

# Higher Learning Commission & GLO Outcomes

Bruce McMillin

May

2016

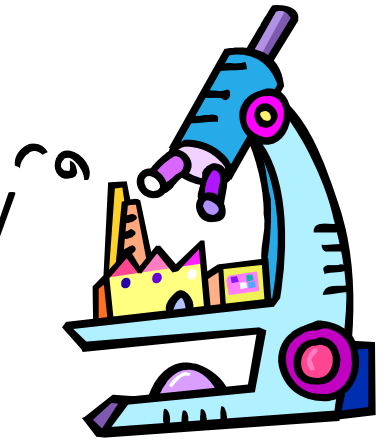
# HLC Reaccreditation

An accreditation team from HLC will visit S&T in 2018. Nearly all of the work necessary for reaccreditation will occur in the next two years.

All departments must share information about their learning outcomes and assessment plans, and results of assessments and/or improvements, in order for S&T to complete the self-study required for reaccreditation.

# Philosophy of Accreditation

- Ensure that the organization has \*processes\* in place to track how they are meeting their own *standards*.
- Outcomes (HLC Objectives)
  - prescribed standards for the students at graduation



# Timeline for Data Collection

We must show the HLC at least one cycle of data collection and efforts to implement continuous improvement measures.

- Spring 2016 – Collect assessment data and set Standards
- Fall 2016 – Review data and propose changes
- Spring 2017 – Collect more data
- Fall 2017 – Review data; identify changes and any measurable effects.

Goal: To demonstrate that your department has an active and effective continuous improvement process. The details of this process will depend on individual department's goals and assessment tools.

# Campus Graduate Student Learning Outcomes (GLOs)

The Graduate Learning Outcomes for Missouri University of Science and Technology as required by the Higher Learning Commission are listed below:

- Knowledge: an ability to apply knowledge of subject matter within their field of study
- Communication: an ability to communicate effectively within their field of study
- Critical Thinking: an ability to engage in productive critical thinking within their field of study
- Professional Development: an ability to develop professionally within their field of study.

Your Graduate Coordinators have rubrics in place for thesis students and should have defined success metrics to execute processes on the same timeline.

# GLO Raw Data (old system)

	Knowledge	Communication	Critical Thinking	Professional Development
Student	5	4.67	4.67	4.67
Student	4.22	5	4.5	5
Student	5	5	5	5
Student	4.1	3.8	3.98	4.1
Student	2.97	2.8	2.93	3.1
Student	4.5	4.5	4.5	4.67
Student	4.51	4.6	4.18	4.6
Student	4.46	3.75	4.63	4.5
Student	4	4	4.42	3.67

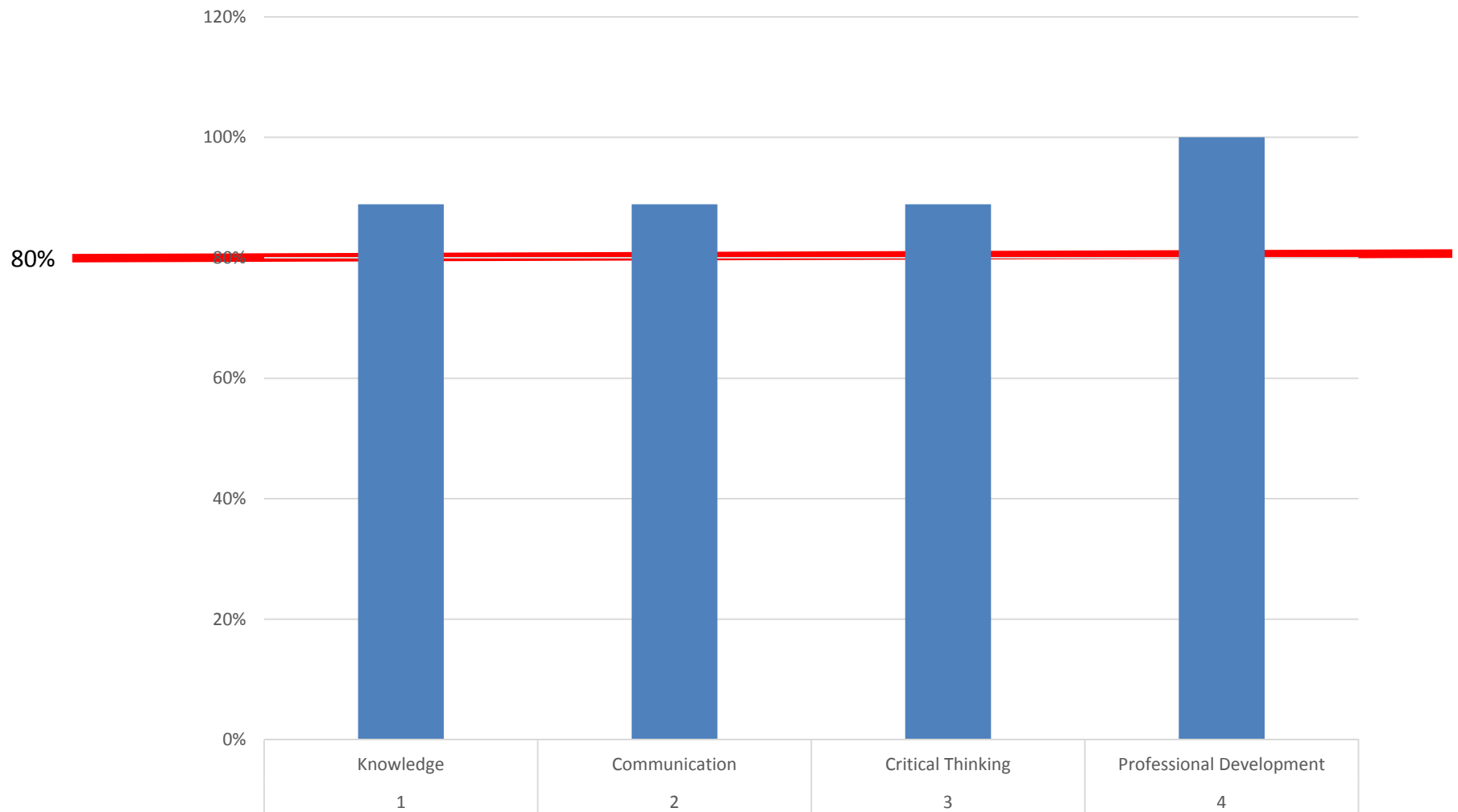
Question	5	4	3	2	1
1 Knowledge	78%	11%	11%	0%	0%
2 Communication	56%	33%	11%	0%	0%
3 Critical Thinking	78%	11%	11%	0%	0%
4 Professional Development	78%	22%	0%	0%	0%

# Standard

- 80% of all Computer Science Thesis/Dissertation students will achieve levels 4 or 5 on the standardized GLO assessments.

# GLO Plot (Old Format)

Sp15Su16





# Everyone is Above Average!

Evaluation/Guidan	Needs Significant Improvement	Needs Improvement	Acceptable	Very Good	Excellent
-------------------	-------------------------------------	----------------------	------------	-----------	-----------

# Finer Grained Rubric

Student Name: \_\_\_\_\_

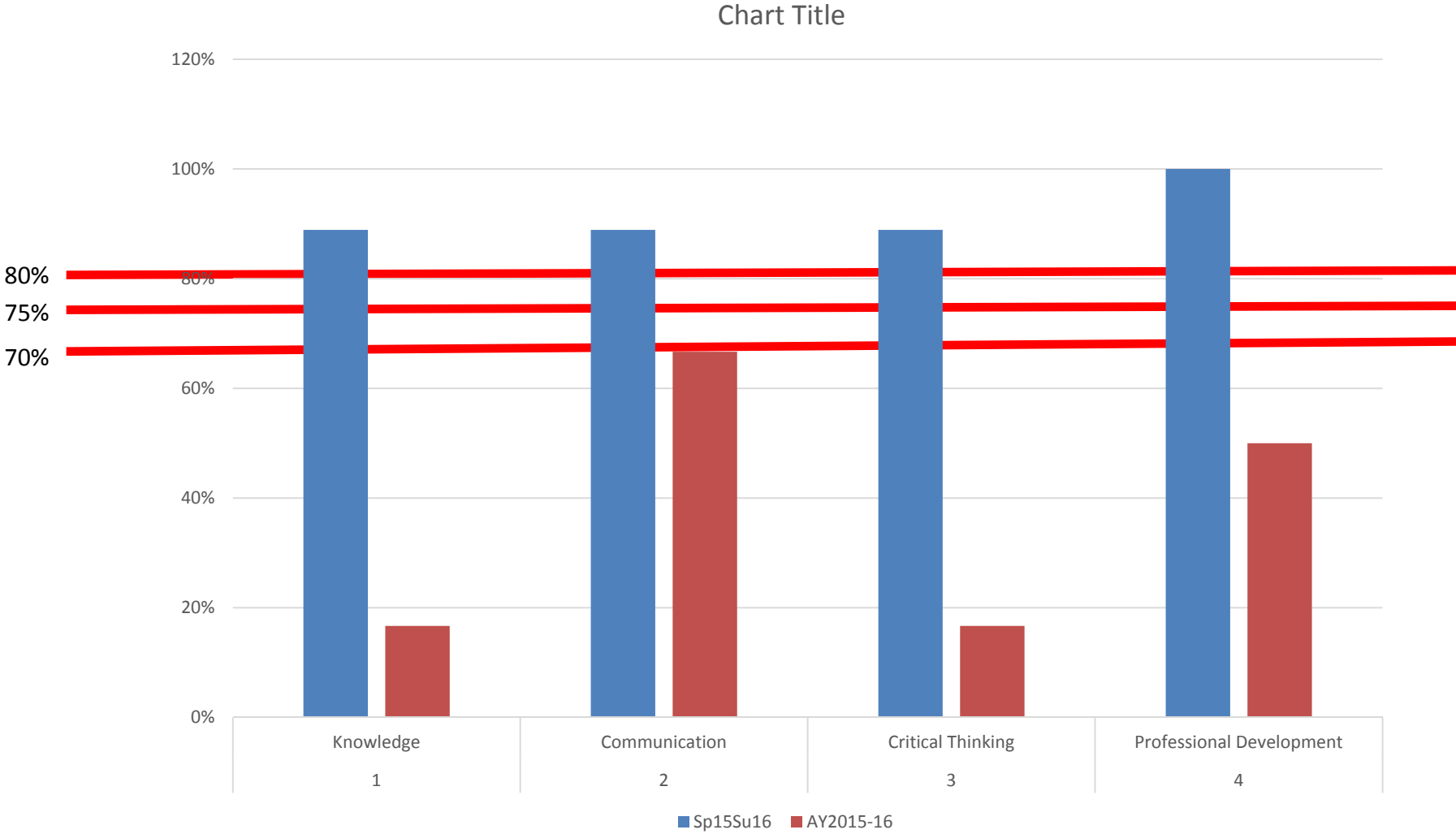
Milestone Rubric Completed by: \_\_\_\_\_

Circle the number for each field.

Graduate Learning Outcome		Unsubstantiated/Developing (1-2)		Acceptable (3)		Proficient/Exceptional (4-5)	
<b>Knowledge:</b> an ability to apply knowledge of subject matter within their field of study.	1 2	Does not reflect understanding of subject matter and associated literature	3	Reflects understanding of subject matter and associated literature	4 5	Reflects mastery of subject matter and associated literature	
	1 2	Demonstrates little understanding of theoretical concepts	3	Demonstrates understanding of theoretical concepts	4 5	Demonstrates superior understanding of theoretical concepts	
	1 2	Limited evidence of comprehension	3	Some evidence of comprehension	4 5	Significant evidence of comprehension	
	1 2	Limited expansion upon previous research	3	Builds upon previous research	4 5	Greatly extends previous research	
<b>Communication:</b> an ability to communicate effectively within their field of study.	1 2	Presents reasonings incorrectly, incoherently, or faulty	3	Presents reasonings coherently and clearly	4 5	Presents reasonings in a superior manner	
	1 2	Defines objectives are poorly	3	Defines objectives are clearly	4 5	Defines objectives thoroughly	
	1 2	Contains numerous grammatical and spelling errors	3	Contains some grammatical and spelling errors	4 5	Contains no grammatical or spelling errors	
	1 2	Organization is poor	3	Organization is logical	4 5	Organization is excellent	
<b>Critical Thinking:</b> an ability to engage in productive critical thinking within their field of study.	1 2	Demonstrates rudimentary problem solving skills	3	Demonstrates average problem solving skills	4 5	Demonstrates mature problem solving skills	
	1 2	Demonstrates limited originality	3	Demonstrates adequate originality	4 5	Demonstrates significant originality	
	1 2	Displays limited creativity and insight	3	Displays creativity and insight	4 5	Displays significant creativity and insight	
<b>Professional Development:</b> an ability to develop professionally within their field of study.	1 2	Exhibits limited theoretical or applied significance	3	Exhibits reasonable theoretical or applied significance	4 5	Exhibits significant theoretical or applied significance	
	1 2	Presents limited publication potential	3	Presents reasonable publication potential	4 5	Presents significant publication potential	
	1 2	Work is not presentation quality	3	Work is adequate for presentation	4 5	Work is presentation quality	
	1 2	Possesses inadequate awareness/training of ethical and responsible research	3	Possesses suitable awareness/training of ethical and responsible research	4 5	Possesses substantial awareness/training of ethical and responsible research	
	1 2	Documentation is poor	3	Documentation is adequate	4 5	Documentation is excellent	

Comments:

# GLO Plots (old and new)



# How do faculty make changes based on the results?

- Action
  - Admissions,
  - Advising,
  - Curriculum,
  - Courses,
  - and Faculty Development

It's vital that any proposed changes be tied to the assessed data and metric standards

# Some Possible Computer Science Actions

- Improve admissions standards (GRE scores)
- Revisit professional development program (FS 2016)
- Implement Communication-emphasis in graduate courses

# Reassess

- FS 2016 – no expected change in collected results after actions
- SP 2017 – keep collecting data
- FS 2017 – maybe some see some change in collected results?
- 2018, 2019, 2020, ..... Keep going