# Master of Education with Biology Education

## Effectiveness Program

2014-2015

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**University Mission:** As a Christian university which embraces its Baptist heritage and namesake, William Carey University provides quality educational programs, within a caring Christian academic community, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society.

**Expanded Statement of Mission:**

1. Provide academic programs to promote student learning
2. Promote Christian development and social responsibility
3. Serve Baptist churches, associations, and conventions
4. Provide an environment that supports student learning
5. Strengthen organizational and operational effectiveness
6. Strengthen financial resources

**Goal for Departmental Program/Unit:**

**Education Goals:** Consistent with the Interstate New Teacher Assessment and Support Consortium (INTASC) AND NCATE Standards, William Carey University seeks to prepare teachers who:

1. apply current research and technology related to the teaching-learning-assessment process;
2. respond sensitively to individual differences and diversity;
3. understand and anticipate the needs of a global society;
4. plan and implement learning experiences that support the highest level of student potential;

1. A graduate student in the M.Ed. program will perceive that he/she is well prepared to critically evaluate the literature in the field and to synthesize the literature from a variety of sources. (WCU Goal 1.1, 1.2, 1.2, 1.4) (EDU Goals 1, 3, 4, 5, 6)

1. A. In the Exit Interview for Master Graduates, student perceptions of the program’s effectiveness in engaging students in critical thinking and maintaining a high level of scholarship will be ranked at a 4.5 out of 5.0 (Likert scale).
5. continue to reflect, refine, and revise professional practices;
6. collaborate with others to promote learning;
7. Build caring, reflective decision-makers.

1. B. At the time of the comprehensive examination, all candidates are surveyed using the Graduate School of Education Exit Survey. There are 11 categories. The Student Learning Outcome is that graduates would have a mean of 4.0 or higher in the 11 categories.
2. Students completing the Master of Education degree will demonstrate advanced knowledge of teacher education and content appropriate to general secondary education. (WCU Goals 1.1, 1.2, 1.3) (EDU Goals 1, 2, 3, 4, 5, 6, 7)

3. A graduate student in the M.Ed. program will be able to evaluate a research study in four areas: (1) the problem, (2) the breadth and depth of the literature review, (3) the overall effectiveness of the research design, and the analysis and interpretation of data. (WCU Goals 1.1) (EDU Goals 1, 5)

2. A. 90% of the graduate students will earn an overall rating of 3 or higher on a written comprehensive examination covering their subject matter field.

3. A. EDU 620, Teacher as a Researcher, introduces and develops research writing skills for graduate students entering into the graduate program. The Annotated Bibliography is a key component of the research writing program. The Student Learning Outcome will be a group mean of 85% or higher when Target and Acceptable are aggregated. There are three indicators with four performance levels: Target, Acceptable, Emerging, and Novice.
4. The graduate student will demonstrate content knowledge and performance skills when designing curriculum for differentiated instruction, the inclusion classroom, and the co-teaching design. (WCU Goals 1.1, 1.4) (EDU Goals 1, 2, 3, 5, 7)

4. A. As measured by the “Designing an Interdisciplinary Unit” rubric, teachers in EDU 640 “Curriculum Planning” will achieve a mean score of 80% when Artisan and Experienced scores are combined. The interdisciplinary unit covers eight indicators: Topic and Topical Theme; Unit Overview; Generalizations; Guiding Questions; Teaching Strategies/Activities; Culminating Task with a Rubric; Lesson Plan; Overall Design.
**MASTER OF EDUCATION WITH BIOLOGY EDUCATION EFFECTIVENESS PROGRAM**  
**2013-2014**

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<th>USE OF RESULTS</th>
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<td><strong>University Mission:</strong> As a Christian university which embraces its Baptist heritage and namesake, William Carey University provides quality educational programs, within a caring Christian academic community, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society.</td>
<td>1. A graduate student in the M.Ed. program will perceive that he/she is well prepared to critically evaluate the literature in the field and to synthesize the literature from a variety of sources. (WCU Goal 1.1, 1.2, 1.2, 1.4) (EDU Goals 1, 3, 4, 5, 6)</td>
<td>1. A. In the Exit Interview for Master Graduates, student perceptions of the program’s effectiveness in engaging students in critical thinking and maintaining a high level of scholarship will be ranked at a 4.5 out of 5.0 (Likert scale).</td>
<td>1. A. The Exit Interview does not evaluate individual programs. Therefore the “n” represents all undergraduate graduating students. The survey has 12 categories: N=69 Main Campus</td>
<td>1. A. The Exit Interview met the S.L.O. with all categories above 4.0. The highest score for both campuses was 4.8 in the following areas: - Academic Climate for Success - Faculty and Staff meet the mission of the university - University works with students to attain their highest potential. The lowest score was a 4.5 in the following categories: - Emphasizing values of the arts and sciences; - Develops and recognizes talent; - Nurtures the fine arts. The overall means of 4.7 for both campuses provides evidence of high student satisfaction with the programs.</td>
</tr>
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**Expanded Statement of Mission:**
1. Provide academic programs to promote student learning  
2. Promote Christian development and social responsibility  
3. Strengthen ties with Baptist churches, associations, and conventions  
4. Provide an environment that supports student learning  
5. Strengthen organizational and operational effectiveness  
6. Strengthen financial resources

**Goal for Departmental Program/Unit:**

**Education Goals:** Consistent with the Interstate New Teacher Assessment and Support Consortium (INTASC) AND NCATE Standards, William Carey University seeks to prepare teachers who:
1. apply current research and technology related to the teaching-learning-assessment process;  
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3. understand and anticipate the needs of a global society;  
4. plan and implement learning experiences that support the highest level of student potential;  
5. continue to reflect, refine, and revise
professional practices;
6. collaborate with others to promote learning;
7. Build caring, reflective decision-makers.

1. B. At the time of the comprehensive examination, all candidates are surveyed using the Graduate School of Education Exit Survey. There are 11 categories. The Student Learning Outcome is that graduates would have a mean of 4.0 or higher in the 11 categories.

1. B. In 2013-2014 the Graduate School of Education Exit Survey was administered with the following results. The 11 categories are:

- Advisor Guidance 4.6
- Faculty Expertise 4.68
- Library 4.45
- Facilities 4.59
- Technology 4.59
- Best Practices 4.68
- Scholarly Writing 4.7

1. B. The S.L.O. of 4.0 or higher was met in all 11 categories and the total mean of 4.64 for 22 Hattiesburg graduate students in the M.Ed. Secondary Education degree. The mean for the Tradition students (N=8) was 4.71. All indicators from both campuses met the S.L.O. goal. This indicates a strong positive affirmation of the program by program completers.

Achievement – Mean 4.5 S.D. 0.9
Nurtures an appreciation of the fine arts – Mean 4.5 S.D. 0.9
Provides basic professional training in selected areas – Mean 4.6 S.D. 0.7
Develops responsible leaders and citizens – Mean 4.7 S.D. 0.7

In striving to reach these objectives, William Carey University seeks to have each individual within the University community – students, faculty, staff, and administrators – attain his/her highest potential Mean 4.8 S.D. 0.7

Total Mean 4.7 S.D. 0.7
2. Students completing the Master of Education degree will demonstrate advanced knowledge of teacher education and content appropriate to general secondary education. (WCU Goals 1.1, 1.2, 1.3) (EDU Goals 1, 2, 3, 4, 5, 6, 7)

3. A graduate student in the M.Ed. program will be able to evaluate a research study in four areas: (1) the problem, (2) the breadth and depth of the literature review, (3) the overall effectiveness of the research design, and the analysis and interpretation of data. (WCU Goals 1.1) (EDU Goals 1, 5)

2. A. 90% of the graduate students will earn an overall rating of 3 or higher on a written comprehensive examination covering their subject matter field.

3. A. EDU 620, Teacher as a Researcher, introduces and develops research writing skills for graduate students entering the graduate program. The Annotated Bibliography is a key component of the research writing program. The Student Learning Outcome will be a group mean of 85% or higher when Target and Acceptable are aggregated. There are three indicators with four performance levels: Target, Acceptable, Emerging, and Novice.

Research Skills 4.59
Class Availability 4.7
Individual Needs 4.68
Mission 4.8
Total Mean: 4.64

3. A. In the Annotated Bibliography, the N was 113 with three indicators.
(1) Five Appropriate Research Selections
Target 94.69%
Acceptable 3.54%
Emerging 0.88%
Novice 0.88%
(2) Appropriate Summary of Research and Quality of Writing
Target 59.29%
Acceptable 25.66%
Emerging 14.16%
Novice 0.88%
(3) Recommendation / Reflection
Target 90.65%
Acceptable 8.41%
Emerging 0%
Novice 0.93%
TOTAL GROUP MEANS
Target 81.38%
Acceptable 12.61%
Emerging 5.11%

2. A. In 2013-2014, there were no Biology Education candidates scheduled to take the examination.

3. A. In the Annotated Bibliography (N=113), the Student Learning Outcome was exceeded (93.99%).
4. The graduate student will demonstrate content knowledge and performance skills when designing curriculum for differentiated instruction, the inclusion classroom, and the co-teaching design. (WCU Goals 1.1, 1.4) (EDU Goals 1, 2, 3, 5, 7)

4. A. As measured by the “Designing an Interdisciplinary Unit” rubric, teachers in EDU 640 “Curriculum Planning” will achieve a mean score of 80% when Artisan and Experienced scores are combined. The interdisciplinary unit covers eight indicators: Topic and Topical Theme; Unit Overview; Generalizations; Guiding Questions; Teaching Strategies/Activities; Culminating Task with a Rubric; Lesson Plan; Overall Design.

Novice 0.9%

4. A. The Designing an Interdisciplinary Project has eight indicators rated over three performance levels (Artisan, Experienced, Apprentice).
(1) Topic and Topical Theme
   Artisan 80.17%
   Experienced 17.36%
   Apprentice 2.48%
(2) Unit Overview
   Artisan 84.3%
   Experienced 12.4%
   Apprentice 3.31%
(3) Generalizations
   Artisan 84.3%
   Experienced 10.74%
   Apprentice 4.96%
(4) Guiding Questions
   Artisan 87.88%
   Experienced 9.85%
   Apprentice 2.27%
(5) Teaching Strategies / Activities
   Artisan 93.18%
   Experienced 6.06%
   Apprentice 0.76%
(6) Culminating Task with a Rubric
   Artisan 85.95%
   Experienced 7.44%
   Apprentice 6.61%
(7) Lesson Plan
   Artisan 90.15%
   Experienced 9.09%
   Apprentice 0.76%

4. A. The Student Learning Outcome was met when Artisan and Experienced scores were aggregated. Both at the indicator and the total group mean.
(8) Overall Design
Artisan 76.69%
Experienced 22.56%
Apprentice 0.75%
Total Means Artisan
85.39% Experienced
11.94% Apprentice
2.67%
# MASTER OF EDUCATION WITH BIOLOGY EDUCATION EFFECTIVENESS PROGRAM
## 2012-2013

## Expanded Statement of Institutional Mission

**University Mission:** As a Christian university which embraces its Baptist heritage and namesake, William Carey University provides quality educational programs, within a caring Christian academic community, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society.

**Expanded Statement of Mission:**

1. Provide academic programs to promote student learning
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**Goal for Departmental Program/Unit:**

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1. apply current research and technology related to the teaching-learning-assessment process;
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3. understand and anticipate the needs of a global society;
4. plan and implement learning experiences that support the highest level of student potential;
5. continue to reflect, refine, and revise

## Outcomes

1. A graduate student in the M.Ed. program will perceive that he/she is well prepared to critically evaluate the literature in the field and to synthesize the literature from a variety of sources. (WCU Goal 1.1, 1.2, 1.2, 1.4) (EDU Goals 1, 3, 4, 5, 6)

## Assessment Criteria and Procedures

1. A. In the Exit Interview for Master Graduates, student perceptions of the program’s effectiveness in engaging students in critical thinking and maintaining a high level of scholarship will be ranked at a 4.5 out of 5.0 (Likert scale).

## Assessment Results

During the academic year (2012-2013), there were not candidates in the M.Ed. Biology Education program.

1. B. At the time of the comprehensive examination, all candidates are surveyed using the Graduate School of Education Exit Survey. There are 11 categories. The Student Learning Outcome is that graduates would have a mean of 4.0 or higher in the 11 categories.

## Use of Results

2. A. 90% of the graduate students will earn an overall rating of 3 or higher on a written comprehensive examination covering their subject matter field.

3. A. EDU 620, Teacher as a Researcher, introduces and develops research writing skills for graduate students entering
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<td>collaborate with others to promote learning;</td>
<td>6. The graduate student will demonstrate content knowledge and performance skills when designing curriculum for differentiated instruction, the inclusion classroom, and the co-teaching design. (WCU Goals 1.1, 1.4) (EDU Goals 1, 2, 3, 5, 7)</td>
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<td>7.</td>
<td>Build caring, reflective decision-makers.</td>
<td>into the graduate program. The Annotated Bibliography is a key component of the research writing program. The Student Learning Outcome will be a group mean of 85% or higher when Target and Acceptable are aggregated. There are three indicators with four performance levels: Target, Acceptable, Emerging, and Novice.</td>
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<td>4. As measured by the “Designing an Interdisciplinary Unit” rubric, teachers in EDU 640 “Curriculum Planning” will achieve a mean score of 80% when Artisan and Experienced scores are combined. The interdisciplinary unit covers eight indicators: Topic and Topical Theme; Unit Overview; Generalizations; Guiding Questions; Teaching Strategies/Activities; Culminating Task with a Rubric; Lesson Plan; Overall Design.</td>
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<td>M.Ed. BIOLOGY EFFECTIVENESS PROGRAM 2011-2012</td>
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**University Mission:** As a Christian university which embraces its Baptist heritage and namesake, William Carey University provides quality educational programs, within a caring Christian academic community, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society.

**Expanded Statement of Purpose:**
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**Goal for Departmental Program/Unit:**
Provide graduate training in the biological sciences for students preparing for careers in science teaching

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<td>1. Graduate Students will perform well on projects and presentations in graduate lab science courses.</td>
<td>1. As documented by grading rubrics. Graduate Students will earn grades of above 82% on class projects.</td>
<td>1. Biology Graduate Students earned an average grade of 95% on their class projects (n=2).</td>
<td>This section will continue to be monitored to involve a greater number of students.</td>
</tr>
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<td>2. Graduate Students will be able to demonstrate a mastery of biological concepts.</td>
<td>2. Graduates will score above 3.7 on their Comprehensive Exam.</td>
<td>2. Graduates scored a mean of 3.2 on their comprehensive exams (n=7).</td>
<td>We will adjust this section to collect scores on highest three questions for students. This data will continue to be collected.</td>
</tr>
<tr>
<td>3. Graduate students will be required to gather and analyze scientific data.</td>
<td>3. Collection and analysis of data in BIO 640 was evaluated using a rubric and students must score above 87%.</td>
<td>3. BIO 640 students scored a 90.1 (N=8) on the evaluation rubric.</td>
<td>Data from this course will continue to be collected to give a better picture of their data analysis skills.</td>
</tr>
<tr>
<td>4. Graduate students will demonstrate an understanding of and proficiency in writing research proposals.</td>
<td>4. In BIO 601 students will score greater than 86% according to a rubric designed by the instructor</td>
<td>4. Students averaged 94% on the faculty generated rubric.</td>
<td>4. We will continue to monitor this rubric for proficiency in writing research proposals.</td>
</tr>
<tr>
<td>5. Graduate Students will graduate with the perception that that they developed to their highest potential</td>
<td>5. In the Master Graduate Exit Interview, student’s perceptions of the “Develops talent and recognizes achievement” will be ranked at 4.0 out of 5.0 (Likert Scale).</td>
<td>5. Students perception of “Develops talent and recognizes achievement” scored a 5 (n=1).</td>
<td>5. This data will have to be collected for several years to give us a suitable number of respondents.</td>
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**M.Ed. BIOLOGY**  
**EFFECTIVENESS PROGRAM**  
**2010-2011**

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<tr>
<td>University Mission: As a Christian university which embraces its Baptist heritage and namesake, William Carey University provides quality educational programs, within a caring Christian academic community, which challenge the individual student to excel in scholarship, leadership, and service in a diverse global society.</td>
<td>1. Graduate Students will perform well on projects and presentations in graduate lab science courses.</td>
<td>1. As documented by grading rubrics Graduate Students will earn grades of above 82% on class projects.</td>
<td>1. Graduate students earned an average grade of 91 (n = 12) on class projects.</td>
<td>1 We will continue to monitor the average grades on class projects and look for an increase in the average score.</td>
</tr>
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<td></td>
<td>2. Graduate Students will be able to demonstrate a mastery of biological concepts.</td>
<td>2. Graduates will score above 3.7 on their Comprehensive Exam.</td>
<td>The average grade on their Comprehensive Exam was 3.43 (n = 7).</td>
<td>We will continue to collect this data until we have an n of 20.</td>
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<tr>
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<td>3. Graduate students will be required to gather and analyze scientific data.</td>
<td>3. Collection and analysis of data in BIO 640 was evaluated using a rubric and students must score above 87%.</td>
<td>BIO 640 was not taught last year.</td>
<td>We will retain this assessment and collect data when the course it taught next year.</td>
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<td>4. Graduate students will demonstrate an understanding of and proficiency in writing research proposals.</td>
<td>4. In BIO 601 students will score greater than 86% according to a rubric designed by the instructor</td>
<td>Graduate students scored an average of 93 on their research proposal in BIO 601.</td>
<td>We will continue to monitor these results and raise our expected score to 88%.</td>
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<td>5. Graduate Students will graduate with the perception that that they developed to their highest potential</td>
<td>5. In the Master Graduate Exit Interview, student’s perceptions of the “Develops talent and recognizes achievement” will be ranked at 4.0 out of 5.0 (Likert Scale).</td>
<td>5. The Master Graduate Exit Interview results for the “Develops talent and recognizes achievement” was an average of 4.3 (n = 26).</td>
<td>This assessment will be retained to increase the number of responses which will give us a better picture of the students view o their development.</td>
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**Goal for Departmental Program/Unit:**  
Provide graduate training in the biological sciences for students preparing for careers in science teaching

1. We will continue to monitor the average grades on class projects  
   and look for an increase in the average score.  

2. We will continue to collect this data until we have an n of 20.  

3. We will retain this assessment and collect data when the course it taught next year.  

4. We will continue to monitor these results and raise our expected score to 88%.  

5. This assessment will be retained to increase the number of responses which will give us a better picture of the students view o their development.
### M.Ed. BIOLOGY EFFECTIVENESS PROGRAM 2009-2010

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<tr>
<td>University Mission: The mission of William Carey University is to provide liberal arts and professional education programs within a caring Christian academic community. The individual student is encouraged to develop his or her highest potential in scholarship, leadership, and service. The university collaborates with churches, organizations, and individuals to affirm its Baptist heritage and namesake – William Carey.</td>
<td>1. Graduate Students will perform well on projects and presentations in graduate lab science courses.</td>
<td>1. As documented by grading rubrics Graduate Students will earn grades of above 82% on class projects.</td>
<td>1. Graduate students scored an average grade of 85% on class projects.</td>
<td>We will continue to collect this data and monitor the results.</td>
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<td>Expanded Statement of Purpose:</td>
<td>2. Graduate Students will be able to demonstrate a mastery of biological concepts.</td>
<td>2. Graduates will score above 3.7 on their Comprehensive Exam.</td>
<td>Two students completed comps last year and the average grade was 4.42</td>
<td>We will continue to collect data in order to have a greater n and monitor the average grade as the number of students’ increases.</td>
</tr>
<tr>
<td></td>
<td>3. Graduate students will be required to gather and analyze scientific data.</td>
<td>3. Collection and analysis of data in BIO 640 was evaluated using a rubric and students must score above 87%.</td>
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<td>We will continue to use this as an indicator of how well students collect and analyze scientific data.</td>
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<td>4. Graduate students will demonstrate an understanding of and proficiency in writing research proposals.</td>
<td>4. In BIO 601 students will score greater than 86% according to a rubric designed by the instructor</td>
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<td>We will initiate a new unit on writing proposals and continue to monitor the results.</td>
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<td>Goal for Departmental Program/Unit: Provide graduate training in the biological sciences for students preparing for careers in sci</td>
<td>5. Graduate Students will graduate with the perception that that they developed to their highest potential</td>
<td>5. In the Master Graduate Exit Interview, student’s perceptions of the “Develops talent and recognizes achievement” will be ranked at 4.0 out of 5.0 (Likert Scale).</td>
<td>On the ‘Develops talent and recognizes achievement’ question of the Exit Interview, MEd students scored an average of 4.6.</td>
<td>We will continue to collect this data to involve a greater number of students in the study group.</td>
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