math Prep as a distance course (non-credit) to prepare for their upcoming classes. He meets with students in 100-level courses for supervised testing and assistance. He also co-teaches some courses for students with special math needs. Through these various methods he has strengthened over 1,000 "COT students since the program began in fall 2012. He is active with students during summer months and over Christmas break as incoming students get ready for class. The licenses are paid in advance, but remain in supply until used. A total of 620 licenses were used during the past 10 months. We anticipate a need for 700 licenses in 2015/2016.