**Sinclair Community College**

**Continuous Improvement Annual Update 2012-13**

**Please submit to your dean and the Provost’s Office no later than Oct. 1, 2012**

**Department:** 0712 – Developmental Mathematics

**Year of Last Program Review:** FY 2011-12

**Year of Next Program Review:** FY 2016-2017

**Section I: Department Trend Data, Interpretation, and Analysis**

**Degree and Certificate Completion Trend Data – OVERALL SUMMARY**

**NOT APPLICABLE**

Please provide an interpretation and analysis of the Degree and Certificate Completion Trend Data (Raw Data is located in Appendix A*): i.e. What trends do you see in the above data? Are there internal or external factors that account for these trends? What are the implications for the department? What actions have the department taken that have influenced these trends? What strategies will the department implement as a result of this data?*

**Course Success Trend Data – OVERALL SUMMARY**

Please provide an interpretation and analysis of the Course Success Trend Data (Raw Data is located in Appendix A). Looking at the success rate data provided in the Appendix for each course, please discuss trends for high enrollment courses, courses used extensively by other departments, and courses where there have been substantial changes in success.

The FY 12 - 13 success rate was 65.5% for the entire fiscal year

The department's success rate for all modalities has shown a significant improvement in the last year. With new measures in place to ensure accurate placement and enrollment in a course we are hoping that the trend will continue.

Dev. 0020 success rate was 57%. This was a significant improvement over previous years when compared to the success rates of Dev. 084 which ranged from 48% to 52.3%

Dev. 0022 success rate was 66%. This course now contains content from both Dev. 084 and 085

Dev. 0024 success rate was 66%. This course now contains content from both Dev. 085 and 108

Dev. 0026 success rate was 72%. This course now contains content from Dev. 108

Success rates for the Math Academy are provided below

Course Fall 12 Spring 13

Dev. 0022 63% 68%

Dev. 0024 74% 74%

Dev. 0026 78% 80%

Success rates for the Boot Camps are provided below

Course Fall 12 Spring 13

Dev. 0070 100% 85.7%

Dev. 0072 85% 95.2%

Dev. 0074 50% 80%

Dev. 0076 100% 83.3%

Average 87.5% 87.8%

Overall the trend appears to be increasing each year for all modalities, but as we have new courses due to the semester conversion, a course to course comparison was not able to be made.

Please provide any additional data and analysis that illustrates what is going on in the department (examples might include accreditation data, program data, benchmark data from national exams, course sequence completion, retention, demographic data, data on placement of graduates, graduate survey data, etc.)

**Section II: Progress Since the Most Recent Review**

Below are the goals from Section IV part E of your last Program Review Self-Study. Describe progress or changes made toward meeting each goal over the last year.

|  |  |  |
| --- | --- | --- |
| **GOALS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| ACA is scaling up Math Modules, Accelerated English and Boot Camps to serve more students. These modalities will move from “297” designation to “real” courses in semesters. ACA is also in the process of re-vamping all web courses for semester format. | In progress  Completed  No longer applicable | In the summer of 2012, the computer lab was renovated and expanded to contain 58 computers. As a result the class size has increased to 40 students. Each class time offers all three levels of developmental math, which provides the opportunity to maximize the lab space. The lab is open all week, including weekday evenings and Saturday mornings. Students appreciate having the ability to utilize the lab during their breaks and they appreciate having a tutor available at all times to help them with questions. The Math Academy is now being offered at the Courseview Campus in a stacked format as well. The possibility of offering the Math Academy at Preble County Learning Center is being pursued for next year.  The Boot Camp is currently being offered four different times during the year, both during the day and evening. The enrollment has been showing an increase with Fall 12=36 students, Spring 13=44 students, Summer 13=100 students, and Fall 13=105 students.  The DL courses have all been updated for semesters. |
| Reading faculty are working with the Biology Department to create biology–specific reading modules to help increase success in biology. These interactive lessons could be expanded to other disciplines. A “dream” would be to combine a course such as ALH 103 with DEV 065 (Reading) as a learning community | In progress  Completed  No longer applicable | Due to the separation of Academic Foundations, Reading is no longer in the Developmental Math Department |

Below are the Recommendations for Action made by the review team. Describe the progress or changes made toward meeting each recommendation over the last year.

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| --- | --- | --- |
| **RECOMMENDATIONS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| The mission statement for the department that was provided in the Self-Study does not mention preparation for college-level math and English courses as the department’s central purpose and should be revised accordingly. The mission statement overall would benefit from being more concise and focused. | In progress  Completed  No longer applicable | Revised  The Developmental Math Department is committed to providing a learning centered curriculum and approach which engages students and prepares them for college level courses. Through a variety of methodologies, the Developmental Math program’s mission is to meet the needs of Sinclair’s diverse study body by providing flexibility and equity and empowering students to attain higher education goals regardless of their previous mathematical experience |
| The current program outcomes for the department mirror the college’s General Education outcomes. It is recommended that the department develop program outcomes that support the General Education outcomes, but that are clearly tailored to developmental education. | In progress  Completed  No longer applicable | We are meeting as an area in Nov. to discuss the revising of our program outcomes. |
| While the department has collected a tremendous amount of data, it appears that to a large extent this data has not been interpreted, synthesized, and then used to inform changes. The department is encouraged to work with RAR to develop a plan for its use of data, including delineation regarding what routine data collection, analysis and interpretation the department will handle versus what RAR can best manage. | In progress  Completed  No longer applicable | The department has discussed what data will need to be collected to determine as to which courses and areas of content the department will concentrate on. This will be done by collecting data on the success of our students in their next level math class as well as the results on the exit exam. |
| Similarly, while the department’s efforts in developing common assignments and exams have been good, it does not appear from the Self-Study and review meeting that data on student outcomes at the course and section level is currently being collected and used to improve teaching and learning. The review team recommends that the department capture and mine this rich source of assessment data, analyze results and document findings. Assessment results collected in this manner should be reported in Annual Updates beginning next year and in the next Program Review self-study. Few departments at Sinclair are as well positioned to document student learning so completely and comprehensively, and it is recommended that the department take the next step to make this a reality. | In progress  Completed  No longer applicable | The department conducted an Item Analysis of the common tests and final exam. Based on the results, revisions were made in the ancillary materials. Further comparisons will be conduced each term on the most frequently missed questions to direct future changes. So to better analyze the final exam, specifically related to course outcomes, discussion is occuring as to whether changes should be made regarding the format of the final from all open ended questions to include some multiple choice questions. |
| Building on the foundation for assessment that has been laid with common assignments and exams, it is recommended that the department work with its divisional Learning Liaison to develop a formal assessment plan to work through the issues related to collection, analysis, interpretation, and reporting of assessment data. RAR can also be a valuable resource in this regard. | In progress  Completed  No longer applicable | The chair will meet with our Learning Liason prior to our Nov.  Department Learning Day so that a clearer and more concise plan of action can be developed |
| There is some indication that pilot studies in the department may have been compromised in some instances by having the practices being studied used in sections other than those assigned to use them, confounding the research results. The department is encouraged to maintain the integrity of any pilot studies, and utilize the services RAR offers in designing and implementing any future pilot studies. | In progress  Completed  No longer applicable | The department has no new pilots at this time. |
| The department is encouraged to forecast enrollment on a yearly basis. The higher education environment related to developmental education is changing significantly, and the institution will want to stay on top of any trends that emerge that may either increase or decrease DEV enrollments. The department would be well served by paying close attention to changes in high schools and colleges that could impact developmental education enrollment and plan accordingly. | In progress  Completed  No longer applicable | This is an on-going process due to not only the changes outside of the college but also because of new initiatives to accelerate students through their developmental courses faster. |
| Similarly, changes at the state and national level in developmental education practice and policy are occurring quickly, and the department’s work will be well served by understanding these changes and their implications for developmental education at Sinclair. It is recommended that the department maintain an openness to substantially new and innovative approaches and structures, and a willingness to adapt as new best practices emerge in the field. Changes in the area of developmental education will be inevitable in the future, and the department will need to be prepared to take these changes in stride and, hopefully, help shape these changes. Without question, an important challenge for the department and Sinclair is identifying sound approaches to helping students accelerate their completion of basic skills so they can perform successfully in their college-level courses. | In progress  Completed  No longer applicable | A new course, Dev. 0050, using the flipped classroom model was introduced this year. The department is continually implimenting new ideas into the classroom setting, such as using more activities in the classroom to not only engage the student but to provide the student with a more hands on approach.  Why Me - Why Math is a new initiave that will be included in a few sections of each level starting in Spring of 2014.  Each course will have students complete actitivies related to how math affects them and how math is used in different occupations. Students will be asked to write 1 page responses to various questions and discuss consequences of errors in the various occupations. |
| Many of the issues raised in the self-study and in the discussion in the review meeting suggest that span of control may be an issue for the department. With such a large department, and with a number of initiatives ongoing simultaneously, it may be a challenge for the chair and faculty leaders to stay on top of everything. It may be in the department’s best interest to determine which activities are most valuable and focus resources in those areas. | In progress  Completed  No longer applicable | Due to the separation of Academic Foundations into 2 separate departments the challenges have become much more manageable. |
| While it is clear that all faculty in the department have strong feelings of commitment to their students, it is likely that some faculty have successfully developed approaches that are particularly effective and beneficial to students. It is recommended that the department identify best practices among its faculty based on clear evidence of student success in courses over time, communicate these practices and widely adopt those best practices that are supported by evidence | In progress  Completed  No longer applicable | Several of our faculty participated in the Global Skills initative and we are in the process of including those concepts into the various sections of our courses.  Dr. Brian Cafarella, a professor in our department, completed his disseration pertaining to best practices in Dev. Math at urban colleges. He will be presenting some of his findings during our Department Learning Day in November and based on our discussion, plans will be made to share those findings with all faculty and to incorporate stragetgies into all sections. |
| On a related note, the department should identify those practices currently being piloted that provide the best evidence of enhancing student learning, and find ways to scale those practices to reach a larger number of students. Much work has been done investigating new approaches, and the department has reached a point where the most promising approaches need to be expanded to serve a greater number of students. | In progress  Completed  No longer applicable | Both the Math Academy and Boot Camps have increased in their offerings to better meet the needs of students  .  Discussion is currently occurring as to whether all upper level course should require the use of MyMathLab    A new approach, Flipped Classroom, is currently being used in the Dev. 0050 Accelerating Beginning Alebra course and the department will look at whether or not to integrate some of these new ideas into traditional format courses. |
| There are a number of support mechanisms in place that are available from Student Services – Early Alert, for example. The department should ensure that it is taking full advantage of these support mechanisms and that it maintains a strong collaborative relationship with Student Services. The department is asked to set goals for increasing use of these services, such as setting a goal that 100% of developmental sections will utilize Early Alert when appropriate for students in the section. | In progress  Completed  No longer applicable | The promotion of support services continues to be a focus for the Dev. Math department. Reminders are sent out to faculty regarding Early Alert, the TLC as well as Tutorial Services. All information is included in each of the syllabi.  The marketing of boot camps is increasing.    A Dev. Ed. council was formed this summer which will work on common issues among both departments and is comprised of members from various support services.  A dedicated DEI academic advisor was hired to act as a liason between advising and Dev. Education. This person will provide promotion and marketing of the various initiatives as well as provide support to the faculty and students. |

**Section III: Assessment of General Education & Degree Program Outcomes**

The Program Outcomes for the degrees are listed below. **All program outcomes must be assessed at least once during the 5 year Program Review cycle, and assessment of program outcomes must occur each year**.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **General Education Outcomes** | To which degree(s) is this program outcome related? | Year assessed or to be assessed. | Assessment Methods  Used | What were the assessment results?  (Please provide brief summary data) |
| Critical Thinking/Problem Solving | | All programs | **2012-2013** | Results on common final - See attached exit assessment data | In general the B term students have a tendency to do better. This is likely due to the fact that there is less gap between the 2 terms as well as more students are continuing a sequence and not being placed into the class.  A few of the problems that had a low percenttage of students getting correct were changed to less cumbersome numbers to see if that will have any effect on the results |
| Values/Citizenship/Community | | All programs | **2013-2014** |  |  |
| Computer Literacy | | All programs | **2014-2015** |  |  |
| Information Literacy | | All programs | **2015-2016** |  |  |
| Oral Communication | | All programs | **2016-2017** |  |  |
| Written Communication | | All programs | **2016-2017** |  |  |
|  | |  |  |  |  |
| **Program Outcomes** | | To which course(s) is this program outcome related? | Year assessed or to be assessed. | Assessment Methods  Used | What were the assessment results?  (Please provide brief summary data) |
| Demonstrate effective written communication skills in a college setting | | ***DEV 0020, DEV 0022, DEV 0024*** |  |  |  |
| Demonstrate effective verbal communication skills in a college setting | | ***DEV 0020, DEV 0022, DEV 0024*** |  |  |  |
| Demonstrate creative and critical thinking skills in a college setting | | ***DEV 0020, DEV 0022, DEV 0024*** |  |  |  |
| Demonstrate a basic understanding and use of computer and information literacy in a college setting | | ***DEV 0020, DEV 0022, DEV 0024*** |  |  |  |
| Demonstrate a sense of citizenship and community and a sense of values towards oneself and others in a college setting | | ***DEV 0020, DEV 0022, DEV 0024*** |  |  |  |

**General Education Outcomes**

1. Are changes planned as a result of the assessment of general education outcomes? If so, what are those changes?

Some problems may be changed to less cumbersome numbers or reworded if that appears to have impacted the results

Course materials will be revised to provide more emphasis on topics and practice problems.

The various modality results will be compared to see if there are any differences and why those may be occurring

Some of the questions may be changed to a multiple choice format to provide better and more consistent data

1. How will you determine whether those changes had an impact?

Exit Assessments will be looked at again to see if there have been any improvements

**Program Outcomes**

1. Are changes planned as a result of the assessment of program outcomes? If so, what are those changes?

The program assessments will be rewritten to better reflect the goals of the department

1. How will you determine whether those changes had an impact?

**Improvement Efforts**

1. What were the results of changes that were planned in the last Annual Update? Are further changes needed based on these results?

In the fall of 2012, Sinclair Community College changed from a quarter system to a semester system. This undertaking provided the faculty and staff to reevaluate their textbooks and curriculum. As a result, the developmental math faculty decided to create mini-term classes, for a total of two terms per semester. The faculty feel that the move to an eight week course format has helped to increase the success rate for our students as well as accelerated them through the developmental math sequence. A student now may only need an 8 week course instead of a full semester course.

1. Are there any other improvement efforts that have not been discussed in this Annual Update submission?

There has been an increased effort to have better communication with the large number of adjuncts the department uses. Focus groups and a workshop were held last year to discover what the adjuncts needed to better succeed as well as a discussion/sharing of ideas of what we each as individuals do in the classroom to help our students succeed.

**APPENDIX – PROGRAM COMPLETION AND SUCCESS RATE DATA**

**Degree and Certificate Completion**

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| --- | --- | --- | --- | --- | --- | --- |
| Department | Department Name | Program | FY 07-08 | FY 08-09 | FY 09-10 | FY 10-11 |
|  |  |  |  |  |  |  |
|  | NOT APPLICABLE |  |  |  |  |  |
|  |  |  |  |  |  |  |

**Course Success Rates**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Course** | **FY 07-08** | **FY 08-09** | **FY 09-10** | **FY 10-11** | **FY 11-12** | **FY 12-13** |
| DEV-0020 | . | . | . | . | . | 55.9% |
| DEV-0022 | . | . | . | . | . | 66.6% |
| DEV-0024 | . | . | . | . | . | 66.1% |
| DEV-084 | 48.0% | 48.9% | 52.2% | 51.2% | 52.3% | 46.6% |
| DEV-085 | 46.7% | 49.4% | 53.1% | 51.3% | 52.0% | 66.2% |
| DEV-108 | 48.9% | 54.3% | 58.5% | 55.1% | 59.8% | 72.4% |
| DEV-297 | . | . | . | 57.0% | 81.5% | 81.1% |