**Sinclair Community College - Continuous Improvement Annual Update 2010-11**

**Program:** Civil and Construction Technology

**Section I: Trend Data**

1. **Program Trend Data**

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| **ARC.AAS, CEGT,AAS and CMO.AAS Degree Programs** |
|  | **ARC** | **CEGT** | **CMO** |
| Average Age | 26 | 28 | 28 |
| African-American Male | 11% | 12% | 18% |
| African-American Female | 2% | 0% | 1% |
| Hispanic Male | 3% | 2% | 1% |
| Caucasian Male | 54% | 63% | 54% |
| Caucasian Female | 11% | 6% | 5% |
| Other Male | 13% | 15% | 16% |
| Other Female | 6% | 2% | 3% |

1. **Interpretation and Analysis of Trend Data** *Suggestions of questions that might be addressed in this section: 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 program or department? What actions have the department taken that have influenced these trends? What strategies will the department implement as a result of this data?*

Enrollment in Civil Engineering Technology and Construction Management Technology programs has increased while Architectural Technology enrollment has been trending down. Some of this may be due to better advising of the differences between Architectural Technology and Architecture and the fact that few, if any, classes will transfer to a traditional Architecture program.

All three programs are made up of predominantly male students; interestingly, the percentage of black males in construction management significantly exceeds the percentage in the other two programs. The architectural program has the highest female enrollment, approaching 20%. It should be noted that students who have difficulty passing statics in either the Architectural Technology or Civil Engineering Technology program will ultimately graduate from the Construction Management program.

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

1. What was the fiscal year of the most recent Program Review for this program? 2005-06
2. Briefly summarize the goals that were listed in Section IV part E of the most recent Program Review Self-Study (this section of the Self-Study asks “What are the department’s/program’s goals and rationale for expanding and improving student learning, including new courses, programs, delivery formats and locations”)?

Increase course offerings at remote sites (Learning Centers and Warren County)

Continue to develop on-line courses in Construction Management

1. Have these goals changed since your last Program Review Self-Study?  If so, please describe the changes.

There have been few opportunities to expand these programs to outlying campuses and locations. There have been no resources to develop more Construction Management courses in an on-line format. Increased emphasis on project-based learning, including a new, integrated capstone project. Significant efforts to “keep up” with changing software tools in the industry.

1. What progress has been made toward meeting any of the goals listed above in the past year?

Continued implementation of integrated capstone project.

Implemented Revit design software in all programs and used in the capstone.

1. What Recommendations for Action were made by the review team to the most recent Program Review? What progress has been made towards meeting these recommendations in the past year?
2. Improve tracking of non-graduates, including those who “job-out” – no significant progress..
3. Conduct student interviews earlier in the program to determine ways to improve student success and persistence – no action.
4. Explore ways to reach out to Developmental students – no action.
5. Incorporate TAC/ABET recommendations – “Clean” TAC-ABET review.

**Section III: Assessment of Outcomes**

The Program Outcomes for this program are listed below. **At least one-third of your program outcomes must be assessed as part of this Annual Update, and across the next three years all of these program outcomes must be assessed at least once**.

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| **Civil and Construction Technology**Program Outcomes | In which courses are these program outcomes addressed? | Which of these program outcomes were assessed during the last fiscal year?  | Assessment MethodsUsed |
| **1)** Communicate effectively and professional in the architectural environment through proper usage of verbal, written and graphic skills. | COM 206, ENG 111, ENG 112, CAT 101, CAT 121, CAT 201, CAT 216, CAT 221, CAT 223, CAT 227, CAT 245, CAT 255, CAT 278 |  | Faculty and Advisory Committee assessment of CAT 278 Capstone CourseCore competency survey at the time of graduationGraduate Exit InterviewsEmployer SurveysFaculty review of student comments from course evaluations |
| **2)** Employ logical and concise problem solving techniques to complex problems. | MAT 131, MAT 132, PHY 131, ETD 213, ETD 222, ETD 261, CAT 223, CAT 245, CAT 255, CAT 278 |  | Faculty and Advisory Committee assessment of CAT 278 Capstone CourseCore competency survey at the time of graduationGraduate Exit InterviewsEmployer SurveysFaculty review of student comments from course evaluations |
| **3)** Understand the mechanics of structural design. | MAT 131, MAT 132, PHY 131, ETD 213, ETD 222, CAT 245 |  | Faculty and Advisory Committee assessment of CAT 278 Capstone CourseCore competency survey at the time of graduationGraduate Exit InterviewsEmployer SurveysFaculty review of student comments from course evaluations |
| **4)** Use surveying equipment and software applications to safely collect data, solve technical problems and layout construction projects. | CAT 121, CAT 123, CAT 221, CAT 223, CAT 227, CAT 229, CAT 278 |  | Faculty and Advisory Committee assessment of CAT 278 Capstone CourseCore competency survey at the time of graduationGraduate Exit InterviewsEmployer SurveysFaculty review of student comments from course evaluations |
| **5)** Assist in the management of construction projects with emphasis on safety, quality and continuous improvement. | ETD 198, CAT 105, CAT 106, CAT 145, CAT 216, CAT 255, CAT 278 |  | Faculty and Advisory Committee assessment of CAT 278 Capstone CourseCore competency survey at the time of graduationGraduate Exit InterviewsEmployer SurveysFaculty review of student comments from course evaluations |
| **6)** Function effectively in teams—demonstrating a cooperative effort to evaluate and solve problems and to develop and implement plans. | COM 206, CAT 110, CAT 123, CAT 221, CAT 227, CAT 229, CAT 245, CAT 278 |  | Faculty and Advisory Committee assessment of CAT 278 Capstone CourseCore competency survey at the time of graduationGraduate Exit InterviewsEmployer SurveysFaculty review of student comments from course evaluations |
| **7)** Recognize professional, ethical and societal responsibilities, respect diversity and commit to lifelong learning. | SCC 101CAT 110, CAT 216, CAT 245, CAT 255, CAT 270, CAT 278, ETD 121 |  | Faculty and Advisory Committee assessment of CAT 278 Capstone CourseCore competency survey at the time of graduationGraduate Exit InterviewsEmployer SurveysFaculty review of student comments from course evaluations |

a) For the assessment methods listed in the table above, what were the results? What changes are planned as a result of the data? How will you determine whether those changes had an impact?

Assessments of these items were at the “good” level. We have increased the complexity of some of the case studies in the ethics class. We have also continued emphasizing lifelong learning in upper-level classes, having students attend professional society meetings and activities and bringing in professionals to speak in classes. We will continue to review employer surveys and the core competency surveys to insure students are achieving the desired level of outcome.

Added more writing and presentation assignments across the technical curriculum - The quality of both student written and oral presentations has improved, with the Capstone presentations much better than the prior year.

b) What other changes have been made in past years as a result of assessment of program outcomes? What evidence is there that these changes have had an impact?

Revit CAD software is now required for all students in the program – their graphical presentation skills are much improved since the introduction of this software throughout the program.

c) Describe general education changes/improvements in your program/department during this past academic year (09-10).

Added additional material into ETD 121 on critical thinking.

**Section IV: Improvement Efforts for the Fiscal Year**

1. **FY 09-10:** What other improvement efforts did the department make in FY 09-10?  How successful were these efforts?  What further efforts need to be made? If your department didn’t make improvement efforts during the fiscal year, discuss the strengths and weaknesses of the department over the last year and how the department plans to address them in the coming year.

The biggest improvement was in the implementation of the integrated capstone project. This project has required students to use more teamwork and communication skills along with their technical skills. The project was an overall success and communication was better in this, the second year than in the first year, however, more improvement needs to be made.

1. **FY 10-11:** What improvement efforts does the department have planned for FY 10-11? How will you know whether you have been successful?

Continued work on integrating teams. Plan to do one or more joint assignment between the HVAC and architectural students prior to capstone quarter to help foster a sense of community.

Questions regarding completion of the Annual Update? Please contact the Director of Curriculum and Assessment at 512-2789 to schedule a time to review the template and ask any questions.