## CADC Building Construction MBC, 2017

The Master of Building Construction (MBC) is a non-thesis based graduate program which requires a minimum of 35 credit hours to complete. The program has been enrolling students since fall of 1993. The average number of students in the MBC program has been approximately 12 during the past 10 years and has varied from 5 – 20 in any given academic year. The enrollment data of the last five years is shown below:

| Year | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| --- | --- | --- | --- | --- | --- |
| Enrollment | 12 | 17 | 16 | 18 | 12 |

The graduate construction programs are not required to be accredited by the American Council for Construction Education (ACCE). The MBC program is designed to be completed in one calendar year (3 semesters) by students who hold an accredited undergraduate degree in construction. Those students who enter the program with a degree in a non-construction discipline (including civil engineering or architecture) are required to take an additional 14 credit hours of foundation courses. The foundation courses are offered in the summer semester only. This increases the total time to complete the degree to 16 months (4 semesters). The curriculum plan of the MBC program is graphically shown below:



The MBC program does not offer any formal options/tracks. The program is offered on-campus. It is important to note that the McWhorter School of Building Science offers three graduate certificates in construction management via distance education. Each certificate is a 12 credit-hour graduate program. Students completing all three certificate programs and a graduate capstone course can earn a Master of Building Construction (MBC) degree. The distance education program is administered and assessed separately. Hence the scope of this report is limited to on-campus program only.

## Student Learning Outcomes

### Specificity of Outcomes

**Program Vision**

The vision of the Master of Building Construction (MBC) program is to prepare construction industry leaders through engaged learning, active collaboration with industry, and entrepreneurial creativity.

**Learning Objectives and Outcomes**

Five learning objectives have been defined to realize the program vision. The learning objectives and their relationship to the individual learning outcomes are set out below:

Learning Objective #1

Students graduating with a Master’s degree in Building Construction will demonstrate proficiency in processes involved in construction project development.

Upon graduation, Graduates of the Master of Building Construction program will be able to:

***Student Learning Outcomes:***

1. Analyze the roles of stakeholders in a construction project
2. Develop organization strategy and strategic management plan
3. Apply a basic project portfolio management system
4. Define project scope and financing alternatives
5. Develop the project execution plan
6. Evaluate project delivery options
7. Produce constructability reviews and value studies
8. Evaluate project risks and create a risk management plan
9. Create plans to manage human resources, equipment and materials at jobsites

Learning Objective #2

Students graduating with a Master’s degree in Building Construction will show evidence of mastery of project management skills required for national and international construction projects.

Upon graduation, Graduates of the Master of Building Construction program will be able to:

***Student Learning Outcomes:***

1. Establish project priorities and create a Work Breakdown structure
2. Identify construction best practices and apply them to the project
3. Produce project cost, schedule and resource allocation plans
4. Prepare project bid and detailed construction documents
5. Analyze subcontractor bid scope statement
6. Assess the jobsite safety program
7. Organize Green Building activities
8. Analyze buildings for their compliance with structural requirements (i.e. strength, stiffness, stability)
9. Analyze building systems and equipment
10. Classify direct-hire construction craft worker issues (i.e. hiring, training, promoting and retaining workers)
11. Analyze labor reports, schedule acceleration and resource leveling
12. Develop procedures to measure project progress and performance
13. Evaluate project submittal documents
14. Analyze financial, legal and contractual issues

Learning Objective #3

Students graduating with a Master’s degree in Building Construction will demonstrate effective digital, oral, and written communication skills.

Upon graduation, Graduates of the Master of Building Construction program will be able to:

***Student Learning Outcomes:***

1. Apply written, oral and visual means to communicate effectively in diverse settings
2. Employ technology as an effective communication, visualization and management tool
3. Formulate resolutions to difficult issues creatively by employing multiple systems and tools
4. Solve conflicts by personal communication
5. Establish the ability to negotiate construction issues
6. Operate effectively in business meetings
7. Prepare project proposals and technical reports

Learning Objective #4

Students graduating with a Master’s degree in Building Construction will be able to independently research a problem important for the construction industry and systematically develop its solution while displaying the highest standards of ethical conduct.

Upon graduation, Graduates of the Master of Building Construction program will be able to:

***Student Learning Outcomes:***

1. Rationally analyze an on- or off-site construction problem
2. Apply systematic procedures to identify the major issues
3. Select possible solutions within or outside the organization
4. Develop, implement and evaluate the best solution
5. Measure system performance and any intended problem(s)
6. Write a report to document the entire process for knowledge management
7. Apply code of ethical principles and procedures throughout the research process

### Comprehensive Outcomes

The program vision, learning objectives and subsequent learning outcomes are created by the Building Construction graduate faculty group (8 members) through a series of brain storming sessions and consensus meetings held from October 2013 to April 2014. Minor revisions were made in March 2017. Though the MBC program is non-accredited but accreditation guidelines developed by the American Council for Construction Education (ACCE), USA and Royal Institute of Charted Surveyors (RICS), UK for graduate construction (or built environment) programs were consulted. The aim was to develop learning objectives and outcomes in line with the potential accreditation standards so that it would be easy to seek an accreditation in the future.

### Communicating Student Learning Outcomes

**Faculty**

The Building Construction graduate faculty was directly involved in the development of program vision, learning objectives, and learning outcomes. A copy of this document is provided to newly hired faculty and adjunct faculty members during the orientation week or beginning of their academic semester. The document is also available on the School’s shared drive which is accessible to all faculty and staff members.

**Students**

The enrolled students are provided a copy of the program vision, learning objectives and learning outcomes document in their orientation meeting with the Graduate Program Chair. This meeting is held in the beginning of the first semester of the program. Students are also introduced about the program assessment methods used by the graduate faculty and the program chair. In their final semester, the same document is provided to the graduate students again to get their feedback on each learning outcome.

## Curriculum Map

### Curriculum Map

**Overview**

The next table presents a mapped overview of student learning outcomes (SLOs) and the program curriculum.

The table includes all foundation and core courses. The elective courses are excluded because students have a choice to choose a variety of electives from Building Construction or other related disciplines. Following abbreviations are used in the table.

* I: Course(s) where a particular SLO is first introduced
* M: Courses(s) where a particular SLO is mastered
* R: Courses(s) where a particular SLO is reinforced
* A: Courses(s) where a particular SLO is assessed

Courses with asterisk (\*) are foundation courses which are taken by students with a non-construction undergraduate degree. These courses are offered a semester before the start of the program. The full course titles are available in Appendix A.

***Learning Objective 1***

| **Courses** | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BSCI 6970-001:Estimating\* | I |  |  | I |  | I |  |  |  |
| BSCI 6970-003:Surveying\* |  |  |  |  |  |  |  |  |  |
| BSCI 7100-002:Structures\* |  |  |  |  |  |  |  |  |  |
| BSCI 7100-003:Info Tech\* |  |  |  |  |  |  |  |  |  |
| BSCI 7100-004:PM/Scheduling\*  | I |  |  | I | I | I |  |  | I |
| BSCI 7020:Intg Bldg Process-I  | MA | IMA | IMA | MA | MA | MA | IMA | IMA | IMA |
| BSCI 7030:Construction IT |  |  |  |  |  |  |  |  |  |
| BSCI 7040:Intg Bldg Process-II | R | R | R | R | R | R | R | R | R |
| BSCI 7050:Executive Issues | R | R | R | R | R | R | R | R | R |
| BSCI 7060:Research Methods |  |  |  |  |  |  |  |  |  |
| BSCI 7950:Graduate Seminar |  |  |  |  |  | R | R | R |  |
| BSCI 7980:Graduate Capstone |  |  |  |  |  |  |  |  |  |

***Learning Objective 2***

| **Courses** | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.8 | 2.9 | 2.10 | 2.11 | 2.12 | 2.13 | 2.14 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BSCI 6970-001:Estimating\* |  |  | I | I | I |  |  |  | I |  |  |  | I |  |
| BSCI 6970-003:Surveying\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BSCI 7100-002:Structures\* |  |  |  |  |  |  |  | IM |  |  |  |  |  |  |
| BSCI 7100-003:Info Tech\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BSCI 7100-004:PM/Scheduling\*  | I |  | I |  |  |  |  |  | I | I | I | I |  | I |
| BSCI 7020:Intg Bldg Process-I  |  |  |  |  |  |  |  |  |  |  |  | I |  | I |
| BSCI 7030:Construction IT |  |  |  |  |  | I |  |  |  |  |  |  |  |  |
| BSCI 7040:Intg Bldg Process-II | MA | IMA | MA | MA | MA | MA | IMA | RA | MA | MA | MA | MA | MA | MA |
| BSCI 7050:Executive Issues |  | R | R | R | R | R | R |  | R | R | R | R | R | R |
| BSCI 7060: Research Methods |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BSCI 7950: Graduate Seminar |  |  |  |  |  |  | R | R | R |  |  |  | R | R |
| BSCI 7980: Graduate Capstone |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

***Learning Objective 3***

| **Courses** | 3.1 | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 | 3.7 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| BSCI 6970-001:Estimating\* |  |  |  |  |  |  |  |
| BSCI 6970-003:Surveying\* | I |  |  |  |  |  |  |
| BSCI 7100-002:Structures\* |  |  |  |  |  |  |  |
| BSCI 7100-003:Info Tech\* | I | I |  |  |  |  |  |
| BSCI 7100-004:PM/Scheduling\*  |  |  |  |  |  |  |  |
| BSCI 7020:Intg Bldg Process-I  | R | R | I | I | I | I | I |
| BSCI 7030:Construction IT | M | M | M | M |  | R |  |
| BSCI 7040:Intg Bldg Process-II | M | R | R | R | R | R | M |
| BSCI 7050:Executive Issues | R | R | R | R | M | M | R |
| BSCI 7060:Research Methods | R | R |  |  |  |  | M |
| BSCI 7950:Graduate Seminar | R | R |  |  | R | R | R |
| BSCI 7980:Graduate Capstone | RA | RA | RA | RA | RA | RA | RA |

***Learning Objective 4***

| **Courses** | 4.1 | 4.2 | 4.3 | 4.4 | 4.5 | 4.6 | 4.7 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| BSCI 6970-001:Estimating\* |  |  |  |  |  |  |  |
| BSCI 6970-003:Surveying\* |  |  |  |  |  |  |  |
| BSCI 7100-002:Structures\* |  |  |  |  |  |  |  |
| BSCI 7100-003:Info Tech\* |  |  |  |  |  |  |  |
| BSCI 7100-004:PM/Scheduling\*  |  |  |  |  |  |  |  |
| BSCI 7020:Intg Bldg Process-I  | I | I | I | I | I | I | I |
| BSCI 7030:Construction IT |  | I |  |  |  |  |  |
| BSCI 7040:Intg Bldg Process-II | I | R | I | I | I | R | I |
| BSCI 7050:Executive Issues | M | M | M | M | M | M | M |
| BSCI 7060:Research Methods | M | M | M | R | R | R | R |
| BSCI 7950:Graduate Seminar |  |  |  |  |  | R | R |
| BSCI 7980:Graduate Capstone | RA | RA | RA | RA | RA | RA | RA |

**Course/Experience for SLOs Assessment**

The following table depicts the alignment between Student Learning Outcomes (SLOs) and required courses/experiences used for assessment.

| **Learning Objective** | **Learning Outcomes** | **Course/Experience for Assessment** | **Description** |
| --- | --- | --- | --- |
| #1 | 1.1 – 1.9 | Course: BSCI 7020: Integrated Building Process-IExperience: Final Project | The BSCI 7020: Integrated Building Process-I is a required (core) course and is offered in the first semester of the program. The course involves a final project that is completed by the students in small groups (2-3 members per group). The final project covers all 9 learning outcomes. A construction project development proposal is provided to the students at the beginning of the course. The students mimic the role of a project manager and complete various tasks typically involved in the construction project development process. A report is required at the completion of each task for review and feedback. Towards the end of the course, each group submits a project development portfolio to a "hypothetical" client. The final assessment is typically performed by the course instructor, sometimes with the help of an industry representative. The final assessment of the project is based on both group and individual performance. The SLOs assessment is conducted by the course instructor for individual students. |
| #2 | 2.1 – 2.14 | Course: BSCI 7040: Integrated Building Process-IIExperience: Project Portfolio | The BSCI 7040: Integrated Building Process-II is a required course and is offered in the penultimate semester. A specific construction project is assigned to a student at the beginning of the course. Construction drawings and specifications are provided. The student mimics the role of a construction project manager and completes various tasks typically involved in the construction process. A report is required at the completion of each task for review and feedback. Towards the end of the course, the student submits a project portfolio (containing revised reports) for final assessment and feedback. The project portfolio covers all 14 learning outcomes.The final assessment is typically performed by the course instructor. Other faculty members and industry representatives may be invited based on the discretion of the instructor. |
| #3 | 3.1 – 3.7 | Course: BSCI 7980: Graduate CapstoneExperience: Written Report and Presentation | BSCI 7980: Capstone Project is a required course for all building construction graduate students in the last semester of their progress towards the degree. The course deliverables include a written research report and an oral presentation. These deliverable are evaluated by a committee consisting of a major professor and 2 or 3 committee members. |
| #4 | 4.1 – 4.7 | Course: BSCI 7980: Graduate CapstoneExperience: Final Research Report | BSCI 7980: Capstone Project is a required course for all building construction graduate students in the last semester of their progress towards the degree. In this course students complete an independent piece of scholarly research work. Each student identifies a problem (or an existing issue) in the construction industry and proposes a solution using systematic research design. The final deliverable (a research report) is evaluated by a committee consisting of a major professor and 2 or 3 committee members. |

## Measurement

### Outcome-Measure Alignment

The table shown below provides the following information: (1) Outcome-Measure Alignment; (2) Type of Measure (Direct or Indirect); and (3) Data collection process. The grading rubrics, survey and exit interview questions as indicated below are available in the “Results” section.

| **Learning Objective/SLOs** | **Description of the Assessment Measure** | **Direct/Indirect Measure** | **Data Collection Process** |
| --- | --- | --- | --- |
| #1 (1.1 – 1.9) | Final Project Portfolio for BSCI 7020: Integrated Building Process-I | Direct | The final project is completed by the students in small groups. Towards the end of the course, each group submits a project development portfolio to a "hypothetical" client. The final assessment is typically performed by the course instructor, sometimes with the help of an industry representative. The final assessment is based on both group and individual performance. A grading rubric is used by the instructor (and/or industry representative) for project portfolio assessment. Evaluations range is as follows: Excellent (5), Good (4), Fair (3), Poor (2), and Very Poor (1). Performance measurement criteria: At least 70% of the students will receive “Good” or better evaluation (4.00 or higher) and mean evaluation score for each SLO shall be 3.50 or above. Any SLO evaluation that falls below this threshold for two consecutive years will be reviewed by the graduate faculty. |
|  | Faculty Assessment of Students | Indirect | The graduate faculty members are asked to fill out a survey to determine if each student has met the 9 learning outcomes at the end of the program. They are asked to show their level of agreement or disagreement (on a scale of 1 to 5, with 1 represents Strongly Disagreed while 5 represents Strongly Agreed) if the graduating student has met each learning outcome.Performance measurement criteria: Mean evaluation score for each learning outcome shall be 3.5 or above. Any learning outcome evaluation that falls below this threshold for two consecutive years will be reviewed by the graduate faculty. |
|  | Student’s Exit Survey and Interview | Indirect | An Exit Survey is sent to the graduating students. Students are asked how strongly they agree (on a five point scale with 5 representing the strongest level of agreement) they have met the Master of Building Construction program LearningObjective #1 requirements. In addition, the graduate program chair meet with the graduating students in small groups to get their feedback and suggestions for improvement.Performance measurement criteria: Mean evaluation score for each learning outcome should be 3.5 or above. Any learning outcome evaluation that falls below this threshold for two consecutive years will be reviewed by the graduate faculty.  |
| #2 (2.1 – 2.14) | Project Management Portfolio for BSCI 7040: Integrated Building Process-II | Direct | A specific construction project is assigned to a student at the beginning of the course. The student mimics the role of a construction project manager and completes various tasks typically involved in the construction process. A report is required at the completion of each task for review and feedback. Towards the end of the course, the student submits a project portfolio (containing revised reports) for final assessment and feedback. The final assessment is typically performed by the course instructor using a grading rubric. Other faculty members and industry representatives may be invited based on the discretion of the instructor.Performance measurement criteria: Same as LO#1 (direct assessment). |
|  | Faculty Assessment of Students | Indirect | The faculty members are asked to fill out a survey to determine if the student has met the 14 learning outcomes at the end of the program. They are asked to show their level of agreement or disagreement (on a scale of 1 to 5, with 1 represents Strongly Disagreed while 5 represents Strongly Agreed) if the graduating student has met each learning outcome.Performance measurement criteria: Same as LO#1 (indirect assessment #1). |
|  | Student’s Exit Survey and Interview | Indirect | An Exit Survey is sent to the graduating students. Students are asked how strongly they agree (on a five point scale with 5 representing the strongest level of agreement) they have met the Master of Building Construction program LearningObjective #2. In addition, the graduate program chair meets with graduating students in small groups to get their feedback and suggestions for improvement.Performance measurement criteria: Same as LO#1 (indirect assessment #2). |
| #3 (3.1 – 3.7) | Review of Capstone Report and Presentation for BSCI 7980: Capstone Project | Direct | BSCI 7980: Capstone Project is a required course for all building construction graduate students in the last semester of their progress towards the degree. The course deliverables include a written research report and an oral presentation. These deliverables are evaluated by a committee consisting of a major professor and 2 or 3 committee members using a 5-items grading rubric for each deliverable.Performance measurement criteria: Same as LO#1 (direct assessment). |
|  | Faculty Assessment of Students | Indirect | The faculty members are asked to fill out a survey to determine if the student has met the 7 learning outcomes at the end of the program. They are asked to show their level of agreement or disagreement (on a scale of 1 to 5, with 1 represents Strongly Disagreed while 5 represents Strongly Agreed) if the graduating student has met each learning outcome.Performance measurement criteria: Same as LO#1 (indirect assessment #1). |
|  | Student’s Exit Survey and Interview | Indirect | An Exit Survey is sent to the graduating students. Students are asked how strongly they agree (on a five point scale with 5 representing the strongest level of agreement) they have met the Master of Building Construction program LearningObjective #3. In addition, the graduate program chair meets with graduating students in small groups to get their feedback and suggestions for improvement.Performance measurement criteria: Same as LO#1 (indirect assessment #2). |
| #4 (4.1 – 4.7) | Review of Final Research Report in BSCI 7980: Capstone Project | Direct | BSCI 7980: Capstone Project is a required course for all building construction graduate students in the last semester of their progress towards the degree. In this course students complete an independent piece of scholarly research work. Each student identifies a problem (or an existing issue) in the construction industry and proposes a solution using systematic research design. The final deliverable (a research report) is evaluated by a committee consisting of a major professor and 2 or 3 committee members using a 6-items grading rubric that measures students' abilities to:1. Rationally analyze a construction problem and develop research questions and scope.2. Produce a comprehensive literature review of the problem domain.3. Employ systematic procedures to find out the answers of the research questions.4. Collect and analyze the data and report main findings.5. Develop conclusions based on the data analysis and propose suitable recommendations.6. Write a research report to document the entire process.Performance measurement criteria: Same as LO#1 (direct assessment). |
|  | Faculty Assessment of Students | Indirect | The faculty members are asked to fill out a survey to determine if the student has met the 7 learning outcomes at the end of the program. They are asked to show their level of agreement or disagreement (on a scale of 1 to 5, with 1 represents Strongly Disagreed while 5 represents Strongly Agreed) if the graduating student has met each learning outcome.Performance measurement criteria: Same as LO#1 (indirect assessment #1). |
|  | Student’s Exit Survey and Interview | Indirect | An Exit Survey is sent to the graduating students. Students are asked how strongly they agree (on a five point scale with 5 representing the strongest level of agreement) they have met the Master of Building Construction program LearningObjective #4. In addition, the graduate program chair meets with graduating students in small groups to get their feedback and suggestions for improvement.Performance measurement criteria: Same as LO#1 (indirect assessment #2). |

### Direct Measures

See Table above

### Data Collection

See Table above

## Results

### Reporting Results

The grading rubric used for assessment for a sample size of 15 with the grade and number of students who earned it along with the weighted mean scores and standard deviation is shown below:

**Construction Project Development Portfolio - Grading Rubric with Results**

| Goal/Expectations | Cohort | Excellent(5) | Good(4) | Fair(3) | Poor(2) | Very Poor(1) | Weighted Mean Score | S.D. |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Student rationally analyzes the project concept, supporting market data, and proposes an effective site analysis and usage plan (SLO# 1.1,1.2, 1.3) | **2015-16** | **9** | **6** | **0** | **0** | **0** | **4.60** | **0.51** |
| Student rationally analyzes the project concept, supporting market data, and proposes an effective site analysis and usage plan (SLO# 1.1,1.2, 1.3) | 2014-15 | 8 | 2 | 1 | 0 | 0 | 4.64 | 0.67 |
| Student identifies methods of project funding, equity, and capital and their impact on construction (SLO# 1.4) | **2015-16** | **10** | **5** | **0** | **0** | **0** | **4.67** | **0.49** |
| Student identifies methods of project funding, equity, and capital and their impact on construction (SLO# 1.4) | 2014-15 | 7 | 2 | 2 | 0 | 0 | 4.45 | 0.82 |
| Student prepares final pro forma, including refined and detailed construction costs, operating costs and income (SLO# 1.6, 1.7) | **2015-16** | **10** | **5** | **0** | **0** | **0** | **4.67** | **0.49** |
| Student prepares final pro forma, including refined and detailed construction costs, operating costs and income (SLO# 1.6, 1.7) | 2014-15 | 6 | 4 | 0 | 1 | 0 | 4.36 | 0.92 |
| Student is able to evaluate project risks and creates a risk management plan (SLO# 1.8) | **2015-16** | **13** | **2** | **0** | **0** | **0** | **4.87** | **0.35** |
| Student is able to evaluate project risks and creates a risk management plan (SLO# 1.8) | 2014-15 | 4 | 3 | 2 | 2 |  0 | 3.82 | 1.17 |

### Interpreting Results

Current Cohort (2015-16)

Overall, the results are very satisfactory and exceeds the minimum performance criteria outlined in the previous section. On a scale of 1 to 5 (with 1 represents very poor performance and 5 represents excellent performance) the weighted mean score ranges from 4.60 to 4.73. No students earned a score below 4.00 in any category. This indicates that the students performed well in all SLOs and there is no particular area of concern.

Comparison with Last Year Data (2015-16 v. 2014-15)

The mean scores are improved for all SLOs. Last year, two areas of improvement were identified as follows: (1) project risks identification; and (2) risk evaluation and management methods. Both topics were given more in-depth coverage in the curriculum and this is reflected in terms of increased mean score of 4.87 for the SLO# 1.8 “Student is able to evaluate project risks and creates a risk management plan”.

### Communicating Results

The results are shared with the graduate program faculty group that teaches courses related with SLOs 1.1-1.9. Based on their feedback, it is decided that the students’ performance exceeds expectations and no change in the curriculum/course contents at this point is needed. However, the course instructors will continue to improve course contents by adding latest information, more case studies and practical examples.

## Use of Results

### Purposeful Reflection and Action Plan

[Please provide a narrativedescribing the process in which faculty engage to discuss assessment results and create actionable plans in an effort to improve student learning.]

The assessment results are shared and discussed with the graduate faculty in three ways:

1. Individual faculty members that teach a course(s) where assessment of a specific learning objective and related learning outcomes is made.
2. Small group of faculty members that teach courses related with a particular learning objective (courses where various learning outcomes are either introduced or mastered or reinforced or assessed).
3. Quality improvement meetings at the end of the academic year to review the final assessment results and develop quality improvement plan for the next academic year. This year, the quality improvement meetings were held on May 3 and June 14, 2017.

The strengths and weaknesses identified through the assessment process are thoroughly discussed with the graduate program faculty in these meetings and action plans are developed by the Graduate Program Chair for implementation. The details of these action plans for each learning objective are already provided in the “Communicating Results” sections.