Strategic Plan: Construction Technology Program

Part A: Mission Statement:

Construction Technology: Associate in Applied Science (AAS) Degree:
Construction Management: Bachelor of Technology Degree: Used for analysis of AAS.

The Construction Technology program at SUNY Delhi was the first postsecondary construction program in the United State and has been nationally accredited by the American Council for Construction Education (ACCE) since 1997. The Construction Management program at SUNY Delhi continues the tradition in the third and fourth year and has a successful internship program as part of the curriculum.

Consistent with SUNY Delhi's mission, the Construction Technology/Management programs provide students with hands-on, experiential learning that focuses on commercial, residential, heavy/civil, and industrial construction. The programs fully prepare students in the most modern techniques of "Means and Methods" including: construction materials, basic structural theory, environmental and power systems, materials testing, surveying, field supervision, project management, and contemporary topics such as LEED applications.

Delhi's Construction Technology/Management faculty is dedicated to providing both the intellectual and practical foundation needed for students to excel in the contemporary construction management field. Therefore, course content couples theory with a robust applied component so students learn by doing.

Through the integration of mathematics, liberal arts, and business courses, the programs strive to develop skills and knowledge that will provide strong foundations in areas such as materials estimating, planning, scheduling, budgeting, and project execution.

Delhi's Construction Technology Associate in Applied Science (A.A.S.) program and Construction Management Bachelor of Technology (B.T.) program both have a solid and long-standing reputation as premier instructional programs for all aspects of building construction technology and related areas.

Associate degree graduates are assisted in entering industry after completion of the AAS design or continuing their studies in Delhi's Construction Management Bachelor of Technology program. The B.T. enhances their construction training with additional management fundamentals, leadership skills, and industry internships. It also increases their career opportunities as project superintendents and construction project managers.

Assessment of the B.T. program shall be practiced according to the guidelines of the ACCE accrediting body. ACCE is a recognized organization that accredits quality construction management programs throughout the United States. The Construction Management advisory track was developed according to ACCE guidelines for four-year programs. We will investigate the potential for ACCE accreditation of the new Construction Management B.T.

In addition to the ACCE assessment practices, the B.T. program shall be reviewed on an annual basis through meetings and discussions with an active advisory council of industry professionals.

Additionally, course-based assessment shall continue to be practiced as they relate to PLO's and SLO's on a regular basis by SUNY Delhi's construction faculty members. These methods are described further in detail.

Strategic Plan:

Part B: Goals

Delhi's Construction Technology (CT) and Construction Management Bachelor of Technology (B.T.) programs strive to:

1. Help students achieve proficiency in the following **Program Learning Objectives (PLOs)**.

   PLO #1: Understand and apply the career paths and demonstrate the role of the Construction manager in residential construction projects.
   PLO #2: Understand and apply the career paths and demonstrate the role of the construction manager in commercial construction projects.
   PLO #3: Understand and apply the career paths and demonstrate the role of the construction manager in heavy/civil construction projects.

2. Help students achieve proficiency in the following **Student Learning Objectives (SLOs):**
   1. Demonstrate effective communication, both orally and in writing.
   2. Demonstrate the ability to estimate quantities and costs for the bidding process in a construction project.
   3. Demonstrate the ability to schedule a basic construction project.
   4. Demonstrate the ability to use current technology related to the construction process.
   5. Interpret construction documents (contracts, specifications, and drawings) used in managing a construction project.
   6. Apply basic principles of construction accounting.
   7. Use basic surveying techniques used in building layout.
   8. Discuss basic principles of ethics in the construction industry.
   9. Identify the fundamentals of contracts, codes, and regulations that govern a construction project.
   10. Recognize basic construction methods, materials and equipment.
   11. Recognize basic safety hazards on a construction site and standard prevention measures.
   12. Recognize the basic principles of structural design.
   13. Recognize the basic principles of mechanical, electrical and piping systems.

   This will include providing opportunities for students to interface with construction industry and civic organizations such as the Associated General Contractors of America (AGC); the MOLES (Heavy Construction); and Associated Schools of Construction (Regional CM Competition). Activities such as construction field trips, community service projects, and scholarship opportunities are offered.

   - Objectively assess students' proficiency and competence in achieving and demonstrating the following Student Learning Objectives needed to succeed in the highly competitive construction industry. This will include delivering extensive laboratory work to augment classroom instruction.
   - **Laboratory practice is Delhi's strongest point.** This includes analysis of designs, developing means & methods, scheduling, and erection of building mockups that are close to full scale.

Strategic Plan: Part C: Assessment of SLO & PLO's:

1. Assessment of Students:

Each PLO and SLO is assigned to specific courses. Data is entered for each PLO and SLO in SUNY Delhi's Assessment Software, "***Compliance Assist***". A final report is generated from the various methods of assessment such as exams; case studies; reports; lab mock-ups; design-build projects. The 2016-2017 Annual Assessment Report (Using the software "Compliance Assist") is included on our website. An action plan is included.

2. Assessment Surveys: Surveys are conducted for the following:

- "5th year out" Construction Technology Graduate Surveys. The 2012 Graduate survey is included on our website. 54% of the graduates completed the survey. Due to the previous low completion rate, the survey is now kept open to each successive graduating class. Analysis can still be done for each year, but this will give us more accurate overall results to analyze.
- Fourth year Construction Management (CM) Bachelor of Technology students who were in the Construction Technology AAS program and have completed their internships are required to complete an assessment survey.
- Employers of Bachelor of Technology interns complete a Performance Evaluation Summary on each intern which is analyzed.
  - > 90% of employers would hire another SUNY Delhi intern.

Scholarship Awards: Indicator of industry confidence in Construction Technology program, and the students' ability to perform.

- 2 MOLES Scholarships: $12,500 total (Juniors & Seniors)
- 2 MOLES Scholarships: $15,000 total (Juniors & Seniors) (This year only)
- 1 MOLES Student Award: $1,000 total (Juniors & Seniors)
- 2 Delaware County Town Highways Superintendents Association Scholarships: $1,500 total

Strategic Plan: Part D: Yearly Timetable for Goals, Assessment & Action Items

September:

- Generate new list of incoming Freshmen for Degree Tracking and Survey Purposes
- Resend "Action Items" from previous May to Industry Advisory Council (IAC)
- Internship information emailed to freshman AAS class during Freshman Orientation (AECT 100) based on recommendation of IAC.
- MOLES Scholarship and Award Winners selected.

October:

- Industry Advisory Council (IAC) meeting
- Review Assessment surveys from previous spring semester.
- Action Items: Require College approval or changes in-house.
- Southern Tier Career Days: student recruitment activity
- Washington, D.C. Annual Construction field trip.

November:

- MOLES Annual Meeting for Scholarship and Award winners.

December/January Break:

- Assess Student Learning Outcomes at the end of the semester at college-wide Assessment Day. Enter SLO and PLO data into *Compliance Assist.*

February:

- Select student for scholarship award from the Associated Building Contractors of the Triple Cities (ABC)

March:

- Attend Scholarship Dinner: Delaware County Association of Town Highway Superintendents.
- Student Work Study request for fall semester is due.

April:

- MOLES Student Day: Construction tour
- Capital District Career Days: student recruitment activity

May:

- AGC New York Scholarships applications due. (Typically May 15th)

April/May:

- **Assessment Surveys:**
  - Fourth year Construction Management (CM) Bachelor of Technology students who were in the Construction Technology AAS program and have completed their internships are required to complete an assessment survey.
  - Employers of Bachelor of Technology Interns complete a Performance Evaluation Summary on each intern which is analyzed.

End of May/June:

- **Assessment Surveys:**
  - "5th year out" Construction Technology Graduate Surveys.
- Performance Outcomes
  - Update at college-wide Assessment Day.
  - SLO and PLO data are entered into *Compliance Assist.*
- Generate year-end report for all PLO's and SLO's.
- Library: request for current list of periodicals/texts.
- Tabulate and assess data: Send to Dean and IAC.
- Generate "Action Items" to be considered in September/October with IAC.