



Creating a Program-Level Assessment Plan

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Workshop Objectives

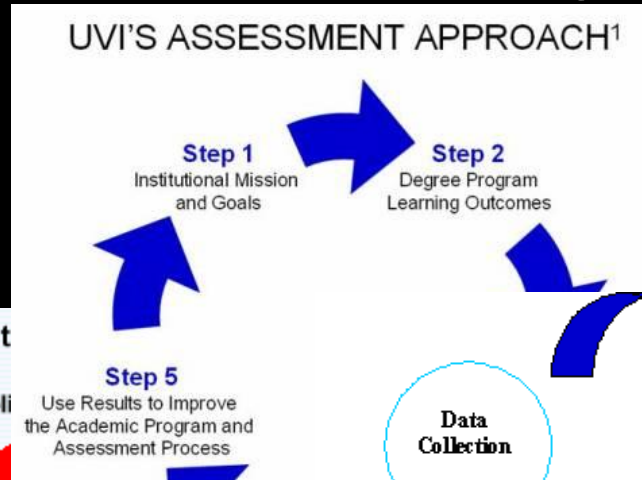
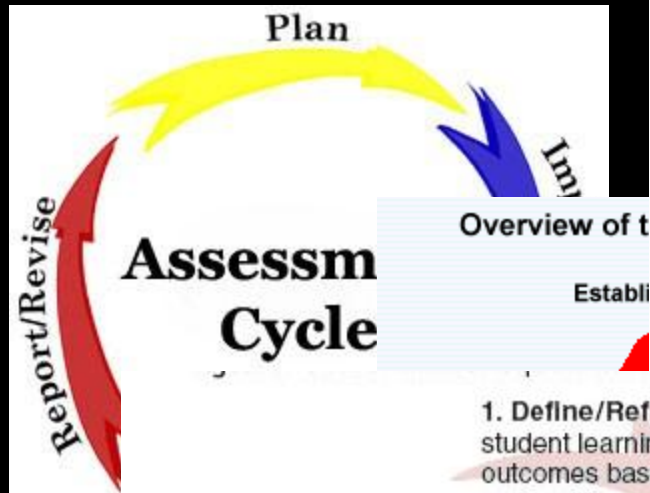
- Identify stages in developing an assessment plan
- Review and align sample program learning outcomes
- Recommend a basic assessment plan that can help in determining the extent to which an outcome is achieved by students within a program



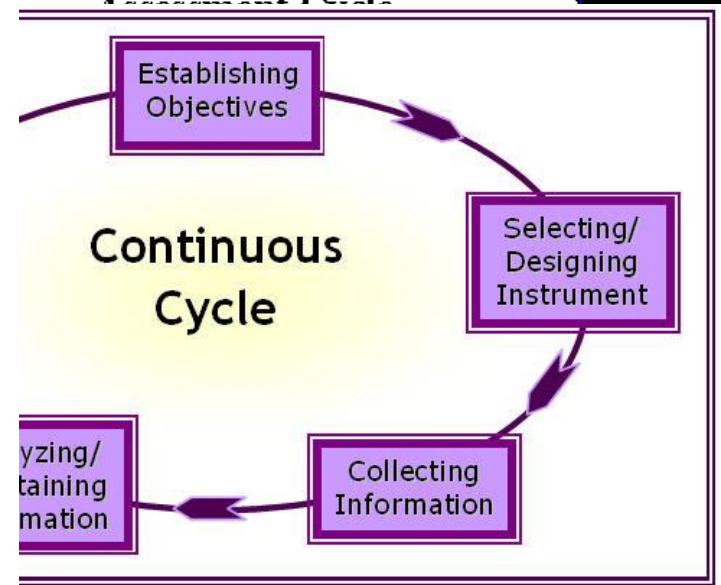
What is an Assessment Plan?

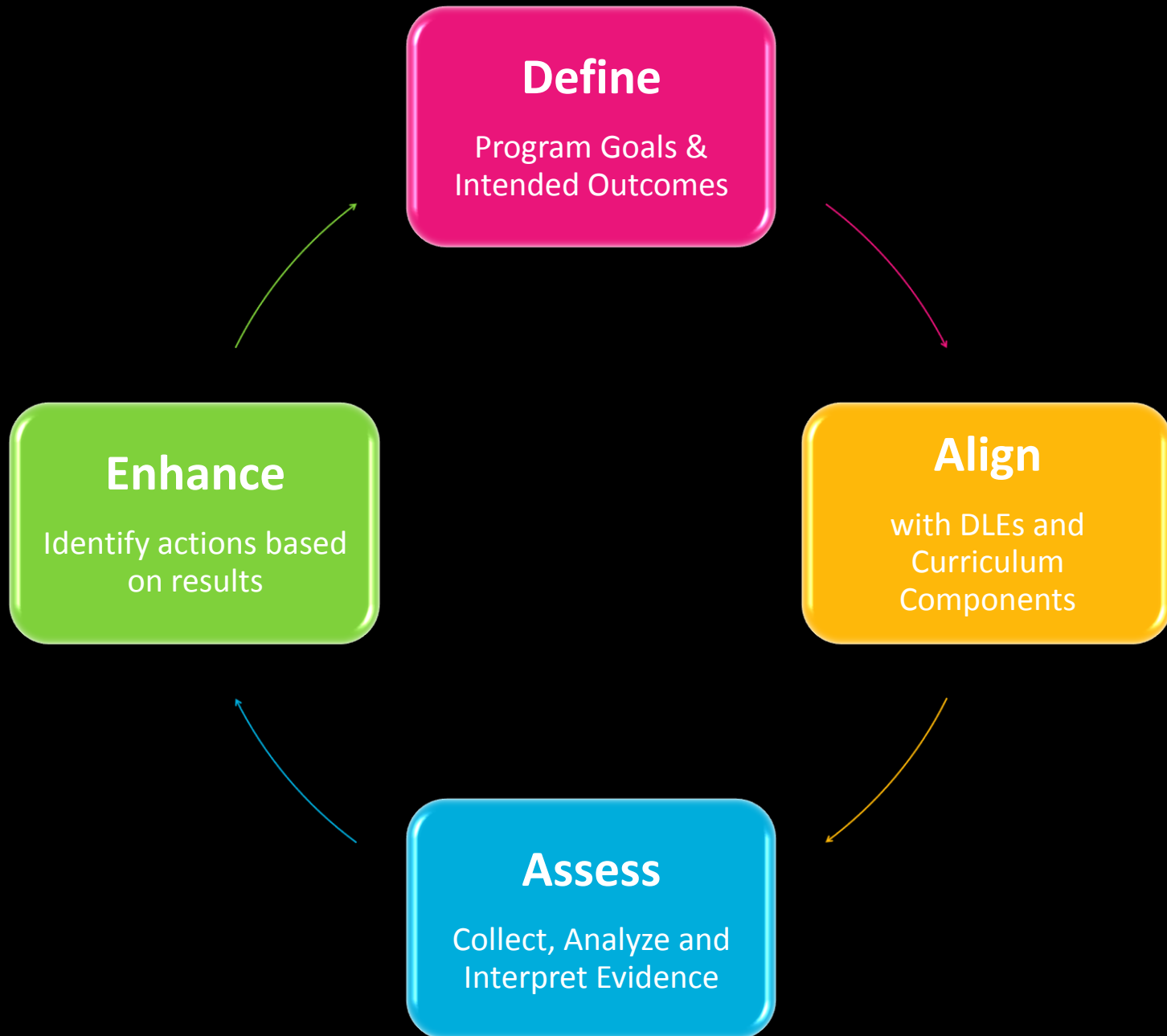
- A planning document that:
 - Aligns learning outcomes and curriculum components with direct/ indirect assessments
 - Assesses student achievement
 - Enhance curriculum
- It allows for evidence-based curriculum decisions to be made

The Assessment Cycle



- 1. Define/Refine** student learning outcomes based on input from stakeholders.
- 2. Design** assessment tools, criteria, and standards directly linked to each outcome.
- 3. Implement** assessment tool(s) to gather evidence of student learning.
- 4. Analyze** and evaluate the collected data.
- 5. Identify** gaps between desired and actual results.
- 6. Document** results and outline needed changes in curriculum, instructional materials, or teaching strategies.





Define

Align

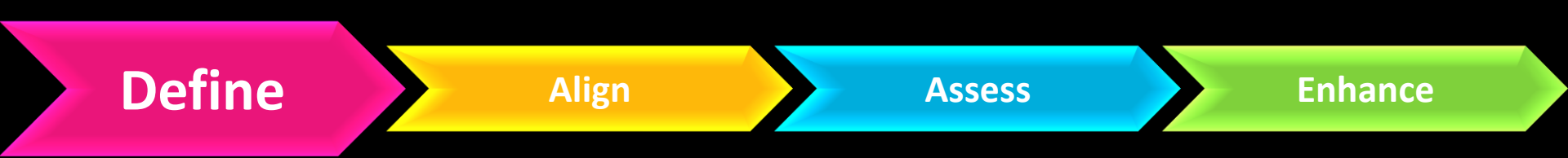
Assess

Enhance

Objectives
Teaching
Content

Outcomes
Learning
Application

How do we know what our students have learned?



Define

Align

Assess

Enhance

Learning Outcomes

- Action-oriented statements that indicate what students will know or be able to do after a sequence of learning (course or program)
- Developed collaboratively and holistically
- Foundation for all other elements of the assessment plan

Define

Align

Assess

Enhance

Studies in Contemporary Global Health

Learning Outcomes:

1. Examine the social determinants of health (social, physical, environmental, occupational) and the interrelationships between each factor.
2. Choose and demonstrate appropriate means of effective written and oral argumentation in a variety of contexts.



Define

Align

Assess

Enhance

We have program learning
outcomes defined...

Now what?

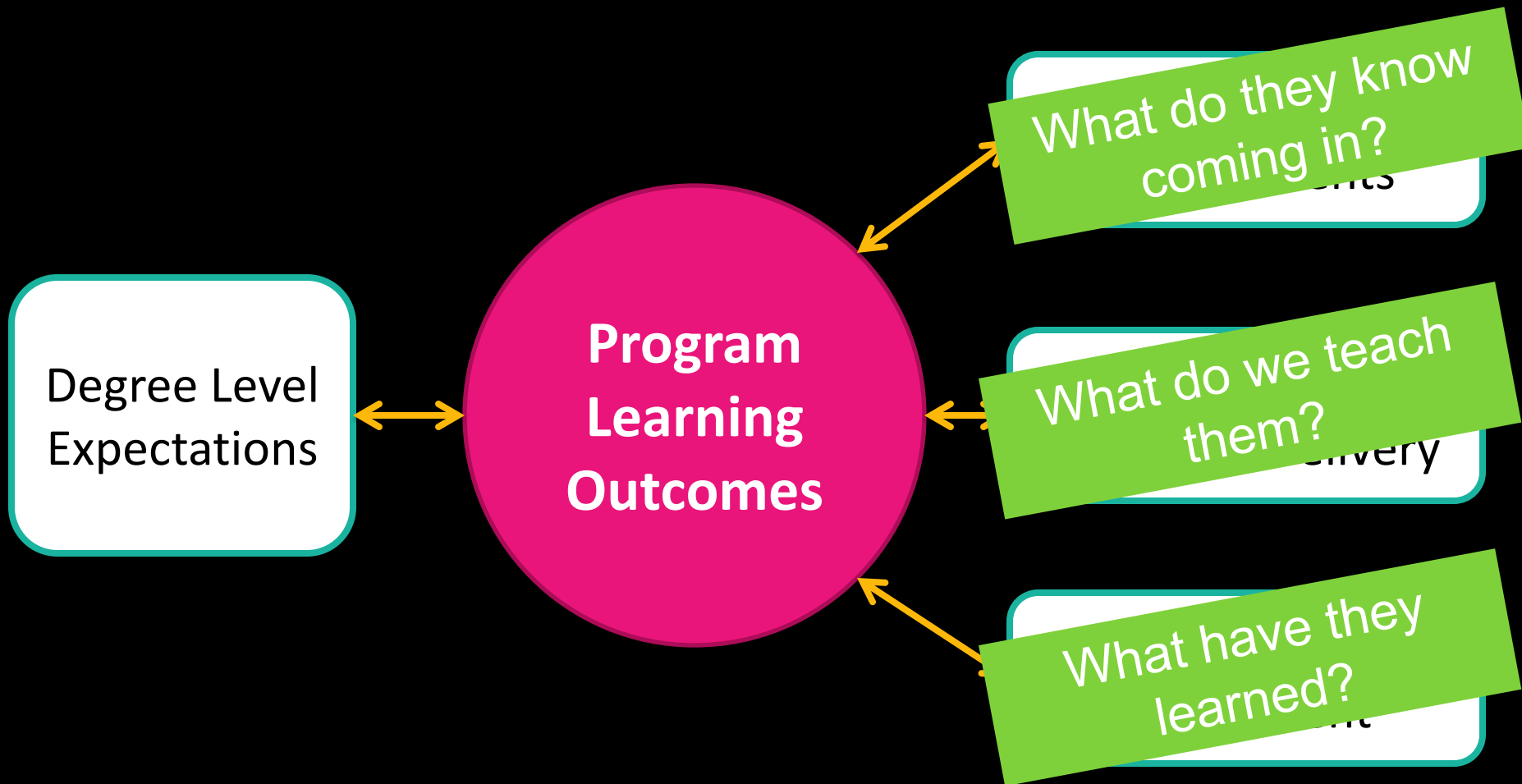
Define

ALIGN

Assess

Enhance

Quality Assurance Framework



Define

ALIGN

Assess

Enhance

Studies in Contemporary Global Health

Program Learning Outcomes	Degree Level Expectations
Examine the social determinants of health (social, physical, environmental, occupational) and the interrelationships between each factor.	
Choose and demonstrate appropriate means of effective written and oral argumentation in a variety of contexts.	

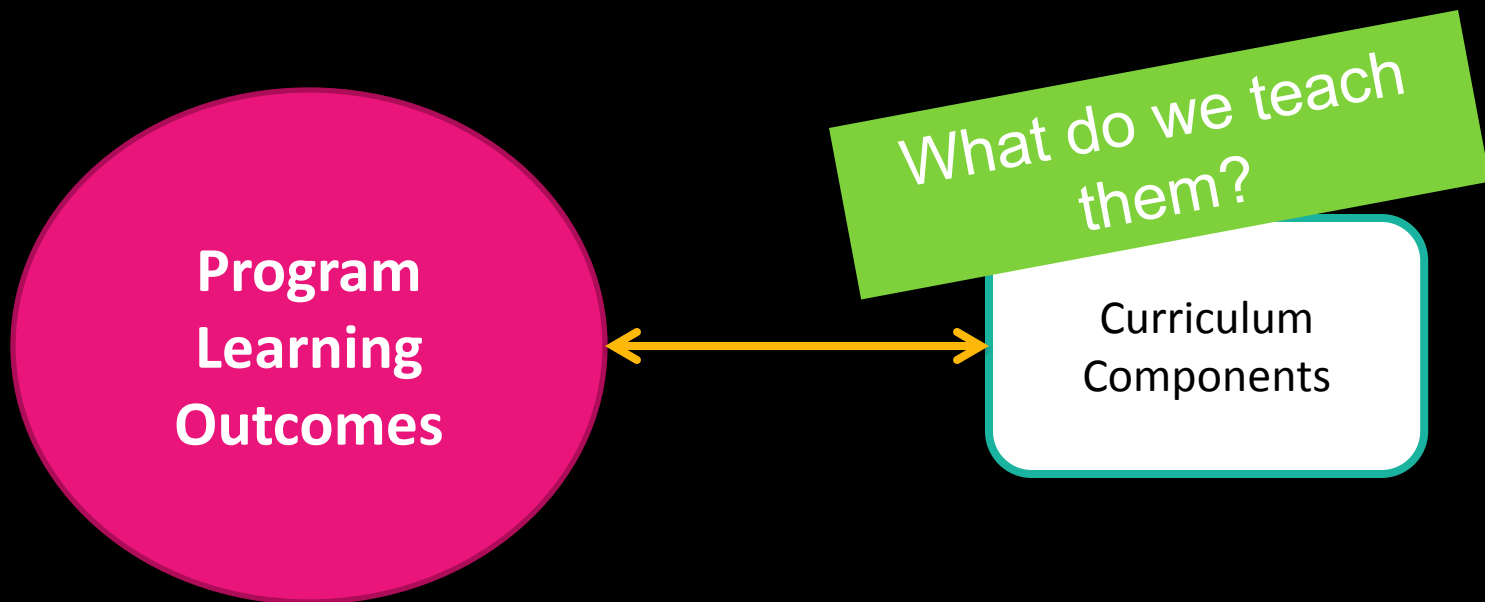
Define

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Assess

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Curriculum components are the courses, projects, theses, experiential and co-curricular learning opportunities that students are required to complete as part of their program.



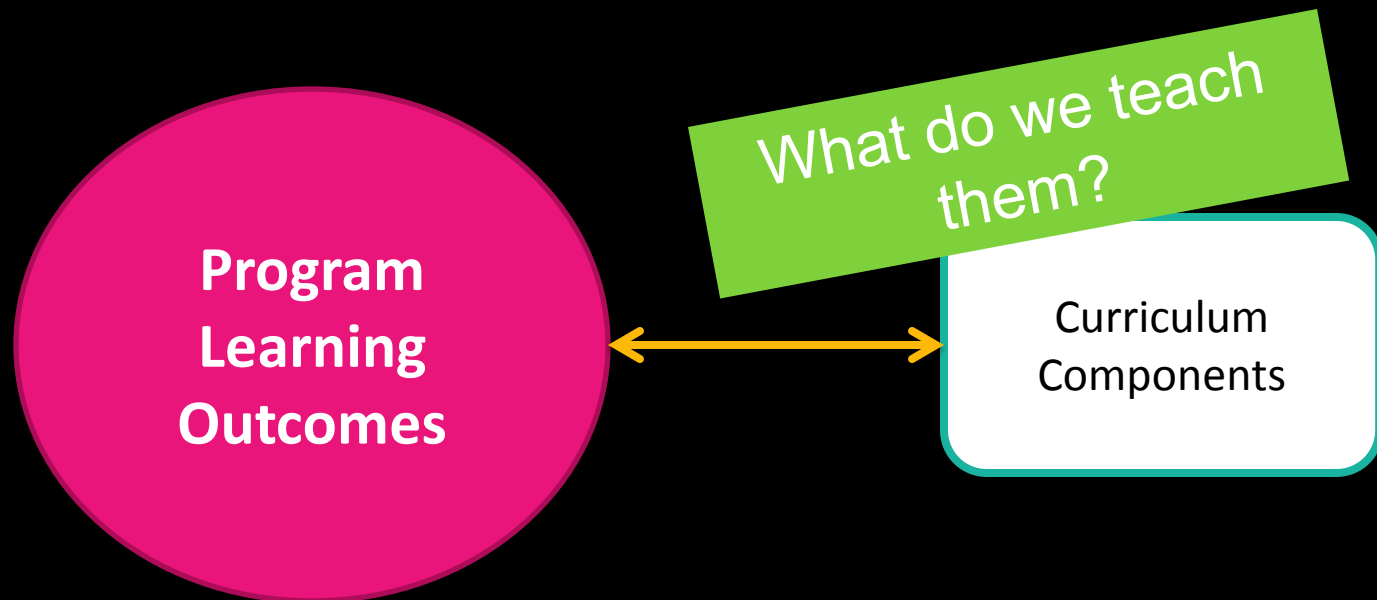
Define

ALIGN

Assess

Enhance

Curriculum mapping is a process whereby the contributions of each course or component are aligned with the program learning outcomes.



Define

ALIGN

Assess

Enhance

Program Level Learning Objectives

6 6 6 6 6 6 6
0 0 0 3 9 2 9
1 2 3 0 0 1 1

1. Depth and Breadth of Knowledge

- a. Understanding of the SJ/EJ and community engagement concepts x x x x x
- b. Awareness of opportunities and processes that lead to positive change. x x x

2. Research and Scholarship

- a. Identify and apply community-based research techniques. x x x x
- b. Evaluate the SJ/EJ literature as it applies to their research problem x x x x x
- c. Development of original written document/alternative project articulating research findings x x

3. Application of Knowledge

- a. Apply theoretical knowledge to community placement experience x
- b. Utilize community-based research approaches to assess research problems x x
- c. Influence SJ/EJ policy and/or facilitate positive community change x x

4. Autonomy and Professional Capacity

- a. Complete assigned tasks with maturity, independence and professionalism x x x x x x x
- b. Demonstrate accountability and commitment to community partners x
- c. Effectively consult and integrate multiple perspectives into research project x x x
- d. Demonstrate knowledge ethics x x x
- e. Awareness of relationship between their research problem and other SJ/EJ issues x x x

5. Awareness of Limits of Knowledge

- a. Recognize that knowledge is dynamic and evolutionary x x
- b. Understand mediation by personal experience within a social context x x x x x
- c. Disciplinary perspectives influence on tools, questions, resources, assumptions x x x x x
- d. Awareness of importance and complexity of interdisciplinary knowledge pursuit x x

6. Communication Skills

- a. Demonstrate the ability to communicate complex ideas clearly x x x x x x x
- b. Participate effectively in group/team settings x x x

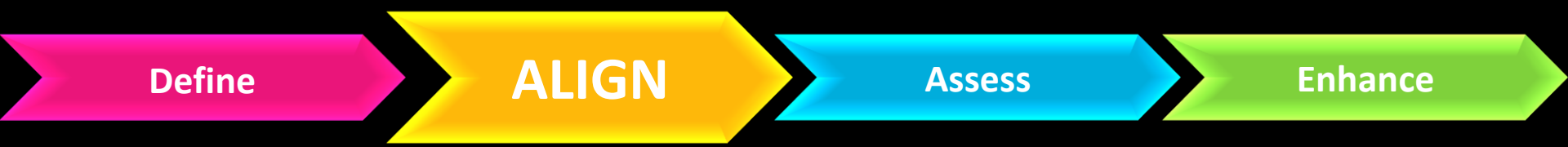
Define

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Assess

Enhance

Program Learning Outcomes	SY 101	SY 102	SY 203	SY 210	SY 280	SY 281	SY 382	SY 389	SY 4XX
Display a broad knowledge of the overall discipline of Sociology, and a detailed understanding of several of its major subfields.	I	R		R		R	R	R	R/M
Demonstrate an understanding of how culture, socialization, social situations, and social structure affect personal behaviour, ideas, choices and social opportunities.	I	R	R	R	R	R	R	R	R/M
Exhibit an awareness of social justice issues and the processes by which social inequality is generated, sustained, and potentially overcome (develop skills for reflexive action (praxis) geared towards transformative social justice).	I	I/R	R	R	R	R		R	R/M
Demonstrate an understanding of the major theoretical perspectives and debates in the discipline, both in terms of their historical development and their present-day formulations, and apply such perspectives to previously unanalyzed materials.	I	I	R	I/R	R	I/R	R	R	M
Access, interpret, and evaluate quantitative and qualitative data relevant to the social sciences.		I		R	I/M	I/R	I/R		M
Identify and distinguish the steps involved in carrying out quantitative research using survey skills.					I/M		I/R		
Design and be equipped to carry out qualitative research using such techniques as in-depth interviewing, participant observation, analysis of talk-in-interaction and focus group interviews.		I				I/R/M			R
Use statistical software to analyze and interpret survey results.							I/R		
Devise research questions and use library resources to identify and access relevant primary and secondary sources useful in answering them.		I	R	R	I	R			M
Produce and express coherent and persuasive written arguments (using relevant literature), with attention to academic integrity and a respect for diverse perspectives and disparate ideas.		I	R	R	I	R	R	R	M
Be able to present orally research findings to an audience of one's peers in a persuasive manner.		I		R	I	R	R	R	M



Define

ALIGN

Assess

Enhance

Studies in Contemporary Global Health

We worked with faculty in the program to determine how required curriculum components aligned with program learning outcomes.

Define

ALIGN

Assess

Enhance

Studies in Contemporary Global Health

Learning Outcomes	SCH 100	SCH 120	SCH 201	SCH 222	SCH 305	SCH 375	SCH 400	SCH 412	SCH 414
Examine the social determinants of health (social, physical, environmental, occupational) and the interrelationships between each factor.	I		R		R		M		
Choose and demonstrate appropriate means of effective written and oral argumentation in a variety of contexts.				R	I		M	M	M

Discuss and evaluate:

- Appropriateness of the alignment (between courses and learning outcomes)
- Progression of development
- Recommendations for modification



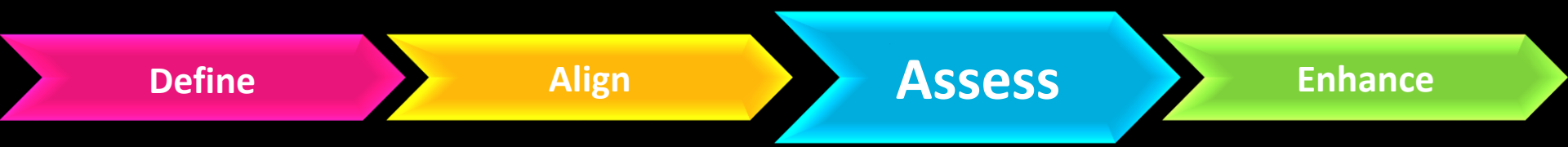
Define

Align

Assess

Enhance

That's as far as we got before the
program review...



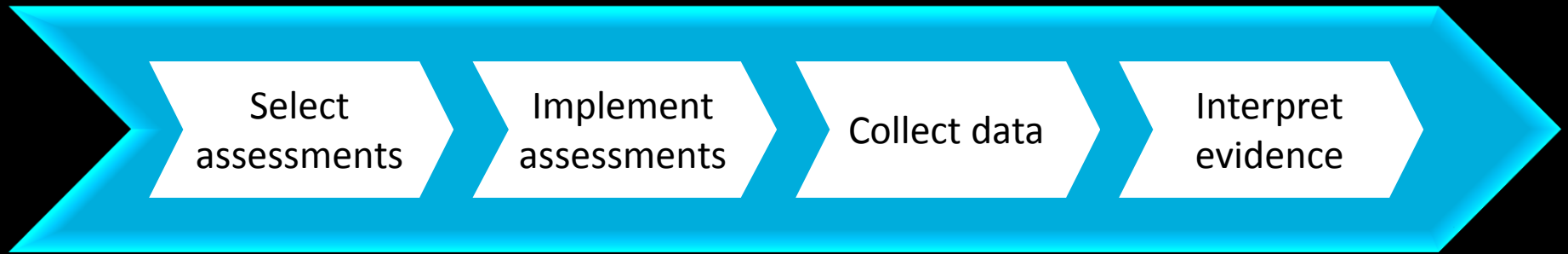
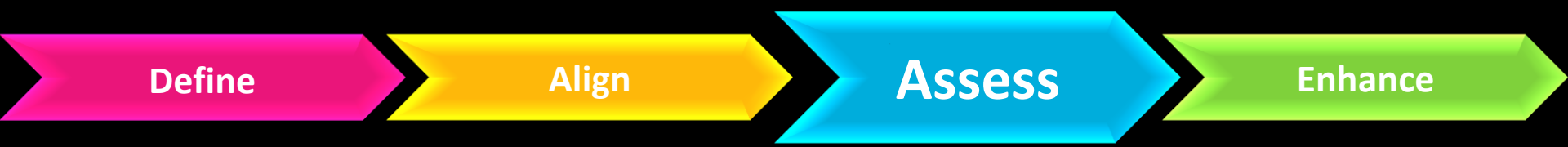
Define

Align

Assess

Enhance

Reviewers recommended the development of mechanisms for demonstrating achievement of the learning outcomes.



Define

Align

Assess

Enhance

Select assessments

Direct Assessments	Indirect Assessments
Assessments that require students to demonstrate their learning such that observers can determine how well they are meeting learning outcomes.	Assessments that imply the level or extent of learning or ascertain learner satisfaction or perception.
Examples may include: Course assignments, essays, term or capstone projects, lab experiments, portfolios, presentations, defenses, publications, theses, dissertations, exam questions, creative works.	Examples may include: surveys, questionnaires, interviews, focus groups.

What type of assessment is a final grade in a course?

Define

Align

Assess

Enhance

Studies in Contemporary Global Health

- **Select one program learning outcome**
- **Recommend TWO suitable course-embedded assessments that could be used to evaluate student achievement of that program learning outcome**

Define

Align

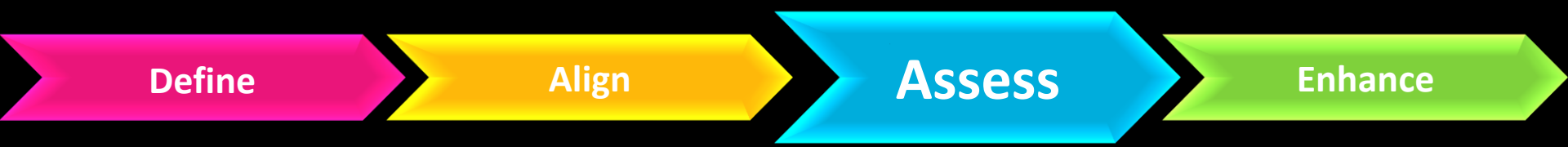
Assess

Enhance

Implement assessments

Questions to consider

1. How **frequently** should each learning outcome be assessed within the program?
2. What **level of achievement** would be acceptable or desired for the program to conclude that the learning outcome has been met or is developing appropriately?
3. **Who** needs to meet these targets (all students, random selection, representative sample, etc)?
4. How **often** should we collect this information? What is feasible?
5. **Who** should be responsible for collecting it? For analyzing it?



Define

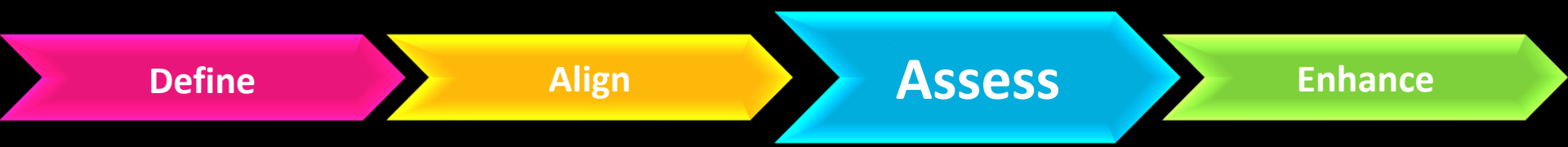
Align

Assess

Enhance

Studies in Contemporary Global Health

Discuss the ‘questions to consider’ for implementing assessments and add your ideas to the assessment plan.



Learning Outcome	Choose and demonstrate appropriate means of effective written and oral argumentation in a variety of contexts.
Achievement data (DIRECT evidence)	90% of students have met the B level performance target (presentation of research paper at student conference)
Student confidence data from alumni survey (INDIRECT evidence)	SA A N D SD Oral Written

Define

Align

Assess

Enhance

Collect Data

Interpret Results

Questions to consider

1. Based on the data collected, to what extent was the learning outcome achieved by students?
2. Is this level of achievement acceptable to the program?
3. What does student perception data add to this interpretation?

Define

Align

Assess

Enhance

Studies in Contemporary Global Health

Learning Outcome

Choose and demonstrate appropriate means of effective written and oral argumentation in a variety of contexts.

Achievement data
(DIRECT evidence)

90% of students have **met the B level** performance target
(presentation of research paper at student conference)

Student confidence data
from alumni survey
(INDIRECT evidence)



Define

Align

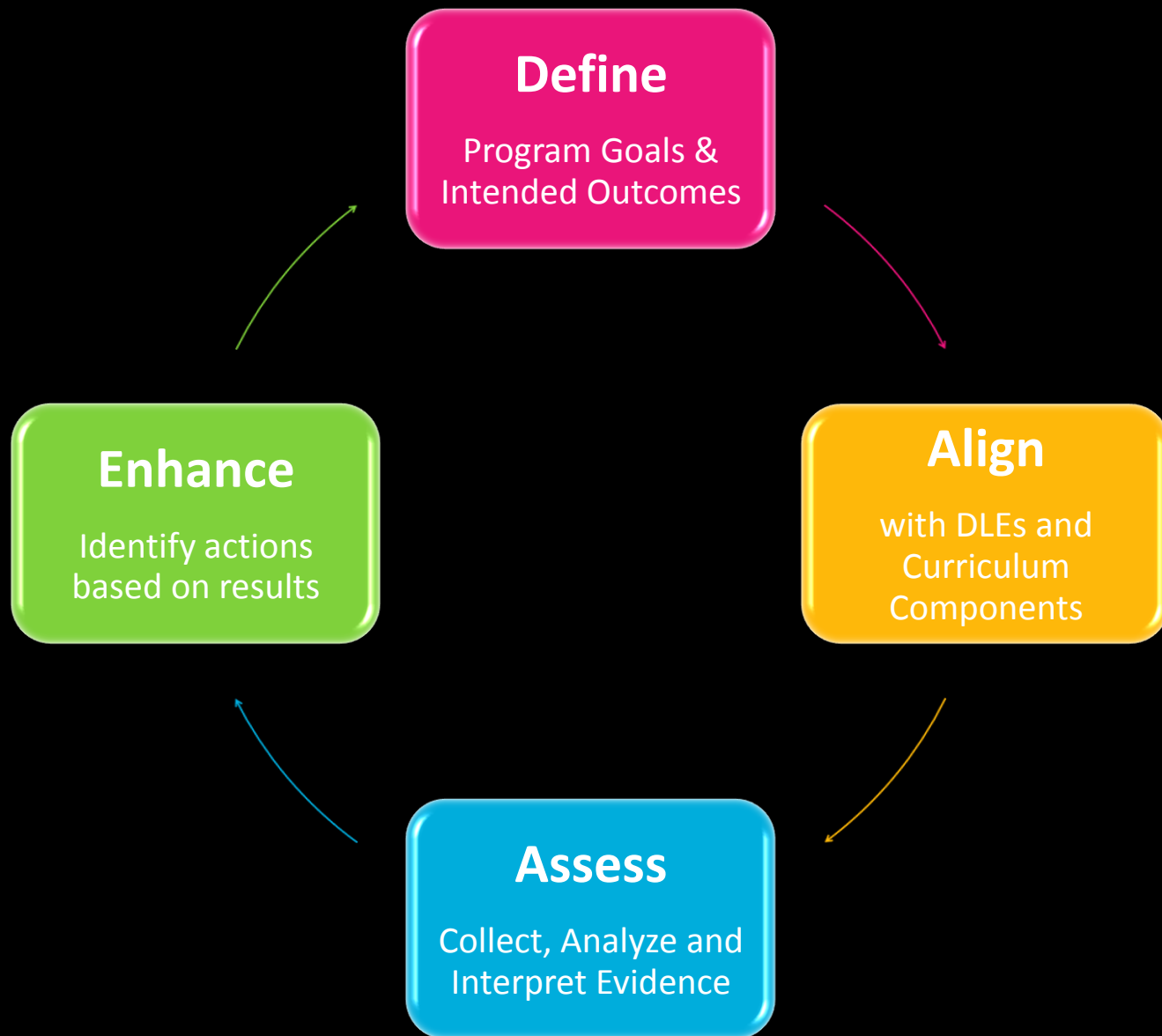
Assess

Enhance

Studies in Contemporary Global Health

Identify Areas for Improvement and Enhancement

- What changes would you want to make to the program based on the assessment results?
- What could or should be revised?
 - The learning outcome? The entrance requirements? The curriculum components? The methods of assessment? Other?





Assessment at your Institution

How can you make assessment
of learning outcomes both
manageable and meaningful?

Food for Thought

‘Cheshire Puss,’ she began, rather timidly, ... ‘Would you tell me, please, which way I ought to go from here?’

‘That depends a good deal on where you want to get to,’ said the Cat.

‘I don’t much care where ...’ said Alice.

‘Then it doesn’t matter which way you go,’ said the Cat.

‘...so long as I get *somewhere*,’ Alice added as an explanation.

‘Oh, you’re sure to do that,’ said the Cat, ‘if you only walk long enough.’

-Alice in Wonderland



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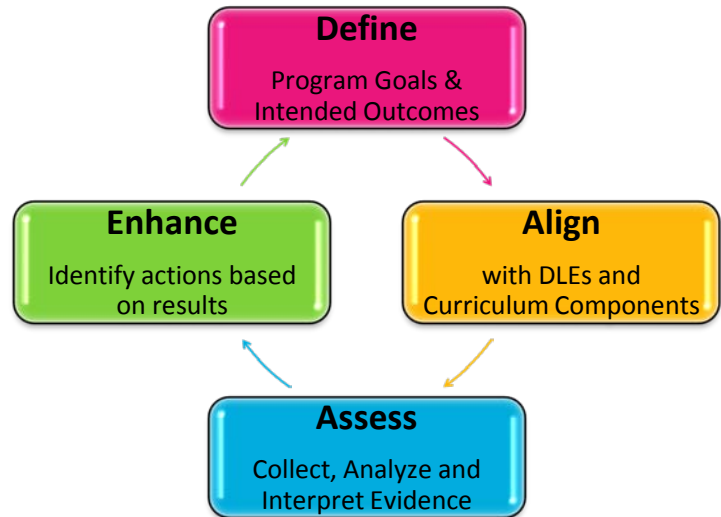
Teaching Support Services, Wilfrid Laurier University

What is Assessment?

Assessment can be defined in many ways, but for our purposes, assessment will be defined as the collection and use of evidence about student learning for purposes of program improvement.¹

The Assessment Cycle and Assessment Plan

While many representations of assessment cycles exist, the most consistent elements include a defining or planning stage, an alignment stage (that often includes a design or re-design phase), an assessment stage (that includes the collection and interpretation of data), and an enhancement stage whereby the goal is to use assessment results for program improvement. An assessment plan is a document that demonstrates the alignment between program outcomes and curriculum components with methods of assessment and other relevant information related to targets, schedules and responsibilities for collection and interpretation of evidence.



Shifting Perspectives

Program goals and teaching objectives have traditionally been the emphasis of our attention when thinking about program quality. In recent years, and in response to global trends in higher education, this emphasis has been shifting to students and their learning within the program. We are familiar with asking questions about the content that is covered and the expertise of the instructor. But now we are being asked to identify and document not only what our students know by the time they graduate, but also what they are able to do with this knowledge. *How do we know what our students have learned while they were enrolled in our programs?* Assessment is at the heart of the answer to this question.

Program Learning Outcomes

The Quality Assurance Framework, a guiding document of the Ontario Universities Council on Quality Assurance², requires that all university programs in Ontario develop program level learning outcomes. These are specific, measurable statements that indicate what the students in the program will know and will be able to do upon completion of the program. There are a variety of ways that you can work towards creating these statements, but ideally they are developed in a collaborative way involving broad departmental representation and a holistic view of the program. The Teaching & Learning centre at your institution will have the experience and resources to help guide your program through the development of learning outcome statements, and there are many benefits to bringing in objective facilitators with specific expertise in this area.

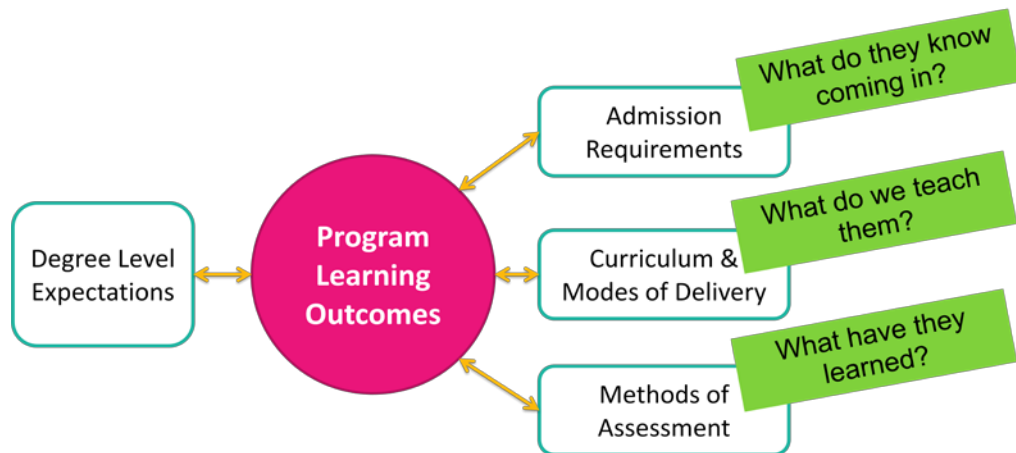
DEFINE

¹ Allen, M.J. (2004). *Assessing Academic Programs in Higher Education*. San Francisco, Anker.

² <http://www.cou.on.ca/quality>

Aligning Program Learning Outcomes

Once program learning outcomes are developed and articulated, these outcomes need to be aligned with the Degree Level Expectations for the appropriate degree (see Appendix A). The Degree Level Expectations are the academic standards for Ontario's universities. They are the threshold statements, or minimum expectations for recipients of Bachelor's, Honour's, Master's, and Doctoral degree within Ontario.



ACTIVITY A Using the assessment plan template in your handout and the Undergraduate Degree Level Expectations (Appendix A), align each of the two program learning outcomes for Studies in Contemporary Global Health with the appropriate UDLE categories.

For both program review purposes and the development of an assessment plan more broadly, the program learning outcomes should also be aligned with the curriculum components of the program; that is, the courses and other learning experiences (i.e. comprehensive examinations, practicums, theses) that are required components of students' experience in the program.

Curriculum Mapping

Curriculum mapping is a process by which the contributions of each course or curriculum component are aligned with the program outcomes in a visual form. This can be done using a variety of approaches, scales and tools, but the common goal of this stage is to demonstrate the relationship between the parts to the whole of the program and how the program learning outcomes are achieved across the curriculum. In order for students to be able to demonstrate mastery of learning outcomes, they must be given appropriate opportunities for development.

ACTIVITY B Using the curriculum map provided in the handout, discuss and evaluate the appropriateness of the alignment between the courses and learning outcomes, the progression of development of the outcomes across the curriculum, and any recommendations for modification.

Assessing Student Achievement

Learning outcomes and curriculum maps are only useful if they are implemented into the curriculum and if there is a mechanism put into place to evaluate whether or not the outcomes are being achieved by students. In this stage of the assessment cycle, assessments are defined, along with acceptable targets for achievement and schedules for evaluation of results. Data derived from assessment results allow a program to confirm what is working within the program as well as identify gaps in student learning. Keep in mind that this work may not need to be done from scratch and that programs should consider how assessment is already being done within the program.

Step 1: Select Assessments

Direct Assessments	Indirect Assessments
Assessments that require students to demonstrate their learning such that observers can determine how well they are meeting learning outcomes.	Assessments that imply the level or extent of learning or ascertain learner satisfaction or perception.
Examples may include: Course assignments, essays, term or capstone projects, lab experiments, portfolios, presentations, defenses, publications, theses, dissertations, some exam questions	Examples may include: surveys, questionnaires, interviews, focus groups.

ACTIVITY C Referring back to the curriculum map and assessment plan for Studies in Contemporary Global Health, select one program learning outcome and recommend two suitable assessments that could be used to evaluate student achievement of that outcome.

Selected program learning outcome:

Assessment 1:

Assessment 2:

Step 2: Implement Assessments

ACTIVITY D Using the assessments identified in Activity C, discuss the following questions related to the implementation stage in your groups.

1. How frequently in the curriculum should each learning outcome be assessed?
2. What level of achievement (target) would be acceptable or desired for the program to conclude that the learning outcome has been met or is developing appropriately?
3. Who needs to meet these targets (all students, random selection, representative sample, etc.)?
4. How often should we collect this information? What is feasible?
5. Who should be responsible for collecting it? For analyzing it?

Step 3: Collect Data and Interpret Results

ACTIVITY E Discuss the following questions related to the interpretation stage in your groups.

1. Based on the data collected, to what extent was the learning outcome achieved by students?
2. Is this level of achievement acceptable to the program?
3. What does student perception data (i.e. indirect assessment) add to this interpretation?

Enhancing the Program Based on Assessment Results (aka “Closing the Loop”)

After the data has been reviewed and interpreted, the task becomes identifying ways that the program can be enhanced or improved based on assessment results. This may involve refining the learning outcome(s), or selecting alternate methods of assessment, then repeating the assessment cycle to determine the impact of these modifications. Once satisfied that the learning outcome is adequately achieved by students, you can turn your attention to another learning outcome and repeat the cycle.

ACTIVITY F Discuss the following questions related to the enhancement stage in your groups.

1. What changes would you want to make to the program based on the assessment results?

2. What could or should be revised? The learning outcome? The entrance requirements? The curriculum components? The methods of assessment? Other?

Guiding Principles for Developing Assessment Plans

- Keep the improvement of student learning and program quality at the forefront of assessment activities
- Start with clearly articulated program learning outcomes
- Don’t allow assessment to be overwhelming; start small (e.g. choose one important outcome to focus on) and consider what is already being done within the program
- Keep assessment plans meaningful, yet manageable
- Use multiple measures (quantitative and qualitative, direct and indirect) to evaluate student achievement
- Involve students and other important program stakeholders in the assessment process

Suggested Resources

Allen, M.J. (2004). *Assessing academic programs in higher education*. San Francisco, Anker.

Driscoll, A., & Wood, S. (2007). *Developing outcomes-based assessment for learner-centred education*. Sterling, VA: Stylus.

Maki, P. (2010). *Assessing for learning: building a sustainable commitment across the institution*. Sterling, VA: Stylus.

Walvoord, B.E. (2010). *Assessment clear and simple: A practical guide for institutions, departments and general education*. San Francisco: Jossey-Bass.

Studies in Contemporary Global Health Curriculum Map

Program Learning Outcomes	Required Courses									
	SCH100 ³ Introduction to the Study of Global Health	SCH120 The Canadian Healthcare System	SCH201 Social Determinants of Health	SCH222 ⁴ Research in Health Studies	SCH305 Healthcare Systems in a Comparative Context	SCH375 Health Policy Development	SCH400 ⁵ Studies in Contemporary Global Health Issues	SCH412 ⁶ Global Health and Social Justice	SCH414 Environment and Health	
Examine the social determinants of health (social, physical, environmental, occupational) and the interrelationships between each factor.	I		R		R		M			
Choose and demonstrate appropriate means of effective written and oral argumentation in a variety of contexts.				R		I	M	M	M	

Legend:

I = Introduction (the learning outcome is introduced, assuming no or limited prior knowledge)

R= Reinforcement (the learning outcome is reinforced, assuming introduction in a previous course)

M = Mastery / Met (the knowledge or skills associated with this outcome are mastered or met within the context of an undergraduate degree, assuming introduction and reinforcement in previous courses / levels)

Notes:

³ SCH100 (Introduction the Study of Global Health) has a historical enrolment of approximately 350 students with no Teaching Assistant support for marking.

⁴ SCH222 (Research in Health Studies) Enrolment is capped at 75 with one graduate student for marking support.

⁵ SCH400 (Studies in Contemporary Global Health Issues) is designated as a capstone experience with an enrolment limit of 20.

⁶ Students are required to take either SCH412 or SCH414 in addition to SCH400.

Studies in Contemporary Global Health Assessment Plan

Program Learning Outcomes (PLO)	Which DLEs does this PLO address?	How do the program design and required curriculum components help students meet the learning outcomes?	What assessments provide evidence of learning outcome achievement?
<i>By the end of the program, the student should be able to:</i> Examine the social determinants of health (social, physical, environmental, occupational) and the interrelationships between each factor.			
<i>By the end of the program, the student should be able to:</i> Choose and demonstrate appropriate means of effective written and oral argumentation in a variety of contexts.			
<i>By the end of the program, the student should be able to:</i>			

APPENDIX A: UNDERGRADUATE DEGREE LEVEL EXPECTATIONS

	BACHELOR'S DEGREE <i>This degree is awarded to students who have demonstrated:</i>	BACHELOR'S DEGREE: HONOURS <i>This degree is awarded to students who have demonstrated:</i>
1. Depth and Breadth of Knowledge	a) General knowledge and understanding of many key concepts, methodologies, theoretical approaches and assumptions in a discipline b) Broad understanding of some of the major fields in a discipline, including, where appropriate, from an interdisciplinary perspective, and how the fields may intersect with fields in related disciplines c) Ability to gather, review, evaluate and interpret information relevant to one or more of the major fields in a discipline d) Some detailed knowledge in an area of the discipline e) Critical thinking and analytical skills inside and outside the discipline f) Ability to apply learning from one or more areas outside the discipline	a) Developed knowledge and critical understanding of the key concepts, methodologies, current advances, theoretical approaches and assumptions in a discipline overall, as well as in a specialized area of a discipline b) Developed understanding of many of the major fields in a discipline, including, where appropriate, from an interdisciplinary perspective, and how the fields may intersect with fields in related disciplines c) Developed ability to: i) gather, review, evaluate and interpret information; and ii) compare the merits of alternate hypotheses or creative options, relevant to one or more of the major fields in a discipline d) Developed, detailed knowledge of and experience in research in an area of the discipline e) Developed critical thinking and analytical skills inside and outside the discipline f) Ability to apply learning from one or more areas outside the discipline
2. Knowledge of Methodologies	An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to: a) evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques; and b) devise and sustain arguments or solve problems using these methods.	An understanding of methods of enquiry or creative activity, or both, in their primary area of study that enables the student to: a) evaluate the appropriateness of different approaches to solving problems using well established ideas and techniques; b) devise and sustain arguments or solve problems using these methods; and c) describe and comment upon particular aspects of current research or equivalent advanced scholarship.
3. Application of Knowledge	The ability to review, present, and interpret quantitative and qualitative information to: a) develop lines of argument; b) make sound judgments in accordance with the major theories, concepts and methods of the subject(s) of study; and The ability to use a basic range of established techniques to: a) analyze information; b) evaluate the appropriateness of different approaches to solving problems related to their area(s) of study; c) propose solutions; and d) make use of scholarly reviews and primary sources.	The ability to review, present and critically evaluate qualitative and quantitative information to: a) develop lines of argument; b) make sound judgments in accordance with the major theories, concepts and methods of the subject(s) of study; c) apply underlying concepts, principles, and techniques of analysis, both within and outside the discipline; d) where appropriate use this knowledge in the creative process; and The ability to use a range of established techniques to: a) initiate and undertake critical evaluation of arguments, assumptions, abstract concepts and information; b) propose solutions; c) frame appropriate questions for the purpose of solving a problem; d) solve a problem or create a new work; and e) to make critical use of scholarly reviews and primary sources.
4. Communication Skills	The ability to communicate accurately and reliably, orally and in writing to a range of audiences.	The ability to communicate information, arguments, and analyses accurately and reliably, orally and in writing to a range of audiences.
5. Awareness of Limits of Knowledge	An understanding of the limits to their own knowledge and how this might influence their analyses and interpretations.	An understanding of the limits to their own knowledge and ability, and an appreciation of the uncertainty, ambiguity and limits to knowledge and how this might influence analyses and interpretations.
6. Autonomy and Professional Capacity	Qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring: a) the exercise of personal responsibility and decision-making; b) working effectively with others; c) the ability to identify and address their own learning needs in changing circumstances and to select an appropriate program of further study; and d) behaviour consistent with academic integrity and social responsibility.	Qualities and transferable skills necessary for further study, employment, community involvement and other activities requiring: a) the exercise of initiative, personal responsibility and accountability in both personal and group contexts; b) working effectively with others; c) decision-making in complex contexts; d) the ability to manage their own learning in changing circumstances, both within and outside the discipline and to select an appropriate program of further study; e) and behaviour consistent with academic integrity and social responsibility.

GRADUATE DEGREE LEVEL EXPECTATIONS

	MASTER'S DEGREE <i>This degree is awarded to students who have demonstrated:</i>	DOCTORAL DEGREE <i>This degree extends the skills associated with the Master's degree and is awarded to students who have demonstrated:</i>
1. Depth and Breadth of Knowledge	A systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of the academic discipline, field of study, or area of professional practice.	A thorough understanding of a substantial body of knowledge that is at the forefront of their academic discipline or area of professional practice.
2. Research and Scholarship	A conceptual understanding and methodological competence that: i) Enables a working comprehension of how established techniques of research and inquiry are used to create and interpret knowledge in the discipline; ii) Enables a critical evaluation of current research and advanced research and scholarship in the discipline or area of professional competence, and iii) Enables a treatment of complex issues and judgments based on established principles and techniques; and, On the basis of that competence, has shown at least one of the following: i) The development and support of a sustained argument in written form, or ii) Originality in the application of knowledge.	a. The ability to conceptualize, design, and implement research for the generation of new knowledge, applications, or understanding at the forefront of the discipline, and to adjust the research design or methodology in the light of unforeseen problems; b. The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and c. The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication;
3. Application of Knowledge	Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.	The capacity to: i) Undertake pure and/or applied research at an advanced level; and ii) Contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials;
4. Communication Skills	The ability to communicate ideas, issues and conclusions clearly.	The ability to communicate complex and/or ambiguous ideas, issues and conclusions clearly and effectively.
5. Awareness of Limits of Knowledge	Cognizance of the complexity of knowledge and of the potential contributions of other interpretations, methods, and disciplines.	An appreciation of the limitations of one's own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods, and disciplines.
6. Autonomy and Professional Capacity	a. The qualities and transferable skills necessary for employment requiring i) The exercise of initiative and of personal responsibility and accountability; ii) Decision-making in complex situations; and b. The intellectual independence required for continuing professional development; c. The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; d. The ability to appreciate the broader implications of applying knowledge to particular contexts.	a. The qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in complex situations; b. The intellectual independence to be academically and professionally engaged and current; c. The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and d. The ability to evaluate the broader implications of applying knowledge to particular contexts.