

# CNM ANNUAL STUDENT LEARNING ASSESSMENT REPORT

*Due to the Student Academic Assessment Committee by October 15*



## PART 1: REPORT INFORMATION

Report Year and Contact Information			
<u>2017-2018</u> Academic Year	<u>David Ruff</u> Contact Person	<u>druff@cnm.edu</u> CNM Email	<u>50228</u> CNM Office Extension

  

Subject of this Report
AT--CMT_AAS--Construction Management Technology Degree

## PART 2: CONTEXT IN WHICH THE ASSESSMENT TOOK PLACE

Program/Area Highlights and Successes
(Wherever applicable, include course completion rates, job placement outcomes, and licensing examination pass rates. See the program information dashboard at <a href="https://livecnm.sharepoint.com/sites/Dashboards/SitePages/Program%20Information%20Dashboard.aspx">https://livecnm.sharepoint.com/sites/Dashboards/SitePages/Program%20Information%20Dashboard.aspx</a> (access restricted to CNM employees) and other reports at <a href="https://www.cnm.edu/depts/opie">https://www.cnm.edu/depts/opie</a> .)
During Fall 2017 and Spring 2018 the program has had an average fill rate of 70%, average completer success rate of 91%, enrollee success rate of 78%, and an average retention rate of 87%. However, we had no graduates from the program during the past academic year.

  

Changes Implemented During the Past Year in Support of Student Learning
The program began a new sustainability certificate. And new sustainability courses were added to the degree program as electives. The certificate and new courses will expose students to an important current trend in construction.

**PART 3: REPORT ON ASSESSMENT OF STUDENT LEARNING**

Assessment Method	Type of Assessment Tool	Population or Course(s) Assessed	Graduate Learning Outcome(s) Assessed	Mastery Level (E.g., "Minimum score of 3 on a rubric scaled 0-4" or "Minimum score of 75%")	Targeted % Achieving Mastery	Outcome
Exercises, Presentations, Projects	Direct & Internal	CM1115 Commercial and Residential Building Codes CM1220 Introduction to Project Management CM2210 General Contractors Preparation	Demonstrate effective communication, both orally and in writing.	Minimum score of 75%	81%	Target met
Survey	Indirect & External	CM1115 Commercial and Residential Building Codes CM1220 Introduction to Project Management CM2210 General Contractors Preparation	Demonstrate effective communication, both orally and in writing.	Minimum score of above 2.5 on a scale of 1-5	Survey to Advisory Committee on 11/14/2018	To be reported 2018/2019. Out of reporting cycle.

Exercise, Project	Direct & Internal	CM1210 Mechanical and Electrical Building Systems CM1215 Construction Equipment and Methods CM1305 Construction Estimating CM2115 Computerized Estimating Techniques	Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project.	Minimum score 75%	83%	Target met
Industry Professional Review	Direct & External	CM1210 Mechanical and Electrical Building Systems CM1215 Construction Equipment and Methods CM1305 Construction Estimating CM2115 Computerized Estimating Techniques	Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project.	Minimum score of above 2.5 on a scale of 1-5	N/A	Did not use this assessment method during this academic year.

Survey	Indirect & External	CM1210 Mechanical and Electrical Building Systems CM1215 Construction Equipment and Methods CM1305 Construction Estimating CM2115 Computerized Estimating Techniques	Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project.	Minimum score of above 2.5 on a scale of 1-5	Survey to Advisory Committee on 11/14/2018	To be reported 2018/2019. Out of reporting cycle.
Presentations, Projects	Direct & Internal	CM2105 Construction Scheduling CM 2220 Computer Project Scheduling	Demonstrate the ability to schedule a basic construction project.	Minimum score 75%	Unable to assess due to FT faculty retirement	N/A
Industry Professional Review	Direct & External	CM2105 Construction Scheduling CM 2220 Computer Project Scheduling	Demonstrate the ability to schedule a basic construction project.	Minimum score of above 2.5 on a scale of 1-5	N/A	Did not use this assessment method during this academic year.

Survey	Indirect & External	CM2105 Construction Scheduling CM 2220 Computer Project Scheduling	Demonstrate the ability to schedule a basic construction project.	Minimum score of above 2.5 on a scale of 1-5	Survey to Advisory Committee on 11/14/2018	To be reported 2018/2019. Out of reporting cycle.
Exercises, projects, presentations	Direct & Internal	CM1205 Introduction to Building Information Modeling CM1220 Introduction to Project Management CM2115 Computerized Estimating Techniques CM2220 Computer Project Scheduling CM2205 Construction Surveying	Demonstrate the ability to use current technology related to the construction process.	Minimum score 75%	84%	

Survey	Indirect & External	CM1205 Introduction to Building Information Modeling CM1220 Introduction to Project Management CM2115 Computerized Estimating Techniques CM2220 Computer Project Scheduling CM2205 Construction Surveying	Demonstrate the ability to use current technology related to the construction process.	Minimum score of above 2.5 on a scale of 1-5	Survey to Advisory Committee on 11/14/2018	To be reported 2018/2019. Out of reporting cycle.
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**Summary of Assessment Findings**

Three out of four graduate learning outcomes meet target achievement levels based on at least one assessment tool. Data for the remaining GLO is not available due to the retirement of faculty.

During the last assessment cycle most Term 3, 4, &5 classes in the program were cancelled. Because of this only the fourth GLO was assessed using data from an upper level course.

**Interpretation of Assessment Findings**

GLO1 shows the lowest level of mastery at 81%. Courses within this GLO are delivered distance learning. A detailed review of data shows the biggest contributor to low mastery is a result of exercises not being turned in rather than poor quality of the work submitted.

Upper level courses build upon learning from earlier courses so assessment results would be of greater value if upper level courses could be included in this evaluation.

In order to comply with accreditation requirements at least two assessment tools must be used for all GLOs. Cancellation of classes affects the ability to implement the Direct- external assessment tool and assess higher level learning.

**Action Plan in Support of Student Learning** (Describe changes to be made that are based at least in part on the assessment interpretation. If the assessment did not yield useful information, describe changes to be made in the assessment methodology and/or criteria.)

Faculty teaching distance learning courses must be engaged, forceful, and timely to encouraging completion of assigned work. Class scheduling will be reviewed to increase enrollment in upper level courses.

*Please select all of the following that characterize the types of changes described in the above action plan:*

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|---|---|--|
| <input type="checkbox"/> Assessment criteria revision   | <input type="checkbox"/> Assessment methodology revision        | <input type="checkbox"/> Assignment revision     |
| <input type="checkbox"/> Budgetary reallocation         | <input checked="" type="checkbox"/> Change in teaching approach | <input type="checkbox"/> Course content revision |
| <input checked="" type="checkbox"/> Curricular Revision | <input type="checkbox"/> Faculty training/development           | <input type="checkbox"/> Process revision        |

Recommendations, Proposals, and/or Funding Requests	Budget Needed
CNM as an institution should encourage program completion by holding classes needed to graduate.	

**PART 4: REMAINING YEARS IN CURRENT ASSESSMENT CYCLE PLAN** (including any revisions) – **OR -- UPCOMING ASSESSMENT CYCLE PLAN** (if this was the final year)

<b>Years of Full Cycle</b>	<b>Next Year's Assessment Focus</b> (Describe how the next planned assessment is expected to provide information that can be used toward improving student learning.)
2017-2020	Next year's focus will be on several important GLOs including construction document interpretation and fundamentals of contracts and codes.



Graduate Learning Outcomes to Be Assessed	Years in which Assessment Is Planned	Population/Courses to Be Assessed	Planned Assessment Approach
Demonstrate effective communication, both orally and in writing.	Fall 17, Spring 18	CM1115 Commercial and Residential Building Codes CM1220 Introduction to Project Management CM2210 General Contractors Preparation	Direct Internal – Research Paper, Presentation, Projects In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)
Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project.	Fall 17, Spring 18	CM1210 Mechanical and Electrical Building Systems CM1215 Construction Equipment and Methods CM1305 Construction Estimating CM2115 Computerized Estimating Techniques	Direct Internal – Exercises, Projects Direct External – Industry Professional Review In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)
Demonstrate the ability to schedule a basic construction project.	Fall 17, Spring 18	CM2105 Construction Scheduling CM2220 Computer Project Scheduling	Direct Internal – Quizzes, Exams, Exercises, Projects Direct External – Industry Professional Review In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)
Demonstrate the ability to use current technology related to the construction process.	Fall 17, Spring 18	CM1205 Introduction to Building Information Modeling CM1220 Introduction to Project Management CM2115 Computerized Estimating Techniques CM2220 Computer Project Scheduling CM2205 Construction Surveying	Direct Internal – Quizzes, Exams, Exercises, Projects In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)

<p>Interpret construction documents (contracts, specifications, and drawings) used in managing a construction project.</p>	<p>Fall 18, Spring 19</p>	<p>CM1105 Construction Detailing  CM115 Commercial &amp; Residential Building Codes  CM1220 Introduction to Project Management  CM1305 Construction Estimating  CM2105 Construction Scheduling</p>	<p>Direct Internal – Quizzes, Exams, Exercises, Projects  In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)</p>
<p>Apply basic principles of construction accounting.</p>	<p>Fall 18, Spring 19</p>	<p>CM1215 Construction Equipment and Methods  CM1220 Introduction to Project Management  CM2115 Computerized Estimating Techniques  CM2220 Computer Project Scheduling  CM2210 General Contractors Preparation</p>	<p>Direct Internal – Quizzes, Exams, Exercises, Projects  In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)</p>
<p>Use basic surveying techniques used in building layout.</p>	<p>Fall 18, Spring 19</p>	<p>CM2205 Construction Layout and Land Surveying</p>	<p>Direct Internal – Quizzes, Exams, Exercises, Projects  In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)</p>
<p>Discuss basic principles of ethics in the construction industry.</p>	<p>Fall 18, Spring 19</p>	<p>CM1220 Introduction to Project Management  CM2120 Structures  CM2205 Construction Layout and Land Surveying  CM2210 General Contractors Preparation</p>	<p>Direct Internal – Quizzes, Exams, Exercises, Projects  In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)</p>

Identify the fundamentals of contracts, codes, and regulations that govern a construction project.	Fall 18, Spring 19	CM1115 Commercial Construction Theory CM2210 General Contractors Preparation	Direct Internal – Quizzes, Exams, Exercises, Projects In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)
Recognize basic construction methods, materials and equipment.	Fall 19, Spring 20	CM1110 Construction Materials and Techniques CM1210 Mechanical and Electrical Building Systems CM1215 Construction Equipment and Methods	Direct Internal – Quizzes, Exams, Exercises, Projects In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)
Recognize basic safety hazards on a construction site and standard prevention measures.	Fall 19, Spring 20	OSH2010 Occupational Safety for Construction	Direct Internal – Quizzes, Exams, Exercises, Projects In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)
Recognize the basic principles of structural design.	Fall 19, Spring 20	CM2120 Structures	Direct Internal – Quizzes, Exams, Exercises, Projects In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)
Recognize the basic principles of mechanical, electrical and plumbing systems.	Fall 19, Spring 20	CM1210 Mechanical Electrical Systems and Construction	Direct Internal – Quizzes, Exams, Exercises, Projects In-Direct External – alumni survey, employer survey (Three Year Cycle beginning Fall 18, Spring 19)