

# Construction Technology: Management Program

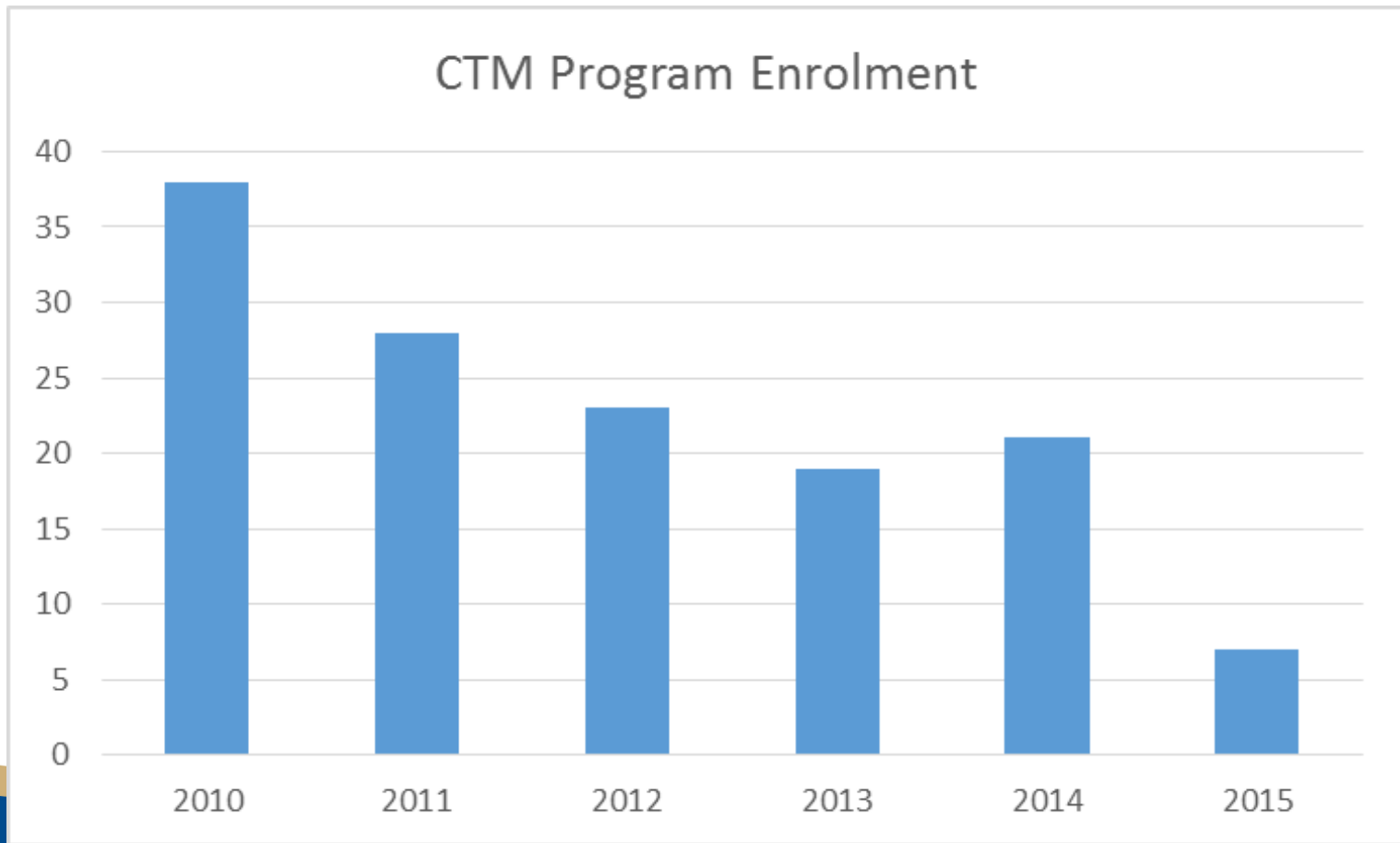
## Fall 2015 Assessment Report



Curriculum Coordinator: Sarah Todd

Date of Presentation: January 15, 2015

# Operational Objective: Enrolment Not Met



# IAB Comments

- Mr. Reilly presented the present dilemma regarding Construction Technology: Management enrollment being so poor.
- *Enrolment is so low it is unsustainable: Should we change our approach?*
- IAB: A name change should be considered. Remove the word “management”.
- It is worth considering having a 2 year program that develops technology skills: carpentry, construction, estimating, scheduling, drafting, print reading....and
- a 4 year program that introduces the business management aspects. An internship(s) would be required and receive college credit. Perhaps students simply want to be focused on a 4 year program from the start. Check out other CM degrees such as Clarkson, Alfred and ESF.



# What was assessed?

## CTM Program Outcomes:

1. The graduate of the SUNY Canton Construction Technology Management program will be able to **communicate effectively in both written and oral forms** to a level acceptable of an entry level construction technician.
2. The graduate of the SUNY Canton Construction Technology Management program will be able to apply **college level math concepts** (Business Math, Algebra, Geometry and Trigonometry) in the solution of **construction related problems**.
3. The graduate of the SUNY Canton Construction Technology Management program will be able to use common **computer applications** (Word Processing, Spreadsheets, Database, and Cadd) effectively.
4. The graduate of the SUNY Canton Construction Technology Management program will demonstrate familiarity with and understanding of the properties and applications of common **construction materials and methods** in the conduct of an entry level position in the construction industry.
5. The graduate of the SUNY Canton Construction Technology Management program will demonstrate familiarity with and understanding of fundamental **business management theory** in relation to an entry level position with a construction-related business.
6. (Added in 2017)



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6. (added 2016) **“Professional Skills”**: Student has acquired a variety of professional-related abilities typical of that expected of an entry level technician. These include print reading, quantity take-off, interpretation of schedules and team work.



# Where were outcomes assessed?

**SLO1. communicate effectively in both written and oral forms**

CONS280  
CONS216

Civil Materials  
Soils in Construction

**SLO 2. apply college level math concepts**

CONS101

Elementary Surveying

**SLO 3. use common computer applications**

CONS132  
CONS222  
CONS216

Construction Drafting  
Estimating  
Soils in Construction

**SLO 4. construction materials and methods**

CONS111  
CONS274

Commercial Structures  
Construction Mgmnt

**SLO 5. fundamentals of business management theory** in relation to an entry level position with a construction-related business.

BSAD100  
BSAD201  
ACCT104

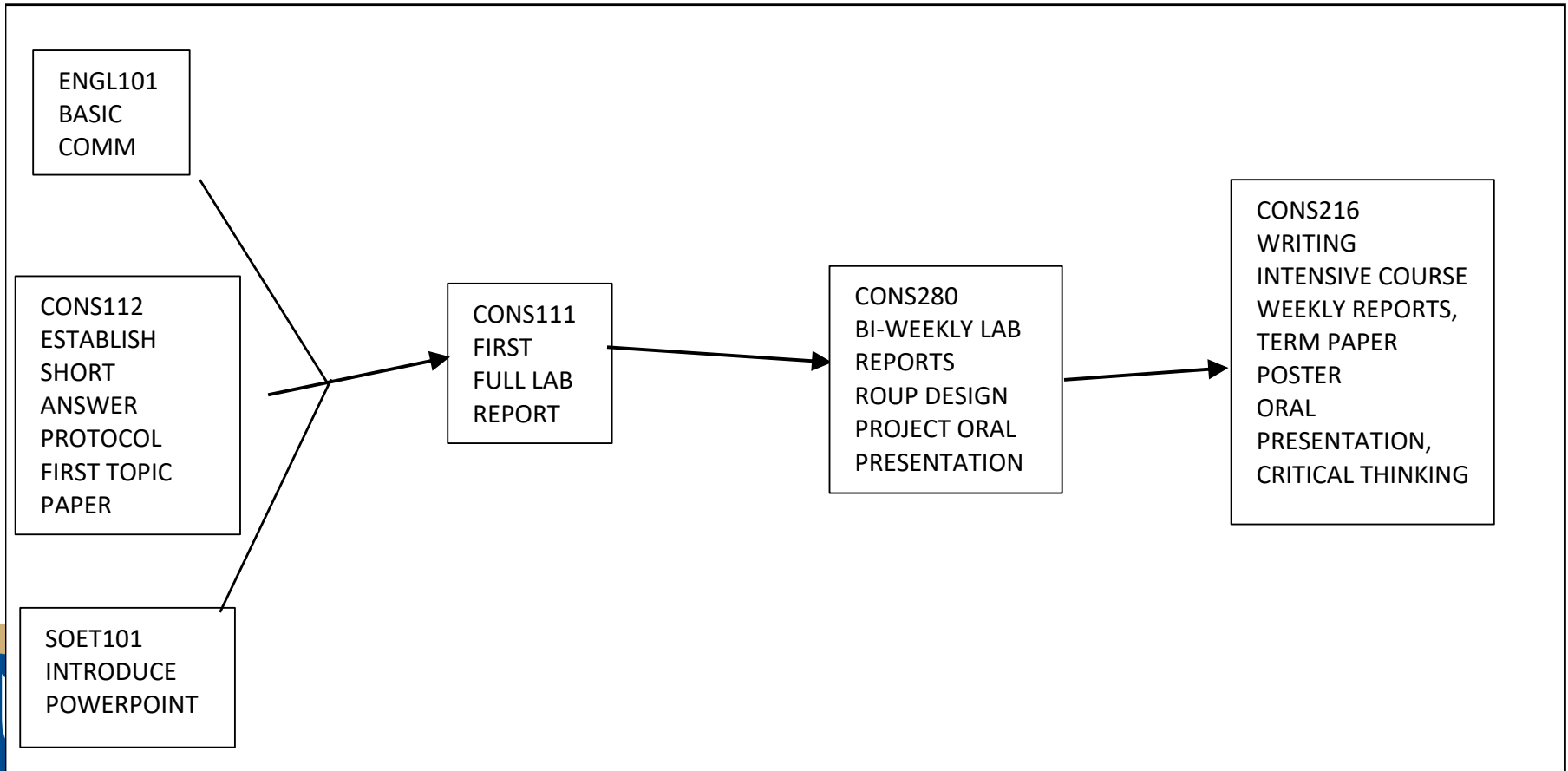
Intro to Business  
Business Law 1  
Intro to Accounting

# How was the assessment accomplished?

- Student work assessed:
  - final exam short answer questions
  - Calculations on assignments and exams
  - Oral presentations
  - Written reports
  - projects
- Grades reviewed for outcome 5
- Surveys of employers needed



# Communications CTM





# SLO 1 - Communication (written and oral)

1. The graduate of the SUNY Canton Construction Technology Management program will be able to communicate effectively in both written and oral forms to a level acceptable of an entry level construction technician.

WRITTEN MEASURED IN	DESCRIPTION	RESULTS	
CONS111	Write a full lab report based on communications manual	2017: 15 Of 19 (79%)	OK
CONS216 Soils in Construction	Write a full lab report based on communications manual	2017: 6 of 8 (75%)	OK
CONS216 Soils in Construction	Present an oral presentation with support of a Poster	2017: 6 of 7 performed	OK



# SLO 1 – Critical thinking from CONS216 Lab

□<sub>1</sub>

QUALITY OF WRITING

10

10

6

6

6

9

8

8

7

( )

Penalty for late submittal

Total

73

66

53

42

57

67

63

67

66

Grade (out of 100%)

100.00%

90%

73%

58%

78%

92%

86%

92%

90%

CANTON ISLO CRITICAL THINKING COMPONENTS

max SCORE

State issue, problem, or objective,  
with pertinent background  
information

4

3.5

3.5

2.5

4

3.5

3

3.5

3.5

data and data analysis

4

3.314286

3.657143

1.714286

3.428571

3.885714

3.542857

4

3.885714

expected/typical

4

4

2

4

4

4

4

4

4

interpretation of data, solution to  
problem

4

4

1

4

2.5

3

3

3

3

conclusions and outcomes

4

4

2

2

2

3.5

4

3.5

4

3.76

2.43

2.84

3.19

3.58

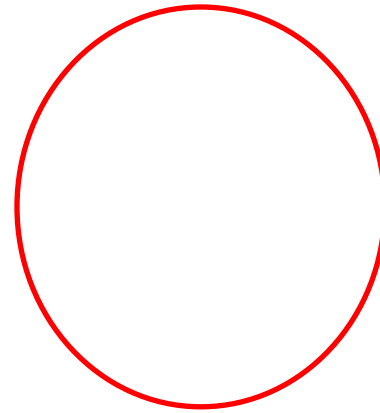
3.51

3.60

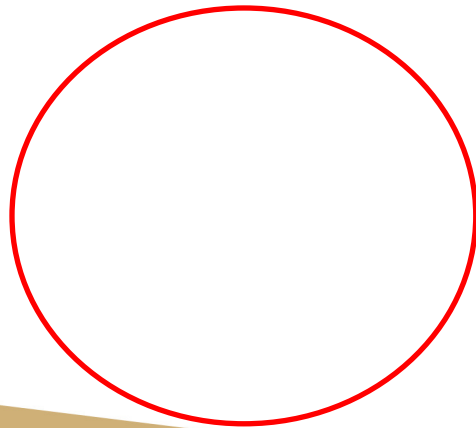
3.68



# SLO 2. Applies Math to Solve problems



SLO 3. Uses computer applications:



SLO 3. Uses computer applications:



# SLO 4. knowledge of industry materials and methods



# SLO 4. knowledge of industry materials and methods



# SLO 5 Business Fundamentals





# SLO 5 Business Fundamentals (from last year)

Evaluation based on cumulative GPA of the student in the business and accounting classes taken.

- Target 75% have cumulative GPA >2.5
- Current advisees : 7/8 (85%) meet target (average GPA is 3.11)
- Total students on advisee list since 2014: 24/32 (75%) meet target
- And recent graduates 2014 and 2015: 13 of 14 (91%) meet target (avg GPA = 3.4)



# SLO 6 (New) Professional Attributes

3. Student has acquired a variety of professional-related abilities typical of that expected of an entry level technician. These include print reading, quantity take-off, interpretation of schedules and team work.				
		RESULT		
CONS111	Structural Steel takeoff on exam	(2017) 16 of 19	MET	Will dedicate more lab time for practice  Trying to cram to much information in this course. Really needs to have print-reading taken out and made its own course
CONS132	Print Reading Assessment	(2016) 71%	Marginal: MET	
CONS222	Project: Perform a detailed estimate including "extension"	2017: All groups submitted an acceptably accurate estimate		Cons 112/111 should be a pre requisite for this course. It is almost impossible for students to perform a quantity takeoff without knowing what they are looking at or knowing the processes to construct a building. There should be two sections of estimating, one section strictly for Civil students and a separate for the construction Management students.
CONS274	Prepares cpm diagram on exam	(2017) 80% (2016) 10 of 13 (77%)	MET MET	
CONS274	Able to use a scheduling software	(2017) 90% 206: 100%	MET MET	Purchase of industry specific scheduling software is recommended to add value to this
CONS274	Heavy Equipment Selection based on productivity	(2017) 90% scored "perfect" 2016 : 11 of 13 (85%)	MET MET	
CONS274	Perform Cost Analysis	2016: 11 of 13	MET	
CONS101	Team Work Evaluation	2017: 31/34 2016: 30/33 2015: 95%	MET MET MET	Includes civil and construction



# Assessment results: What have the data told us?

Improvement over last year, but much information is lacking and requires more in depth study of posted report results..

Revisiting program outcomes. (Did that: loop closed)

Surveys are required. (Still not done)



Data-driven decisions: How the department has or plans to “close the loop” based on these results. OR **Given these findings, what will the program do differently?**

- Closing the loop
- Program Change in Mathematics dropped MATH135 and probably saved the college money
- IAB discussion has apparently led to introduction of 4 yr program
- Curriculum change requests: Estimating, Print Reading,
- Request for support: Campus provide systematic assistance with graduate disposition and graduate Student and employer surveys
- Material requests: scheduling software, estimating software



# What resources were used or have been requested to close the loop?

- Operational goal, replace Mr. B, has been resolved with the hiring of Mr. Reiter.
- We have not, as yet, identified any shortcomings in SLOs that would stimulate request for funds.
- Our biggest issue is low enrollment. Perhaps funding of recruitment efforts could stimulate enrollment???

