Florida Institute of Technology  
Undergraduate Curriculum Committee  
January 29, 2016  
8:00 a.m.  
F.W. Olin Physical Sciences Building  
Second-Floor Conference Room  

MINUTES

The meeting began at 8:00 a.m.  
The Chair welcomed the Committee.

The following items remained on the Consent Agenda and were unanimously approved.  
Consent Agenda:

1. College of Aeronautics  
   a. ANC – AVM 3202 – Airport Design  
      (Note: This is only a request to change a course description, not for the addition of a new course, irrespective of the form submitted.)

College of Psychology and Liberal Arts
2. School of Arts and Communication  
   a. ANM – B.S. Multiplatform Journalism  
   b. ANM – B.S. Strategic Communication

Discussion Items:

1. Presentation of results from Physics/Calculus analysis –  
   Dr. Monica Baloga (VP of Institutional Effectiveness and International Programs)

At the October 30, 2015 meeting, Dr. Maul (Department of Marine and Environmental Systems) noted that that for those programs on campus that require both MTH 1002 (Calculus 2) and PHY 1001 (Physics 1), that about half require students to take MTH 1002 at the same time as PHY 1001, and the other half have the students take these courses in sequence. He asked whether there were any data to suggest that students perform better when they complete MTH 1002 before enrolling in PHY 1001 as compared to when the courses are taken concurrently.

In response, Institutional Research was asked whether they could find relevant data. Today, Dr. Baloga presented the findings.

Dr. Baloga started by explaining that data was collected from Fall 2005 through Summer 2015, and included a sample of 4394 students who had taken PHY 1001. These students were broken out into four categories: 1) those who took MTH 1002 followed by PHY 1001 (1369 students), 2) those who took MTH 1002 concurrently with PHY 1001 (2356 students), 3) those who completed MTH 1002 after having taken PHY 1001 (257 students), and 4) those who took PHY 1001 but for whom there is no record that they ever took MTH 1002 (412 students). She noted that transient students were not included in this sample, and that there is a disparity in the sample size amongst the groups that might affect any conclusions drawn from the data.
In the first group (sequential enrollment), the data showed strong student performance, with a mean grade of 2.74 (out of 4.0). The performance of the second group (concurrent enrollment) was nearly as strong, with a mean grade of 2.55. Performance of students in the third group (PHY 1001 prior to MTH 1002) and fourth group (no record of MTH 1002) was significantly weaker, with mean grades of 1.70 and 1.59, respectively.

Dr. Baloga emphasized that while the data demonstrates a correlation between when students take MTH 1002 in relation to when they take PHY 1001, and student performance, she cautioned that this should not be interpreted as a direct cause-and-effect, and that there are several other variables that may be in play. For example, students who took MTH 1002 before enrolling in PHY 1001 may be more mature (experienced) students, or those students in the third and fourth groups may have struggled with math in general.

It was suggested that one conclusion that might be drawn is that students appear to derive a slight benefit to having taken MTH 1002 and PHY 1001 sequentially. In any event it is clear that students who do not successfully complete MTH 1002 prior to or concurrently with PHY 1001 do not perform as well in PHY 1001. While there was consensus on this point, it was noted that to suggest making MTH 1002 a prerequisite of PHY 1001 would cause substantial problems for many programs where the courses are presently scheduled concurrently. Dr. Baloga again stressed that she did not believe this study alone was sufficient to warrant any policy changes. There was some discussion as to how well the content of PHY 1001 tracked the content of MTH 1001 (Calculus 1) and MTH 1002, and it was reaffirmed that the Department of Physics and Space Sciences ultimately has the responsibility and authority to recommend the appropriate course restrictions on PHY 1001.

The Committee thanked Dr. Baloga for her time and effort in preparing the very informative presentation. Dr. Baloga’s Power Point presentation on this matter can be found on the UGCC website at www.fit.edu/ugcc in the January dropdown menu, or via the January 2016 archival link.

The Chair noted the date and time for the next meeting.

Our next regular meeting is Fri., Feb. 26 at 8:00 a.m. in the Physical Sciences conference room. Agenda items are due Fri., Feb. 19.

The meeting ended at 8:25 a.m.

Respectfully submitted,

Mark Archambault – Chair