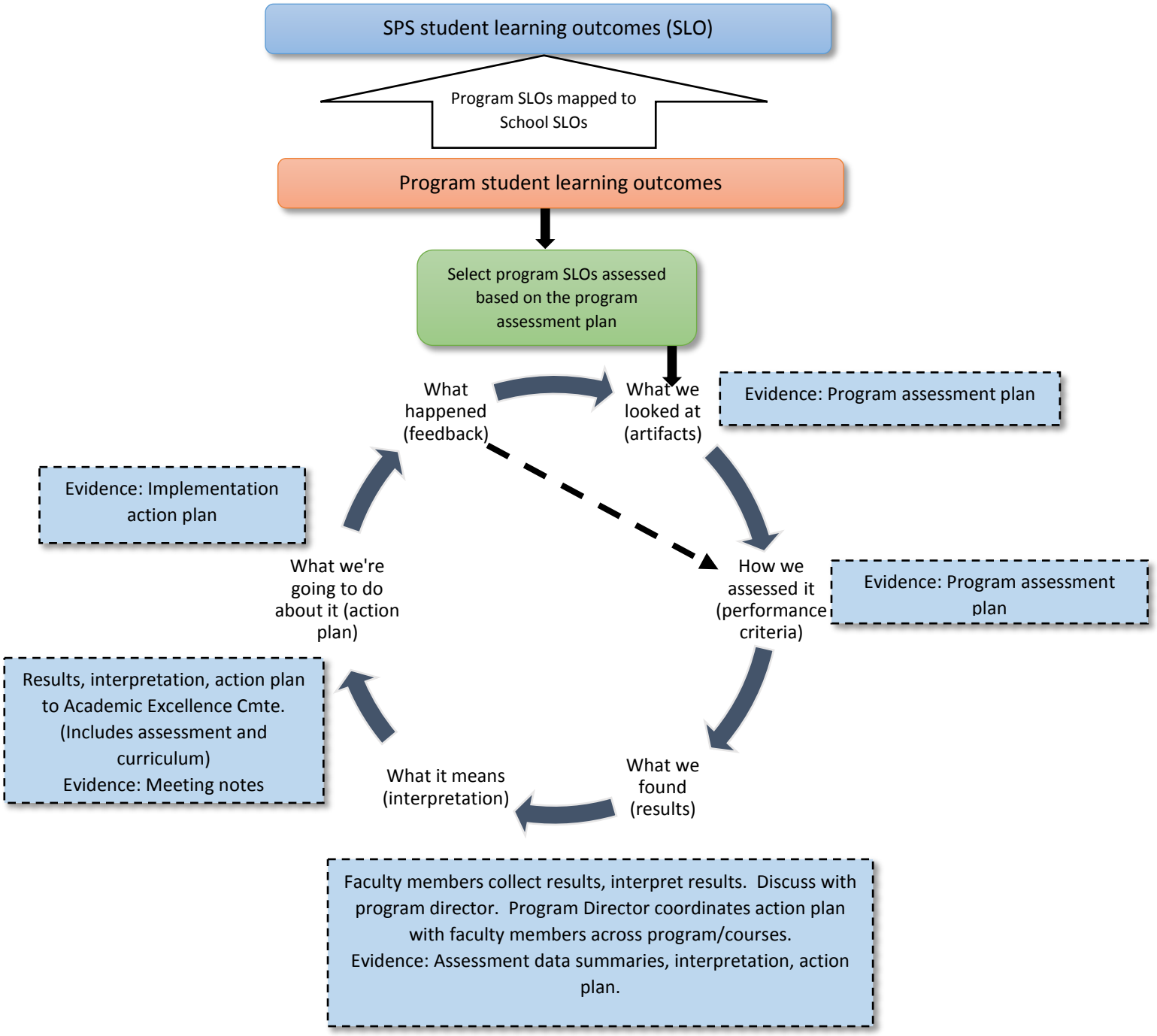
Saint Louis University School for Professional Studies
Program Assessment Model

The School for Professional Studies has adopted the model described in this document for programmatic assessment. Starting with new programs, the model will be phased in for all SPS programs.

The model is designed to illustrate alignment among School, program and course student learning outcomes as well as an ongoing, cyclical assessment process.



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SAINT LOUIS UNIVERSITY.

Program Assessment Plan

Program: Master of Science Cyber Security

Department: N/A

College/School: School for Professional Studies

Date: 10-30-2017

Primary Assessment Contact: John Buerck

Note: Each cell in the table below will expand as needed to accommodate your responses.

#	**Program Learning Outcomes** What do the program faculty expect all students to know, or be able to do, as a result of completing this program? ▪ *Note: These should be measurable, and manageable in number (typically 4-6 are sufficient).*	**Assessment Mapping** From what specific courses (or other educational/professional experiences) will artifacts of student learning be analyzed to demonstrate achievement of the outcome? Include courses taught at the Madrid campus and/or online as applicable.	**Assessment Methods** What specific artifacts of student learning will be analyzed? How, and by whom, will they be analyzed? ▪ *Note: the majority should provide direct, rather than indirect, evidence of achievement.* Please note if a rubric is used and, if so, include it as an appendix to this plan.	**Use of Assessment Data** How and when will analyzed data be used by faculty to make changes in pedagogy, curriculum design, and/or assessment work? How and when will the program evaluate the impact of assessment-informed changes *made in previous years*?
1	Assess evidence to draw reasoned, ethical conclusions.	ORLD 5050, CYBR 5963	1. An assessment survey will be completed by each instructor at end of course in which this program learning outcome exists. This survey will inquire about: A) Specific artifact(s) used to demonstrate achievement, B) Strengths/weakness in student performance towards this outcome, C) Number of students who achieved/partially achieved/not achieved the outcome, D) Suggestions on potential changes to the curriculum/pedagogies/artifacts/assessment methods. 2. Masters applied research projects completed in CYBR 5963 will be evaluated by the Program Director at the end of the research project using a three-point rubric. Comments and	Every other year, typically in the spring. The program Director in cooperation with the full-time and adjunct faculty will analyze assessment data and make changes to pedagogy and/or curriculum. Program Directors will follow up on action items from the previous year to determine impact and possible refinements or enhancements moving forward.

			recommendations will be recorded.	
2	Apply leadership competencies appropriate for a given situation or context.	ORLD 5050, ORLD 5010, CYBR 5961 - 5963	1. An assessment survey will be completed by each instructor at end of course in which this program learning outcome exists. This survey will inquire about: A) Specific artifact(s) used to demonstrate achievement, B) Strengths/weakness in student performance towards this outcome, C) Number of students who achieved/partially achieved/not achieved the outcome, D) Suggestions on potential changes to the curriculum/pedagogies/artifacts/assessment methods. 2. Exit survey completed by students at end of degree. 3. Masters applied research projects completed in CYBR 5963 will be evaluated by the Program Director at the end of the research project using a three-point rubric. Comments and recommendations will be recorded.	Every other year, typically in the spring. The program Director in cooperation with the full-time and adjunct faculty will analyze assessment data and make changes to pedagogy and/or curriculum. Program Directors will follow up on action items from the previous year to determine impact and possible refinements or enhancements moving forward.
3	Articulate arguments or explanations to both a disciplinary or professional audience and to a general audience, in both oral and written forms	AA 5221, AA 5222 CYBR 5961-5963	1. An assessment survey will be completed by each instructor at end of course in which this program learning outcome exists. This survey will inquire about: A) Specific artifact(s) used to demonstrate achievement, B) Strengths/weakness in student performance towards this outcome, C) Number of students who achieved/partially achieved/not achieved the outcome, D) Suggestions on potential changes to the curriculum/pedagogies/artifacts/assessment methods. 2. Exit survey completed by students at end of degree. 3. Masters applied research projects completed in CYBR 5963 will be evaluated by the Program Director at the end of the research project using a three-point rubric. Comments and recommendations will be recorded.	Every other year, typically in the spring. The program Director in cooperation with the full-time and adjunct faculty will analyze assessment data and make changes to pedagogy and/or curriculum. Program Directors will follow up on action items from the previous year to determine impact and possible refinements or enhancements moving forward.

4	Construct and implement networks and data management systems that protect intellectual property using cybersecurity principles.	CYBR 5000, CYBR 5010, CYBR 5020, CYBR 5220, CYBR 5230, CYBR 5961-5963	1. An assessment survey will be completed by each instructor at end of course in which this program learning outcome exists. This survey will inquire about: A) Specific artifact(s) used to demonstrate achievement, B) Strengths/weakness in student performance towards this outcome, C) Number of students who achieved/partially achieved/not achieved the outcome, D) Suggestions on potential changes to the curriculum/pedagogies/artifacts/assessment methods. 2. Exit survey completed by students at end of degree. 3. Masters applied research projects completed in CYBR 5963 will be evaluated by the Program Director at the end of the research project using a three-point rubric. Comments and recommendations will be recorded.	Every other year, typically in the spring. The program Director in cooperation with the full-time and adjunct faculty will analyze assessment data and make changes to pedagogy and/or curriculum. Program Directors will follow up on action items from the previous year to determine impact and possible refinements or enhancements moving forward.
5	Apply information security principles to analyze, detect and mitigate vulnerabilities and intrusions	CYBR 5000, 5010, CYBR 5030, CYBR 5240, CYBR 5961-5963	1. An assessment survey will be completed by each instructor at end of course in which this program learning outcome exists. This survey will inquire about: A) Specific artifact(s) used to demonstrate achievement, B) Strengths/weakness in student performance towards this outcome, C) Number of students who achieved/partially achieved/not achieved the outcome, D) Suggestions on potential changes to the curriculum/pedagogies/artifacts/assessment methods. 2. Exit survey completed by students at end of degree. 3. Masters applied research projects completed in CYBR 5963 will be evaluated by the Program Director at the end of the research project using a three-point rubric. Comments and recommendations will be recorded.	Every other year, typically in the spring. The program Director in cooperation with the full-time and adjunct faculty will analyze assessment data and make changes to pedagogy and/or curriculum. Program Directors will follow up on action items from the previous year to determine impact and possible refinements or enhancements moving forward.

Additional Questions

1. On what schedule/cycle will faculty assess each of the above-noted program learning outcomes? *(It is not recommended to try to assess every outcome every year.)*

Program Assessment Schedule

The following schedule provides an annual timeline for assessing the program's student learning outcomes. The assessment schedule will be reviewed annually and modified to address emerging evidence needs for assessment of a particular SLO.

	SLO1	SLO2	SLO3	SLO4	SLO5
AY 2018-19	ORLD 5050, CYBR 5963	ORLD 5050, ORLD 5010, CYBR 5961 - 5963			
AY 2019-20			AA 5221, AA 5222 CYBR 5961-5963		
AY 2020-21				CYBR 5000, CYBR 5010, CYBR 5030 CYBR 5961 - 5963	CYBR 5240, CYBR 5020 CYBR 5961-5963
AY 2021-22	ORLD 5050, CYBR 5963	ORLD 5050, ORLD 5010, CYBR 5961 - 5963			

Program Curricular Map

The curriculum map indicates where SLOs are introduced (I), reinforced (R), and evaluated. The map demonstrates how each course contributes to students' meeting the SLOs and help ensures student learning is designed to scaffold from initial introduction to the knowledge/skills/attitudes (KSA), to the opportunity to apply the KSAs to different situations, to evaluation of student's degree of achievement of each SLO.

Master of Science Cybersecurity
Program Level Student Learning Objectives
Fall 2018

	1. Assess evidence to draw reasoned, ethical conclusions.	2. Apply leadership competencies appropriate for a given situation or context.	3. Utilize effective discipline-specific argumentation skills.	4. Construct and implement networks and data management systems that protect intellectual property using cybersecurity principles.	5. Apply information security principles to analyze, detect and mitigate vulnerabilities and intrusions
SPS Graduate Core (12 Credits)					
ORLD 5050 Ethical, Evidence-Based Decision Making	I				
ORLD 5010 Contemporary Org Leadership	R	I			
AA 5221 Applied Analytics and Methods I			I		
AA 5222 Applied Analytics and Methods II		R	R		
Cyber Core (15 Credits)				I	I
CYBR 5000 Cybersecurity Principles				R	R
CYBR 5010 Networking Concepts				R	
CYBR 5020 Data Administration					R
CYBR 5030 Cyber Threats and Defense			R	E	E
CYBR 5961-5963 Cybersecurity Master's Research Project (MRP)	E	E	E	E	E
Cyber Electives (9 Credits)					
CYBR 5210 Digital Investigations				I	I
CYBR 5220 Incident Response and Mitigation				R	
CYBR 5230 Intrusion Detection and Analysis				R	
CYBR 5240 Cloud Security					R

*Program learning outcome data collected and evaluated in "R" and "E" courses.

2. Describe how, and the extent to which, program faculty contributed to the development of this plan.

The program Director in cooperation with the full-time and adjunct faculty are involved in the development of the courses and their application to each program learning outcome within the plan. These faculties are highly invested in ensuring that course projects and other associated artifacts are created in ways that student performance toward the learning outcome can be distinguished and evidence towards achievement reported.

3. **On what schedule/cycle will faculty review and, if needed, modify this assessment plan?** This plan will be reviewed annually to ensure it continues to meet the program's needs. If a given learning outcome indicated areas in need of focused assessment, especially as it relates to one or more courses within the program or a foundational competency, then the schedule may be altered as needed. As SPS programs continually evolve to meet changing market needs, this assessment plan is to be considered dynamic and subject to change as the program evolves and new programs are offered.