1. 2012 STEP Cohort

a. Number of Students Placed -- A total of 301 out of 376 students who participated in 2012 Summer Orientation were placed in STEP cohorts (80.1%).

b. Mathematics Placement: The profile of the first-time, first-year CEAS students who participated in Summer Orientation as indicated by first-semester mathematics enrollment is shown in the table below:

<table>
<thead>
<tr>
<th>First Semester Math</th>
<th>2005 (%)</th>
<th>2006 (%)</th>
<th>2007 (%)</th>
<th>2008 (%)</th>
<th>2009 (%)</th>
<th>2010 (%)</th>
<th>2011 (%)</th>
<th>2012 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus II and higher</td>
<td>9.7</td>
<td>5.4</td>
<td>5.1</td>
<td>5.2</td>
<td>7.9</td>
<td>7.5</td>
<td>5.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Calculus I</td>
<td>31.5</td>
<td>35.3</td>
<td>42.7</td>
<td>39.2</td>
<td>54.3</td>
<td>40.7</td>
<td>38.0</td>
<td>37.2</td>
</tr>
<tr>
<td>Pre-Calculus</td>
<td>24.9</td>
<td>31.0</td>
<td>31.1</td>
<td>29.8</td>
<td>27.9</td>
<td>25.2</td>
<td>34.0</td>
<td>31.7***</td>
</tr>
<tr>
<td>Algebra II</td>
<td>23.4</td>
<td>17.7</td>
<td>13.7</td>
<td>18.9</td>
<td>22.0</td>
<td>19.1</td>
<td>16.8</td>
<td>24.2</td>
</tr>
<tr>
<td>Algebra I and lower*</td>
<td>7.0</td>
<td>10.3</td>
<td>7.2</td>
<td>6.9</td>
<td>7.6</td>
<td>6.8</td>
<td>8.4</td>
<td>...***</td>
</tr>
<tr>
<td>No Math Data</td>
<td>3.5</td>
<td>0.3</td>
<td>0.3</td>
<td>1.0</td>
<td>0.3</td>
<td>0.7</td>
<td>0.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

*Include MATH 1090, 1100, 1160
** Only 50 of 119 students placed in Pre-Calculus (42.0%) have the high-school GPA to qualify for General Chemistry I in Fall Semester
***Beginning Fall 2012, students with MATH ACT 18 or lower who applied to CEAS are admitted to Exploratory Advising
c. CEAS Exploratory: Effective Fall 2012, incoming first-year students whose MATH ACT falls between 19 and 23 (Algebra II) will be placed in CEAS Exploratory as part of the revised admissions requirements to CEAS. The CEAS Exploratory students will be admitted to the Pre-Engineering or Pre-Engineering Technology Curriculum when they achieve a grade of B or better in Algebra II (MATH 1110) in no more than two attempts.

The 91 CEAS Exploratory students admitted in 2012 (24.2% of the incoming class of first-year students) will be advised and monitored by Sarah Hagan, a CEAS Academic Advisor using the process described in Appendix I.

2. Preliminary Results of 2011-12 New Initiatives

a. Survey of Faculty Advisors of CEAS Student Organizations

Beginning in Fall 2010, STEP funds have been used to support student leaders of CEAS student organizations to attend leadership retreat hosted by the Student Affairs. In an effort to improve the effectiveness of faculty advisors of CEAS student organizations, a survey on their need was conducted in Spring Semester 2012. An Executive Summary can be found in Appendix II.

b. Mandatory Math Tutoring Pilot

- Involved one Section of Pre-Calculus (MATH 1180) and one section of Calculus I (MATH 1700) in which CEAS students form the majority of students enrolled
- Instructor set the threshold for requiring students to attend tutoring session (e.g., 65% or below on homework, quiz, or exam)
- Card readers at STEP Student Success Centers recorded attendance; biweekly data of who attended tutoring was provided to math instructors
- Mandatory MATH Tutoring Pilot Sections GPA and SSC Use Comparison

<table>
<thead>
<tr>
<th></th>
<th>Pre-Calculus (MATH 1180)</th>
<th>Calculus I (MATH 1700)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollment</td>
<td>44</td>
<td>33</td>
</tr>
<tr>
<td>Total # Unique SSC Users</td>
<td>22 (50%)</td>
<td>19 (58%)</td>
</tr>
<tr>
<td>Average GPA – Course</td>
<td>2.29</td>
<td>2.57</td>
</tr>
<tr>
<td>Average GPA – SSC Users</td>
<td>2.45</td>
<td>2.47</td>
</tr>
<tr>
<td>Average GPA – non-SSC Users</td>
<td>2.12</td>
<td>2.78</td>
</tr>
<tr>
<td>GPA Difference (Users vs. Non-Users)</td>
<td>0.33</td>
<td>-0.31</td>
</tr>
</tbody>
</table>

- Requiring tutoring has a positive impact on Pre-Calculus
- Requiring tutoring increased SSC usage significantly – 69% of PreCalculus students and 79% of Calculus students attending SSC came from the mandatory tutoring sections
- Habit of using SSC did not continue into spring semester (35% of pilot students used SSC in spring semester)

- GPA Comparison of Sections with “Mandatory Tutoring” vs “No Mandatory Tutoring”

<table>
<thead>
<tr>
<th></th>
<th>No. of Students</th>
<th>Avg. Course GPA</th>
<th># Grade =/&gt; C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Calculus I</td>
<td>44</td>
<td>1.65</td>
<td>20 (45.5%)</td>
</tr>
<tr>
<td>Pre-Calculus II</td>
<td>38</td>
<td>2.11</td>
<td>18 (47.4%)</td>
</tr>
<tr>
<td>Pre-Calc III -- Pilot</td>
<td>44</td>
<td>2.28</td>
<td>29 (65.9%)</td>
</tr>
<tr>
<td>Calculus I</td>
<td>30</td>
<td>1.92</td>
<td>18 (60.0%)</td>
</tr>
<tr>
<td>Calc II -- Pilot</td>
<td>38</td>
<td>2.23</td>
<td>27 (71.1%)</td>
</tr>
<tr>
<td>Calculus III</td>
<td>39</td>
<td>2.06</td>
<td>23 (59.0%)</td>
</tr>
</tbody>
</table>
Calculus IV

Not factoring in time of day of class and instructor, mandatory tutoring improve class performance

Moving Forward
- Pre-Calculus instructor would continue mandatory tutoring; Calculus I instructor is still considering; has reached out to Algebra II Coordinator
- Considering Supplemental Instruction (SI) model of tutoring to address issues identified during pilot

At-Risk Student Intervention Pilot

- In January 2012, identified first-year, returning sophomore, and first-year transfer students who lived in residence hall and whose fall semester 2011 term GPA falls between 1.50 to 2.00
- Reached out to students and asked them to meet with STEP GA (first-year and transfer students) or Associate Dean (returning sophomores) within first 6 weeks of spring semester
- 46 students met with STEP GA/Associate Dean (68% response rate) for initial triage and personalized recommendations for academic habit change
- CEAS advising staff met with students with “C” or below spring mid-term grade
- Preliminary results: Spring GPA Differences for Students in Pilot

<table>
<thead>
<tr>
<th>Student Type</th>
<th>Intervention</th>
<th>No Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-Year Students</td>
<td>No. of Students</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>GPA Difference</td>
<td>0.27</td>
</tr>
<tr>
<td>Returning Sophomores</td>
<td>No. of Students</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>GPA Difference</td>
<td>0.66</td>
</tr>
<tr>
<td>First-Year Transfer</td>
<td>No. of Students</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>GPA Difference</td>
<td>0.77</td>
</tr>
</tbody>
</table>

- Intervention has greatest impact on first-year students
- Even with intervention, several students who fell on the lower-end of GPA spectrum did not move out of good academic standing

Moving Forward
- Evaluate what are the best GPA ranges to target where the intervention would have the greatest impact
- Refining communication approaches with students to increase likelihood of responding to meeting request
- Evaluating new Cognos report created by Office of Institutional Research re. user-friendliness in identifying at-risk students
- Address the narrow window between midterm grades released and the last day to withdraw class
- Increase the number of faculty reporting early-work or mid-term grades
Appendix I. CEAS EXPLORATORY PROGRAM PROCESS FLOWCHART

- ADMISSION
  - ACT Math Score
  - CEAS Exploratory
    - Summer Bridges
      - Math Placement Test
        - Math at Comm. College
          - "B" or Better
            - YES
              - Placed into MATH 1180
            - NO
              - "B" or Better
                - YES
                  - MATH 1180 (or higher) F12
                - NO
                  - Sign CEAS Exploratory Compact and get copies of Grade Reporting Forms

- OCTOBER
  - Hold on Account
    - NO
      - Attend Midterm Check-Up with Completed Grade Report Forms
        - YES
          - "B" or better in MATH 1110
            - NO
              - Academic Interventions
            - YES
              - Sign CEAS Exploratory Compact and get copies of Grade Reporting Forms

- DECEMBER
  - Attend Finals Check-Up with Completed Grade Report Forms
    - YES
      - "B" or better final grade in MATH 1110
        - YES
          - MATH 1180 Sp13
        - NO
          - 2nd Attempt
            - NO
              - Mandatory Career Interventions
                - NO
                  - MATH 1110 Sp13
                - YES
                  - MATH 1110 Sp13