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Connecting the Dots

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It's 2017.

**Do you know where
your student learning
outcomes are?**

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Definitions





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Definitions

- Course Learning Outcomes: after completing the course, students should be able to demonstrate these outcomes and competencies. Syllabi should include these.





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Definitions

- Program Learning Outcomes: after completing the academic program, students should be able to demonstrate these outcomes and competencies. These should be in your catalog and on your website.





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General Education

- General Education outcomes should be articulated and the **program** of gen ed explained.
- Middle States and SUNY Gen Ed are different. Some adjustment may be necessary to reconcile the two.

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Definitions

- MSCHE General Education: quantitative and scientific reasoning, oral and written communication, critical analysis and reasoning, technological competency, information literacy, global awareness and cultural sensitivity. Required of all students except those in certificate programs. No credit requirement.

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Definitions

- SUNY General Education: 7/10 Categories, two competencies, and 30 credits in AA and AS degrees, and in baccalaureate degrees in the first two years of study.
- Does not require scientific reasoning.
- Does not require values, ethics, or diverse perspectives.
- Does not require SUNY GER of all degree programs.

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Definitions

- Institutional Student Learning Outcomes:
Required of all students except those in
certificate programs.



**Assessment of all of
the above: sources in
the standards and
expectations.**

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Institutional Student Learning Outcomes

Standard 14:

“Clearly articulated statements of expected student learning outcomes ... at all levels (institution, degree/program, course) ...that are:
Appropriately integrated with one another, consonant with the institution’s mission; and consonant with the standards of higher education and of the relevant disciplines.”

Standard V:

“Clearly stated educational goals at the institution and degree/program levels which are interrelated with one another, with relevant educational experiences, and with the institution’s mission.”

Standard V: Assessment

2. organized and systematic assessments, conducted by faculty and/or appropriate professionals, **evaluating the extent of student achievement of institutional and degree/program goals**. Institutions should:
- a. define meaningful curricular goals with defensible standards for evaluating whether students are achieving those goals;

The Expectations

- It is not necessary for gen ed or ILOs to be delivered within programs or courses; alternative methods of delivery are permissible.
- You have to be able to demonstrate how **all** students are able to obtain instruction in these outcomes. You must also be able to assess them. Curriculum maps should demonstrate how all students access these and how they are assessed. This is about program design and not student choice.
- Program learning outcomes are not the same as general education outcomes or ISLOs. They may be limited to programs only.
- Certificate programs are not included in this expectation.
- The new standards have increased the expectation for assessment. At least two full cycles of evidence of assessment data being used to improve teaching and learning will be required to meet the standard.



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Assessment

Expectations are for a “mature” assessment program

- Curricular offerings must be assessed consistently regardless of level, location or modality.
- General education and/or ISLOs must also be assessed, whether they are delivered within courses or in an extracurricular or co-curricular manner. In this case, mapping is especially important.
- There must be evidence of results being used to improve teaching and learning (assessment spiral).





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Challenges

1. Connecting the dots among all SLOs at the course, program, general education and institutional levels.
2. Showing how students acquire and demonstrate these outcomes.
3. Documenting this.

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Questions

- With outcomes which have multiple objectives or parts, must a student meet all of the objectives to have met the outcome?
- How will this be tracked if the objectives cannot all be addressed in the same course?
- How will this affect transfer students?

**So what is a curriculum
map anyway?**

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Curriculum Mapping

Curriculum mapping is a process for collecting and recording curriculum related data that identifies core skills and content taught, processes employed, and assessments used for each subject area and grade level.

(Education World)

Curriculum Mapping

Curriculum mapping is the process indexing or diagramming a curriculum to identify and address academic gaps, redundancies, and misalignments for purposes of improving the overall coherence of a course of study and, by extension, its effectiveness.
(edglossary.org)

Curriculum Mapping

Curriculum mapping is a method to align instruction with desired goals and program outcomes. It can also be used to explore what is taught and how. The map:

- Documents what is taught and when
- Reveals gaps in the curriculum
- Helps design an assessment plan

Benefits:

- Improves communication about curriculum among faculty
- Improves program coherence
- Increases the likelihood that students achieve program level outcomes
- Encourages reflective practice

(Rochester Institute of Technology)

Curriculum Maps

- A visual manner of diagramming curricular requirements.
- Range in complexity depending on purpose.
- Serve as a means of documenting where and when in a program SLOs are addressed and assessed.



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Curriculum Maps (cont'd)

- Can serve as a quick guide to program outcomes.
- Can serve as a means of facilitating program revision.
- Can serve as planning tools for assessment.
- May take many different forms and styles, depending on the complexity of the purpose and the intended use.

A.S. in Liberal Arts and Sciences: Biology

						Choose 2 of these 3 courses:			Choose 3 of these 7 courses:						
PLO/ Course	BIO 155	CHE 151	MTH 175	BIO 156	CHE 152	BIO 209	BIO 260	BIO 230	PHY 145	PHY 146	PHY 154	PHY 155	CHE 251	CHE 252	MTH 160
1	✓			✓		✓	✓	✓							
2	✓			✓				✓							
3	✓			✓		✓		✓							
4	✓			✓		✓	✓								
5	✓			✓		✓	✓	✓							
6	✓			✓		✓		✓							

Program Learning Outcomes for Liberal Arts and Sciences: Biology A.S. Degree:

1. Demonstrate an understanding of major biological concepts.
2. Demonstrate communication skills as they apply to biological sciences.
3. Demonstrate how to apply the scientific method of inquiry.
4. Apply biological concepts to solve biological-related problems.
5. Demonstrate ability to evaluate and explain scientific information.
6. Correctly and safely perform biological laboratory and/or field techniques common in a biology course.



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Curriculum Maps (cont'd)

Another type of map is a table with one column for each learning outcome and one row for each course or required event/experience (or vice versa: each row contains a course and each column lists a learning outcome). The following is an excerpt from hypothetical biology program curriculum map.

Key: "I"=Introduced; "R"=reinforced and opportunity to practice; "M"=mastery at the senior or exit level; "A"=assessment evidence collected

Courses and Experiences	Program Learning Outcomes			
	Apply the scientific method	Develop laboratory techniques	Diagram and explain major cellular processes	Awareness of careers and job opportunities in biological sciences
	BIOL 101	I	I	I
	BIOL 202	R	R	I
	BIOL 303	R	M, A	R
	BIOL 404	M, A	M, A	R
Other: Exit interview				A

REQUIRED COURSES AND EXPERIENCES	Program Level LEARNING OUTCOMES						
	Demonstrate knowledge of key historical material, theoretical perspectives, institutional practices, and legal and ethical concerns.	Analyze and identify the materials from which historical and or artistic objects are made.	Develop visual and hand skills for recognizing and analyzing materials that compose cultural objects and processes by which they have been constructed.	Develop appropriate research skills.	Analyze the conservation needs of an object and identify best practices.	Illustrate research and computer skills.	Exhibit knowledge of actual museum work through personal experience.
0533-370 Intro to Museums Collecting	I, A		I	I		I	I
0533-422 Art Materials and Photography	R	I, A	R	R	I		



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Layering Curriculum Maps

How do you use maps to give the whole picture of a degree program, with ISLOs, GESLOs, PSLOs, and where each is assessed?

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Institutional Learning Outcomes

The Institutional Learning Outcomes (ILOs) are a promise to the communities that graduates and those transferring to a four-year college or university will be able to demonstrate the knowledge, skills, and abilities contained within all of the ILOs, based on general education and discipline-specific courses. Students who earn a certificate, or have taken courses for personal educational development, will be expected to demonstrate the knowledge, skills, and abilities specified within one or more of the ILOs.

- **Communication Competency** – Students will communicate effectively to different audiences, through various modes of communication.
- **Information Literacy** – Students will identify, evaluate, and integrate information effectively in various contexts.
- **Critical Thinking Competency** – Students will analyze situations, evaluate options, and synthesize findings to make well-justified decisions.
- **Cultural Competency** – Students will interact effectively with others, taking into account their diverse backgrounds, and work competently in cross-cultural situations.
- **Academic and Personal Responsibility** – Students will set academic goals, use college resources, and have the knowledge and skills necessary to achieve their goals in a timely manner.

SUNY GENERAL EDUCATION STUDENT LEARNING OUTCOMES

I. KNOWLEDGE AND SKILL AREAS

1. MATHEMATICS
2. NATURAL SCIENCES
3. SOCIAL SCIENCES
4. AMERICAN HISTORY
5. WESTERN CIVILIZATION
6. OTHER WORLD CIVILIZATIONS
7. HUMANITIES
8. THE ARTS
9. FOREIGN LANGUAGE
10. BASIC COMMUNICATION

II. COMPETENCIES

The following two competencies should be infused throughout the General Education program:

1. CRITICAL THINKING (REASONING)
2. INFORMATION MANAGEMENT

Business Administration AS

PROGRAM LEARNING OUTCOMES

1. Apply knowledge of the activities of business and government and of the environments in which they operate
2. Utilize basic principles of accounting
3. Apply basic knowledge of Macro and Micro Economics Theory
4. Demonstrate an understanding of applied and/or theoretical mathematics and their applications in a business environment
5. Display an understanding of one or more other specific business subjects
6. Effectively compose written and oral business communications
7. Possess an awareness of career options
8. Continue your education at a 4-year institution

Course Designation	Course Title	Credits	ISLO	SUNY GER	PSLO	
ENG 101	Freshman English I	3				
BUS 101	Principles of Accounting I	4				
BUS 103	Principles of Business	3				
	Math Elective	3				
	Science Elective	4				
ENGL 102	Freshman English II	3				
BUS 102	Principles of Accounting II	4				
BUS 225	Microcomputer Application Software	3				
	Math Elective	3				
	Physical Education	1				
	Health	1				
ENG 221	Effective Speech: Public Address	3				
	OR					
ENG 270	Technical Writing	3				
BUS 200	Principles of Management	3				
BUS 205	Business Law I	3				
ECON 201	Intro to Economics I	3				
	Other World Civilizations Elective	3				
	OR					
	The Arts Elective	3				
	Physical Education	1				
BUS 204	Marketing	3				
ECON 202	Intro to Economics II	3				
Math 214	Statistics	3				
HIST 101	Western Civilization I	3				
	OR					
HIST 102	Western Civilization II	3				
	OR					
HIST 103	Pre-History and Early American History	3				
	OR					
HIST 104	19th Century American History	3				
	OR					
HIST 105	America in the 20th and 21st Centuries	3				

Course Designation	Course Title	Credits	ISLO	SUNY GER	PSLO	
ENG 101	Freshman English I	3	1,2			
BUS 101	Principles of Accounting I	4				
BUS 103	Principles of Business	3				
	Math Elective	3				
	Science Elective	4				
ENGL 102	Freshman English II	3				
BUS 102	Principles of Accounting II	4				
BUS 225	Microcomputer Application Software	3				
	Math Elective	3				
	Physical Education	1				
	Health	1				
ENG 221	Effective Speech: Public Address	3	1			
	OR					
ENG 270	Technical Writing	3	1			
BUS 200	Principles of Management	3				
BUS 205	Business Law I	3	3			
ECON 201	Intro to Economics I	3				
	Other World Civilizations Elective	3	4			
	OR					
	The Arts Elective	3				
	Physical Education	1				
BUS 204	Marketing	3				
ECON 202	Intro to Economics II	3				
Math 214	Statistics	3				
HIST 101	Western Civilization I	3				
	OR					
HIST 102	Western Civilization II	3				
	OR					
HIST 103	Pre-History and Early American History	3				
	OR					
HIST 104	19th Century American History	3				
	OR					
HIST 105	America in the 20th and 21st Centuries	3				

Course Designation	Course Title	Credits	ISLO	SUNY GER	PSLO	
ENG 101	Freshman English I	3	1,2	10		
BUS 101	Principles of Accounting I	4				
BUS 103	Principles of Business	3				
	Math Elective	3		1		
	Science Elective	4		2		
ENGL 102	Freshman English II	3		7		
BUS 102	Principles of Accounting II	4				
BUS 225	Microcomputer Application Software	3				
	Math Elective	3		1		
	Physical Education	1				
	Health	1				
ENG 221	Effective Speech: Public Address	3	1	10-O		
	OR					
ENG 270	Technical Writing	3	1	10-W		
BUS 200	Principles of Management	3				
BUS 205	Business Law I	3	3			
ECON 201	Intro to Economics I	3		3		
	Other World Civilizations Elective	3	4			
	OR					
	The Arts Elective	3				
	Physical Education	1				
BUS 204	Marketing	3				
ECON 202	Intro to Economics II	3		3		
Math 214	Statistics	3		1		
HIST 101	Western Civilization I	3		5		
	OR					
HIST 102	Western Civilization II	3		5		
	OR					
HIST 103	Pre-History and Early American History	3		4		
	OR					
HIST 104	19th Century American History	3		4		
	OR					
HIST 105	America in the 20th and 21st Centuries	3		4		

Course Designation	Course Title	Credits	ISLO	SUNY GER	PSLO	
ENG 101	Freshman English I	3	1,2	10		
BUS 101	Principles of Accounting I	4			2	
BUS 103	Principles of Business	3			1	
	Math Elective	3		1	4	
	Science Elective	4		2		
ENGL 102	Freshman English II	3		7		
BUS 102	Principles of Accounting II	4			2	
BUS 225	Microcomputer Application Software	3				
	Math Elective	3		1	4	
	Physical Education	1				
	Health	1				
ENG 221	Effective Speech: Public Address	3	1	10-O	6	
	OR					
ENG 270	Technical Writing	3	1	10-W	6	
BUS 200	Principles of Management	3			5	
BUS 205	Business Law I	3	3		1	
ECON 201	Intro to Economics I	3		3	3	
	Other World Civilizations Elective	3	4			
	OR					
	The Arts Elective	3				
	Physical Education	1				
BUS 204	Marketing	3			5	
ECON 202	Intro to Economics II	3		3	3	
Math 214	Statistics	3		1	4	
HIST 101	Western Civilization I	3		5		
	OR					
HIST 102	Western Civilization II	3		5		
	OR					
HIST 103	Pre-History and Early American History	3		4		
	OR					
HIST 104	19th Century American History	3		4		
	OR					
HIST 105	America in the 20th and 21st Centuries	3		4		

Course Designation	Course Title	Credits	ISLO	Assessed	SUNY GER	Assessed	PSLO	Assessed
ENG 101	Freshman English I×	3	1,2	✓	10	✓		
BUS 101	Principles of Accounting I	4					2	
BUS 103	Principles of Business	3					1	✓
	Math Elective	3			1		4	
	Science Elective	4			2	✓		
ENGL 102	Freshman English II	3			7	✓		
BUS 102	Principles of Accounting II	4					2	✓
BUS 225	Microcomputer Application Software	3						
	Math Elective	3			1		4	
	Physical Education	1						
	Health	1						
ENG 221	Effective Speech: Public Address	3	1		10-O		6	✓
	OR							
ENG 270	Technical Writing	3	1		10-W		6	✓
BUS 200	Principles of Management	3					5	✓
BUS 205	Business Law I	3	3	✓			1	
ECON 201	Intro to Economics I	3			3		3	
	Other World Civilizations Elective	3	4	✓	6	✓		
	OR							
	The Arts Elective	3			8	✓		
	Physical Education	1						
BUS 204	Marketing	3					5	✓
ECON 202	Intro to Economics II	3			3	✓	3	✓
Math 214	Statistics	3			1	✓	4	✓
HIST 101	Western Civilization I	3			5	✓		
	OR							
HIST 102	Western Civilization II	3			5	✓		
	OR							
HIST 103	Pre-History and Early American History	3			4	✓		
	OR							
HIST 104	19th Century American History	3			4	✓		
	OR							
HIST 105	America in the 20th and 21st Centuries	3			4	✓		

Institutional Learning Outcomes Alignment Map

Program Name:

	ILO	PLO	CLO	SUNY GEN ED	ASSESSMENT
1	Oral and Written Communication				
	Objective 1				
	Objective 2				
2	Quantitative Reasoning				
3	Scientific Reasoning				
4	Critical Analysis and Reasoning				
	Objective 1				
	Objective2				
5	Information Literacy				
6	Technological Competency				
7	Values, Ethics and Diverse Perspectives				
8	Information Literacy				

ILO = Institutional Learning Outcome PLO= Program Learning Outcome CLO: Course Learning Outcome



Observations

- Some programs may require re-designation or restriction of electives to specify particular courses which meet the needed outcomes.
- Many courses may meet only one of the objectives under a particular ISLO, PSLO, GESLO. This would need to be specified so that the full range of objectives may be addressed and assessed.
- Some courses may need to add specific SLOs in order to demonstrate that the courses do address the topic in question. You can't just assume.
- In some cases where a choice of courses is indicated, you should check to ensure that any SLO met by one course is met by the other(s) as well if this is the only place that the SLO is addressed in the program.
- Some indication in the map should be made to determine in which courses or in which alternative manner the SLOs will be assessed.

Discussion

