End of the Academic Year 2012-2013 – End of This Cycle

Results & Improvement Plan for Next Year

The template has 9 pages. Please return this completed form with the dean signatures or their E-mail approval(s) copied & pasted in at the end. by **May 10, 2013** to Jessica King in the Valencia Institutional Assessment (VIA) Office (jking84@valenciacollege.edu.) Please see the VIA website for this form, your plans, and related materials: [www.valenciacollege.edu/via](http://www.valenciacollege.edu/via) -- left tab LOA

If you are working on several programs please submit a template for each one; each labeled for the specific program.

<table>
<thead>
<tr>
<th>Academic Program / Discipline Area (for General Education) or Co-Curricular Program Area</th>
<th>MATHEMATICS</th>
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<tbody>
<tr>
<td>Planning Team Leader(s)¹</td>
<td>Campus</td>
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<tr>
<td>Roberta Carew</td>
<td>West</td>
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<td>Planning Team Members²</td>
<td>Campus</td>
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<td>Nichole Shorter</td>
<td>West</td>
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<td>Scott Krise</td>
<td>West</td>
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<td>Armira Shkembi</td>
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<td>Jennifer Lawhon</td>
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<td>Julie Phelps</td>
<td>East</td>
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<td>Joshua Guilemette</td>
<td>East</td>
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<td>Upasana Santra</td>
<td>Winter Park</td>
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<tr>
<td>Magdala Emmanuel</td>
<td>Osceola</td>
</tr>
<tr>
<td>Brian Macon</td>
<td>Lake Nona</td>
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</table>

Note from Planning Team Fall 2011: Please note, with respect to the designation of Planning Team Leaders: The Planning Team came to a consensus that Planning Team Leaders should include representation from each of the three major campuses (East, Osceola, and West). Those selected, or volunteering, for the role of Planning Team Leader are to be a non-tenure track full time faculty members (tenured or four-month). It was the determination of the Planning Team that tenure-track faculty should be encouraged to concentrate on the completion of their ILP.

The Planning Team came to the consensus that all tenured, tenure-track, and full-time four-month faculty are considered members of the planning team. As the work being conducted for these Assessment Plans impacts all tenured and tenure-track faculty, they all should play an active role in the work being conducted.
Six Items Documenting Results
Please fill in the blue shaded areas with brief sentences. A second page is provided for longer comments.

Documenting the Assessment Process

1. In a sentence or two, what did you do and who was responsible for coordinating the collection of student artifacts/data?
   We embedded our assessment question in the final exam for MAC1105 - College Algebra. The question was based on the Quantitative Reasoning and Critical Thinking General Education Program Learning Outcomes. Roberta Carew and representatives from each campus (Magdala Emmanuel, Brian Macon, Damion Hammock and Joshua Guillemette) were responsible for coordinating and collecting artifacts, with the support of the Dean and department office staff.

2. At what point in the academic year/semester were the student artifacts/data collected? How many students were assessed?
   Artifacts were collected immediately after final exams (May 1st was the deadline to submit.) All MAC1105 students were supposed to receive the assessment as part of their final exam but we do not have a count of how many actually did. However, we took a random sample of 125 students, of which 82 artifacts were returned (including withdrawn student “blanks”) for a total of 70 assessable student artifacts.

Improvement Plan and Use of the Assessment Results – Next Year’s Cycle

3. What were your results? (Please e-mail the data and copies of instruments when you submit this form if possible, for example rubric scores in an Excel sheet.) How did this compare with any predictions that you made in the Fall?
   Please see attachments. We were unsure of predictions as this was a revised version of the assessment and rubrics.
   - Competency Levels
     - 1 – Beginning
     - 2 – Developing
     - 3 – Competent
     - 4 – Accomplished
   - Quantitative Reasoning
     - Classifying and utilizing facts and formulas correctly: mean = 2.36, sd = 1.35
     - Constructing a mathematical model: mean = 2.30, sd = 1.22
     - Solving using appropriate procedures: mean = 2.13, sd = 1.18
     - Drawing well supported conclusions (*): mean = 2.00, sd = 1.17
   - Critical Thinking
     - Comprehending data/information: mean = 3.29, sd = 0.92
     - Analyzing data: mean = 2.13, sd = 1.13
- Developing a viable solution plan: mean = 2.34, sd = 1.23
- Drawing well supported conclusions (*same as above, shared indicator): mean = 2.00, sd = 1.17

4. What are the changes / improvements you plan to make within the curriculum (targeted courses), co-curricular program, or student activity over the next year? (Please use the following page if you need more space for your response.)
   a. Keep the rubrics, question and process the same for next year so that we can compare data.
   b. Make sure artifacts are turned in for all students in the sample that are still enrolled and in attendance on Final Exam day.
   c. Ensure that students have a common experience (i.e. consistency in administration, make sure that the question is presented the same way to students in terms of space to write, value/worth, whether there are lines to write, etc.)
   d. Ensure students have practice working with the skills of reasoning and thinking through word problems and the creation of mathematical models during the semester.
      i. Provide a resource for adjunct faculty or any others that may be interested, to include: word problems skill activity (from DEI) and word problem/mini-project activity ideas.
   e. Move from “anonymous” to “confidential” for artifact submission.
      i. Remove all identifying information from student artifacts but label with a unique identifier so that designated researcher (i.e. lead faculty or other designated “analyst”) can do further data analysis.
   f. Discuss results of assessment project at discipline meetings (Summer A) to ensure as many faculty as possible have had a chance to see the results and weigh in on the discussion.
   g. Do an anonymous faculty survey via Qualtrics to gather faculty feedback about the assessment project.

5. What changes, if any, will be made to the common course outlines, the catalog, etc.
None at this time.

Next Steps – Planning for Next Year’s Cycle— Academic Year 2013-2014 (see below for detailed planning)

6. What are your next steps – acting on the results? (These steps will guide others in the next cycle... moving the process forward.) If these steps include the development and implementation of a new assessment, include that information here. If you plan to change the current assessment or the program learning outcome that you focus on, you will want to do that here.

These were our main areas of concern upon discussion of the results:
   o Overall, a common theme in the discussion was student ability (or lack thereof) to reason and think through a word problem.
   o As the learning outcomes move up in Bloom’s Taxonomy, average competency displayed by students seems to decline.
   o Lack of participation in the assessment project by some faculty.
      o Is it a communication issue? Were they unaware?
Do all faculty understand the purpose of the assessment project?
Do some faculty think/feel participation is "optional"?

In response to these concerns, we have created a faculty survey to gather further feedback from all faculty and are sharing the results of the assessment project at department meetings during the summer. We will continue to work on enhancing our communication plan. The Math Assessment Work Team is working on resources for faculty that want/need projects and activities that model the skills assessed as part of our project. This will help to provide learning opportunities during the semester that allow for mastery of the competencies of Quantitative Reasoning and Critical Thinking. We intend to keep the assessment and rubrics the same and assess the same two outcomes again next year.

Please include the name of the person completing this page and your program:
Roberta Carew, Mathematics

See next page...

Additional Space for Comments Reporting on Prior Year (if needed)

3) If you have additional comments for the following question, please share them here: What were your results?
See above

4) If you have additional comments for the following question, please share them here: What are the changes / improvements you plan to make within the curriculum (targeted courses), co-curricular program, or student over the next year?
See above

6) If you have additional comments for the following question, please share them here: What are your next steps – acting on the results? If these steps include the development and implementation of a new assessment, include that information here. If you plan to change the current assessment or the program learning outcome that you focus on, you will want to do that here.
See above

See next page....
## Planning for AY 2013-2014 Learning Outcomes and Performance Indicators

Complete only the sections that apply to your work.

### Academic Program / Discipline Area (for General Education) or Co-Curricular Program Area:

### Mathematics

**Targeted Program Learning Outcome(s)**

(How many will you be assessing this coming year?):

- Quantitative Reasoning and Critical Thinking

**Performance Indicators for the Program Learning Outcome(s) selected:**

- **Quantitative Reasoning**
  - Classifying and utilizing facts and formulas correctly
  - Constructing a mathematical model
  - Solving using appropriate procedures
  - Drawing well supported conclusions (*)

- **Critical Thinking**
  - Comprehending data/information
  - Analyzing data
  - Developing a viable solution plan
  - Drawing well supported conclusions (*)

**External Standard(s) in the field or discipline** (please contact Laura Blasi lblasiv@valenciacollege.edu with any questions about this):

**Common Assessment** (What assessment method (written assignment, speech, test, etc.) will you use to assess student ability related to the program / course outcome(s) selected): Common question embedded in the final exam

**Description of the Proposed Common Assessment** (Common assessments should be designed to ensure a balance between (1) the need for a consistency within the program in order to ensure comparable student artifacts and (2) the need for reasonable flexibility in order to encourage faculty judgment in the design and

**Targeted Course(s), Co-Curricular Program or Student Activity associated with the Academic Program:**

- MAC1105 – College Algebra

**Targeted Outcome(s) within the Course(s), Co-Curricular Program or Student Activity identified above:**

- Quantitative Reasoning and Critical Thinking

**Performance Indicators for Outcome(s) within the Course(s), Co-Curricular Program or Student Activity selected:**

- **Quantitative Reasoning**
  - Classifying and utilizing facts and formulas correctly
  - Constructing a mathematical model
  - Solving using appropriate procedures
  - Drawing well supported conclusions (*)

- **Critical Thinking**
  - Comprehending data/information
  - Analyzing data
  - Developing a viable solution plan
  - Drawing well supported conclusions (*)
Implementation Process

Collection of Student Artifacts

What information needs to be communicated to students concerning the assessment process (informed consent, etc.)?

None. As the assessment is being embedded in the final exam students will not be experiencing anything outside of normal class activities.

How will student artifacts or data associated with student performance be collected?

Ungraded copies of the student’s work will be submitted to the dean’s office. Student identifying information will be replaced with a unique identifier that will preserve the confidentiality of the student and faculty. The lead faculty (presently Roberta Carew) will keep the records solely for the purposes of supplemental analysis regarding enrollment, student success, math course enrollment and performance history, etc.

If student artifacts are to be collected based on a random sample of students registered for the course or participating in the program / activity, what characteristics should the sample include?

Campus, time of day, full-time/part-time faculty status, online/face-to-face

How will information about faculty / staff participation in the assessment project be communicated?

Via email, through department meetings and from the Dean.
Who will be responsible for coordinating the collection of student artifacts?
Roberta Carew and campus representatives of the Math Assessment Team.

At what point in the academic year / semester will the student artifacts be collected?
End of term following final exams.

**Program Level Assessment / Evaluation of Student Artifacts and Analysis of Results**

When will student artifacts be assessed / evaluated?
First week of May, prior to Assessment Day so that results can be discussed at our Assessment Day meeting.

Which faculty or staff from the program/discipline will evaluate student artifacts?
All math faculty will be invited to participate.

What training / preparation / information will faculty or staff need in order adequately assess / evaluate the student artifacts collected?
No training necessary. We will debrief and do a leveling exercise immediately prior to assessing the artifacts.

When will the results / data associated with the assessment plan be analyzed?
The data will be analyzed immediately after scoring so that it can be shared with all math faculty at Assessment Day.
What are your predictions regarding student performance? (What do you expect to see when you analyze your results?)

Not sure as of yet. We plan to have a discussion after Academic Assembly as a discipline to discuss what our expectations for performance would be.

What training / preparation / information will faculty or staff need in order to analyze the results data associated with this assessment plan?

None.

What additional sources of data might allow faculty / staff to better understand and act on the results of this assessment plan?

Not sure at this time. We may need additional background information regarding student course history or other characteristics.

In order to ensure curricular and programmatic alignment, who else should be included in this conversation (e.g., faculty from related discipline areas in General Education)?

None at this time.

How will the assessment results be disseminated to stakeholders (Faculty, Staff, Advisory Boards, etc.)?

Results will be shared with math faculty at Assessment Day 2014 and will be discussed in subsequent Division meetings on all campuses. Results will be shared via email as well.

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Approval Process

<table>
<thead>
<tr>
<th>Activities Associated with the Approval of Assessment Plans</th>
<th>Completion Date</th>
<th>Person Responsible</th>
<th>Results</th>
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<tbody>
<tr>
<td>Draft assessment plan is circulated for input to reviewers appropriate to the program / discipline (including Deans / Directors responsible for supporting and promoting the work necessary for the implementation of the Assessment Plan)</td>
<td>May/June 2013</td>
<td>Roberta Carew, Math Deans, Campus Representatives of the Math Assessment Team</td>
<td>Summary of results and recommendations for next year were discussed at Assessment Day 2013 (May 3rd) and were disseminated via Department Meetings as a follow-up.</td>
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<td>College-wide live or e-mail / Blackboard discussion will be coordinated to consider input received (if needed)</td>
<td>May/June 2013</td>
<td>Roberta Carew, Math Deans, Campus Representatives of the Math Assessment Team</td>
<td>Feedback was collected at Division Meetings and via a Qualtrics Survey.</td>
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<td>Draft assessment plan is revised to reflect input</td>
<td>June 2013</td>
<td>Roberta Carew</td>
<td>Feedback was incorporated in plans for implementation. We will further discuss this plan prior to vote at a college-wide discipline meeting following Academic Assembly.</td>
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<tr>
<td>Faculty vote on the Assessment Plan using the Current voter eligibility list for curriculum (<a href="http://valenciacollege.edu/faculty/forms/voterlists/">http://valenciacollege.edu/faculty/forms/voterlists/</a>)</td>
<td>Anticipated date of completion – August 2013</td>
<td>Roberta Carew, Math Deans</td>
<td>Pending – would like to vote at the College-wide meeting after Academic Assembly.</td>
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**Dean / Director Support**

The Dean(s) responsible for supporting and promoting the work necessary for the implementation of the Assessment Plan need to indicate their support for the plan. Please copy and paste in E-mail approval (as applies) at the end of the document and then send the form complete to us or obtain, scan, and send handwritten signatures and then send.

<p>| Maryke Lee | Signature | Maryke Lee |
| Melissa Pedone | Signature | Melissa Pedone |
| Russell Takashima | Signature | Russell Takashima |</p>
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<th>Name</th>
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