Curriculum Mapping:
A Roadmap for Curriculum Coherence and Student Achievement

Southern Connecticut State University

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Agenda

I. What is Curriculum Mapping?

II. Steps in the Mapping Process

III. Analyzing and Interpreting Maps

IV. Hands-On Exercise

V. Lessons Learned / Tips for Success

VI. Questions / Discussion

I. What is Curriculum Mapping?

What is Curriculum Mapping?

- Curriculum Awareness
  - An ability of looking at programs in a holistic way – at a level beyond individual courses – and making sure that program curriculum provides appropriate conditions for student achievement of intended program learning outcomes.

(Palomba & Banta, 1999)

Key Questions

- "How does the institution ensure that its degree programs demonstrate coherence in sequencing, increasing complexity, and linkages between and among program components?"

- How can we document and demonstrate the coherence of program curricula to accreditors, students, parents, colleagues, and legislators?

Underlying Philosophy

- Program curriculum is a
  - Complex dynamic system with
    - Interdependent components that are
      - Intentionally positioned relative to each other to
        - » Facilitate student achievement of intended learning outcomes

Basic Program Curriculum Map

	Program Outcome 1	Program Outcome 2	Program Outcome 3	Program Outcome 4	Program Outcome 5	Program Outcome 6
Course 1	X		X		X	X
Course 2	X	X	X	X	X	
Course 3	X				X	X
Course 4		X				X
Course 5		X		X	X	
Course 6		X		X	X	
Course 7	X			X		X
Course 8					X	X
Course 9	X				X	
Course 10		X		X	X	X

What is a Curriculum Map? Descriptive Definition

- A curriculum map is a visual representation of the structure of program curriculum.

- The map charts program courses, syllabi, classroom activities, and assessments as they relate to the intended program learning outcomes.

What is a Curriculum Map: Metaphors

- "A structure for all to engage in *collective dialogue* about the curriculum, instruction, and students' learning" (Uchiyama & Radin, 2009, p. 273)
- Program specification that represents "a deliberate process of *curriculum deconstruction* in order to understand better how the sum of the parts relates to the whole" (Jackson, 2000, p. 144)
- Representation of the *underlying logic of curricular design* (Maki, 2004, p. 37)
- "*Study pathway* report" (Lowe & Marshall, 2004)

What is a Curriculum Map: Metaphors

- "The *intellectual linkage*, that makes forty courses a *story of learning*" (Plater, 1998, p.11)
- "*Orchestrating stages* in the skill development of students" (Huba & Freed, 2000)
- "[A]n *advance organizer*, that is a set of principles or propositions that provide [students with] a cognitive structure to guide the incorporation of new information" (Ambrose et al., 2010, p. 53).
- The *picture on a jigsaw puzzle* that guides students collecting the pieces of college experience on the path to graduation (King, 1999)

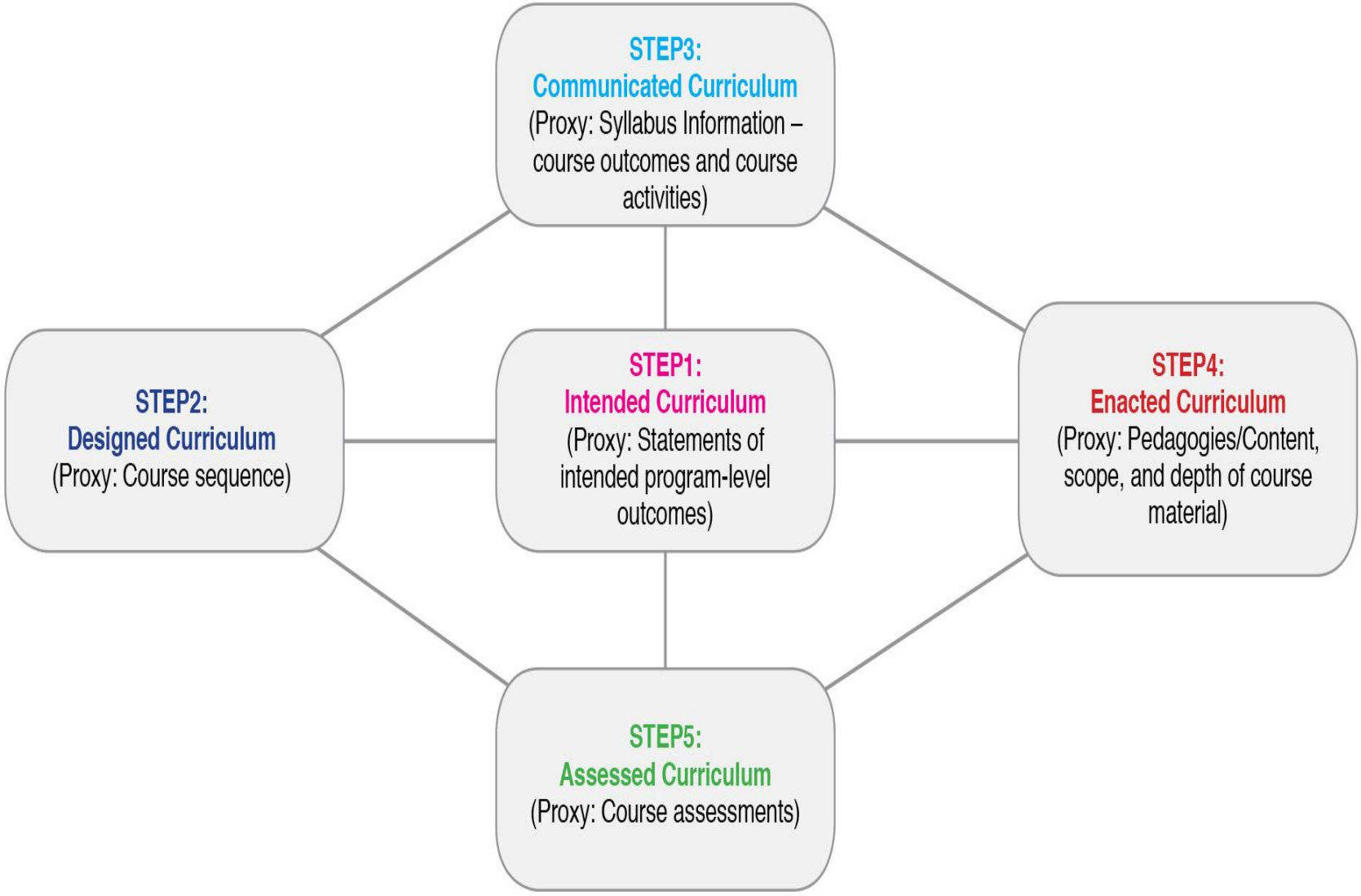
Types of Program Curriculum Maps

- Program Courses / Program Learning Outcomes
- Program Courses / General Education Competencies
- General Education Core Course / General Education Competencies

Why Engage in Curriculum Mapping?

- Offer “students more than just a course catalog, through comprehensive, personalized services to help them plan their careers and stay in school.” (President Barack Obama, 2009, American Graduation Initiative)

Conceptual Framework



II. Steps in the Mapping Process

Example: A. A. Arts Program

Curriculum Mapping
Data Collection Instrument

Two-dimensional data collection tool

- **Columns** (Program *Outcomes*)
  - Sub Columns (for each program outcome)

    I. Communication of Program Outcomes in the Course Syllabus

    II. Level of Instruction

    III. Assessment of Program Outcomes
- **Rows** (*Courses*)

Curriculum Mapping Data Collection Instrument: Conceptual Framework

- Program Outcomes ~ ***intended*** curriculum
- List of Courses ~ ***designed*** curriculum
  - Sub-column 1: Syllabus ~ ***communicated*** curriculum
  - Sub-column 2: Level of Instruction ~ ***enacted*** curriculum
  - Sub-column 3: Feedback ~ ***assessed*** curriculum

Curriculum Mapping Data Collection Steps

1. List program outcomes.
2. List program core courses.
3. Analyze course syllabi to determine alignment between course and program learning outcomes.
4. Make a professional judgment regarding the levels of instruction (I., E., R., A.)in the courses.
5. Analyze course syllabi and indicate whether students have opportunities to (i) demonstrate what has been learned for each program outcome and (ii) receive feedback in a formal way.

Curriculum Mapping Data Collection

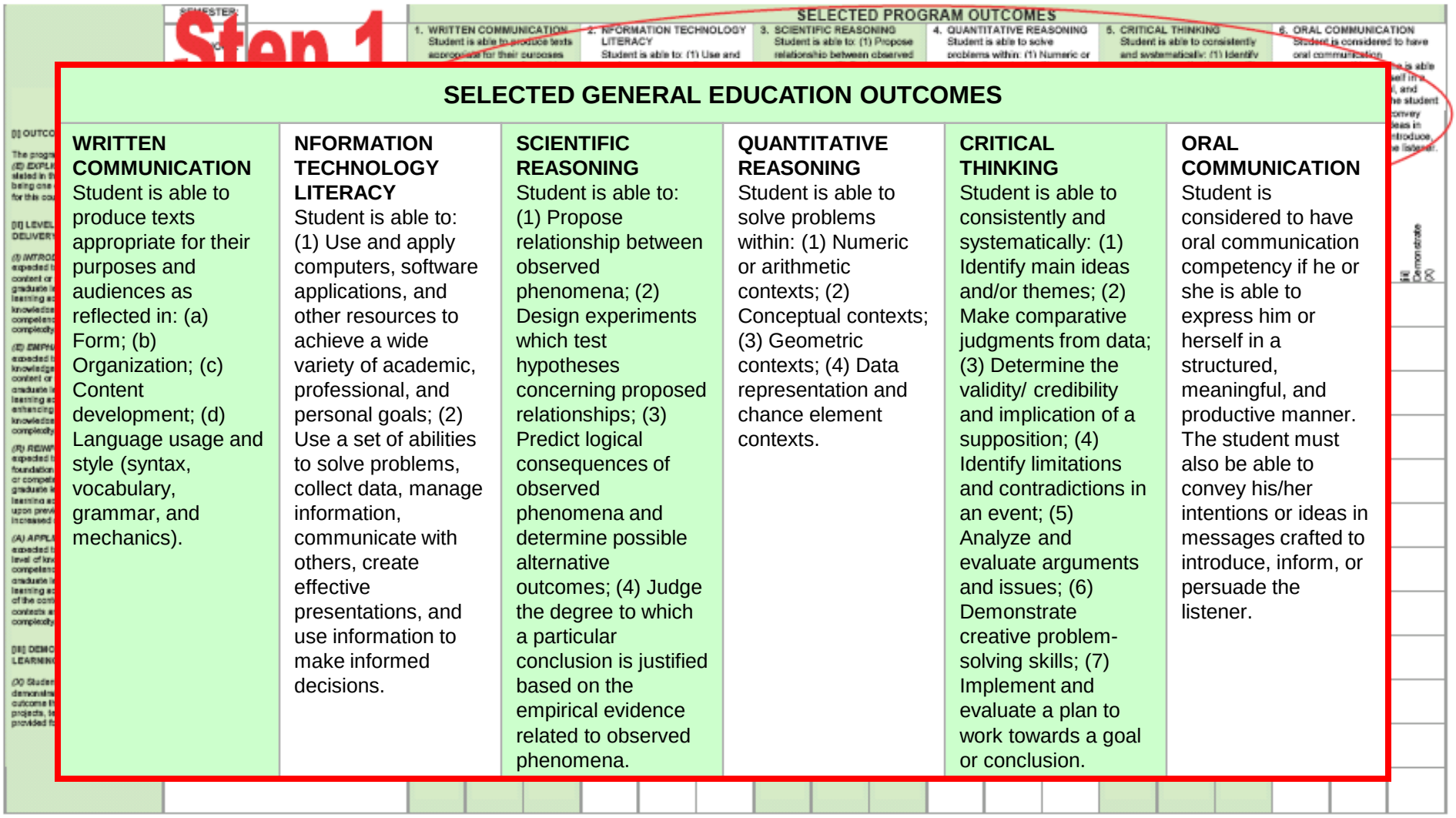
- The glue that holds together the components of the curriculum mapping process is faculty professional judgment and integrity.
  - "The institution places primary responsibility for the content, quality, and effectiveness of the curriculum with its faculty." (SACS CS 3.4.10)

Curriculum Mapping Process: STEP 1

STEP 1

Identify and list intended program learning outcomes in the top horizontal row (re: SACS CS 3.3.1.1 / 3.5.1, FR 4.2)

Curriculum Mapping Process



SELECTED GENERAL EDUCATION OUTCOMES

WRITTEN COMMUNICATION	NFORMATION TECHNOLOGY LITERACY	SCIENTIFIC REASONING	QUANTITATIVE REASONING	CRITICAL THINKING	ORAL COMMUNICATION
Student is able to produce texts appropriate for their purposes and audiences as reflected in: (a) Form; (b) Organization; (c) Content development; (d) Language usage and style (syntax, vocabulary, grammar, and mechanics).	Student is able to: (1) Use and apply computers, software applications, and other resources to achieve a wide variety of academic, professional, and personal goals; (2) Use a set of abilities to solve problems, collect data, manage information, communicate with others, create effective presentations, and use information to make informed decisions.	Student is able to: (1) Propose relationship between observed phenomena; (2) Design experiments which test hypotheses concerning proposed relationships; (3) Predict logical consequences of observed phenomena and determine possible alternative outcomes; (4) Judge the degree to which a particular conclusion is justified based on the empirical evidence related to observed phenomena.	Student is able to solve problems within: (1) Numeric or arithmetic contexts; (2) Conceptual contexts; (3) Geometric contexts; (4) Data representation and chance element contexts.	Student is able to consistently and systematically: (1) Identify main ideas and/or themes; (2) Make comparative judgments from data; (3) Determine the validity/ credibility and implication of a supposition; (4) Identify limitations and contradictions in an event; (5) Analyze and evaluate arguments and issues; (6) Demonstrate creative problem-solving skills; (7) Implement and evaluate a plan to work towards a goal or conclusion.	Student is considered to have oral communication competency if he or she is able to express him or herself in a structured, meaningful, and productive manner. The student must also be able to convey his/her intentions or ideas in messages crafted to introduce, inform, or persuade the listener.

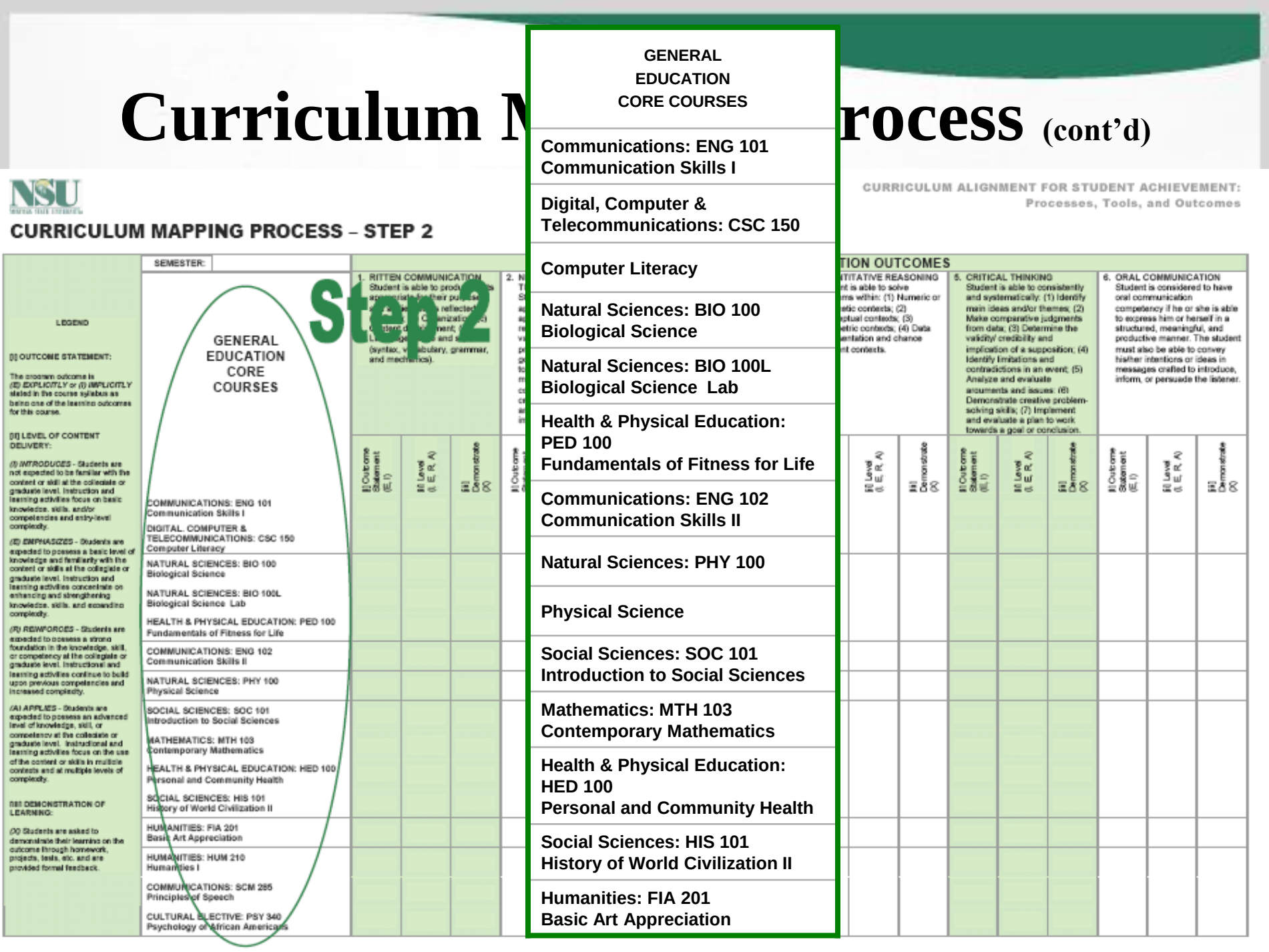
Curriculum Mapping Process: STEP 2

STEP 2

List program core (required) courses in the left vertical column (re: SACS CR 2.7.1; FR 4.4)

- In the order that a "typical" program major progresses through the program curriculum
- Most popular elective course in each distribution cluster can also be added (assumption: all courses in the given cluster similarly reflect given outcomes)

Curriculum M rocess (cont'd)



GENERAL EDUCATION CORE COURSES

- Communications: ENG 101 Communication Skills I
- Digital, Computer & Telecommunications: CSC 150
- Computer Literacy
- Natural Sciences: BIO 100 Biological Science
- Natural Sciences: BIO 100L Biological Science Lab
- Health & Physical Education: PED 100 Fundamentals of Fitness for Life
- Communications: ENG 102 Communication Skills II
- Natural Sciences: PHY 100
- Physical Science
- Social Sciences: SOC 101 Introduction to Social Sciences
- Mathematics: MTH 103 Contemporary Mathematics
- Health & Physical Education: HED 100 Personal and Community Health
- Social Sciences: HIS 101 History of World Civilization II
- Humanities: FIA 201 Basic Art Appreciation

Curriculum Mapping Process

STEPS 3, 4, 5

1. WRITTEN COMMUNICATION: Student is able to produce texts appropriate for their purposes and audiences as reflected in: (a) Form, (b) Organization, (c) Content development, and (d) Language usage and style (syntax, vocabulary, grammar, and mechanics).		
Outcome Statement (X, M) **STEP 3**	**Level of Instruction (I, E, R, A) STEP 4**	**Feedback and Assessment (F) STEP 5**

Curriculum Mapping Process: STEP 3

STEP 3

Analyze course syllabi and indicate whether each *program* outcome is e**X**plicitly or i**M**plicitly reflected in the *course* outcomes. (re: SACS FR 4.6)

Why Take Step 3?

- Syllabi are a proxy for *designed curricula*
- Cognitive science research
  - We must be sure that program outcomes are highlighted and stressed in both the overall program design and in each course (cf. Svinicki, 2004)
- Being fair to students
  - If we want our students to achieve intended outcomes, we must inform students about those outcomes

Curriculum Mapping Process: STEP 3

STEP 3

3.1 Review course syllabus to examine course outcomes in the context of program outcomes (to identify course outcomes related to the given program outcome)

3.2 Using professional judgment, determine the degree to which program outcomes are reflected among the course outcomes – eXplicit or iMplicit

Curriculum Mapping Process: STEP 3

STEP 3

Explicit -- *program* outcome that is fully and directly expressed or referenced in a *course* syllabus.

Implicit -- *program* outcome that is indirectly expressed or referenced in a *course* syllabus.

Course Outcome Statement: Example

(X) EXPLICIT

Program Outcome: Outcome 5/Problem-Solving – Scientific Reasoning

Course Outcome (HIST 1301):

"At the end of the course, students will be able to … describe how social scientists follow the scientific method to understand social phenomena…."

Course Outcome Statement: Example

(X) EXPLICIT

Program Outcome: Outcome 5 / Problem Solving – Critical Thinking

Course Outcome (CUST 2370):

You will find that studying civilization will enable you to:

1. highlight a variety of perceptions that people have held through the ages
2. show the options that individuals have used historically in making decisions and solving problems
4. understand relationships in time and space that are important for sound reasoning
5. illustrate with examples the roles of process, comparison and causation in history.

Course Outcome Statement: Example

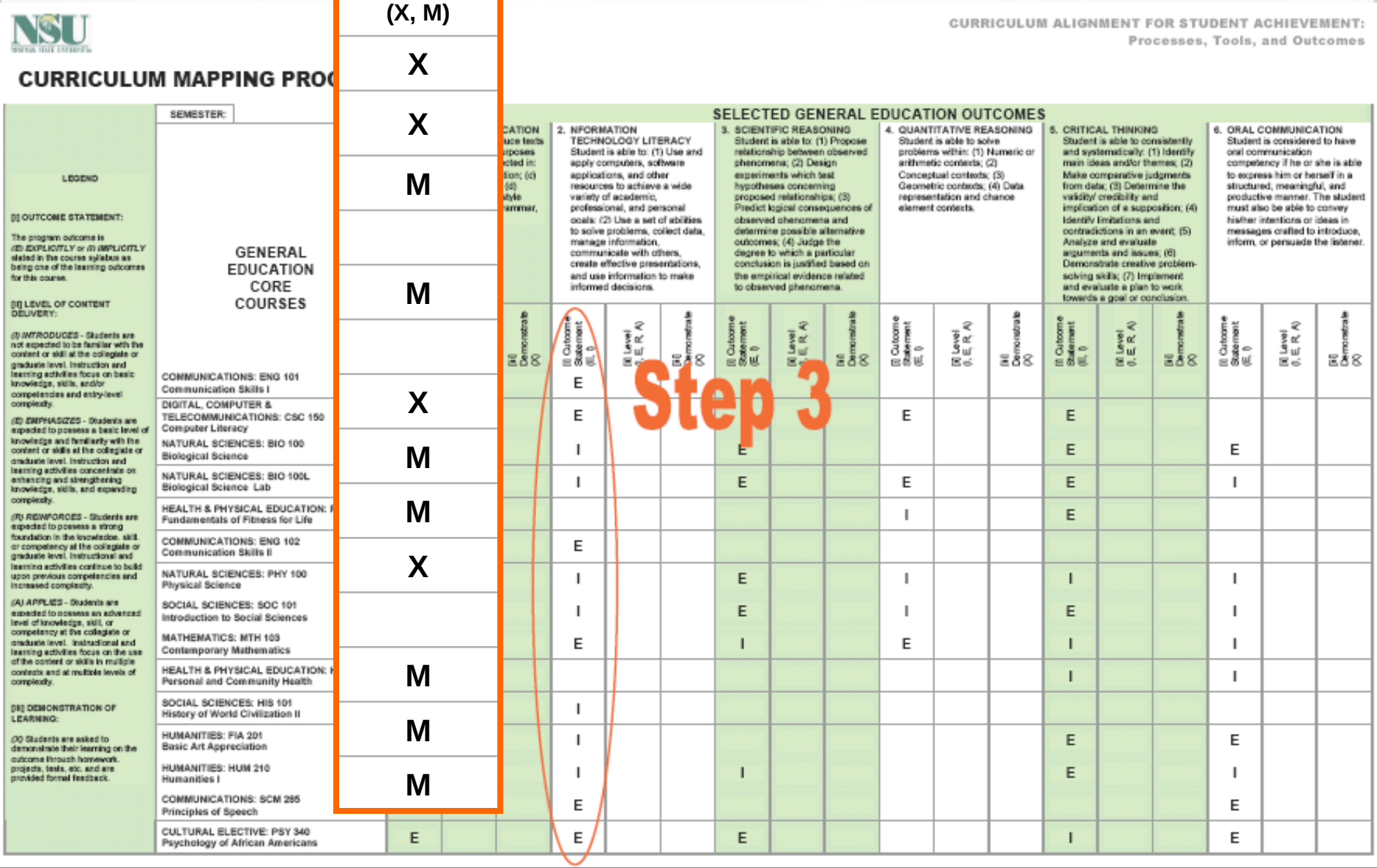
(M) IMPLICIT

Program Outcome: Outcome 1 -- Communication

Course Outcome (HIST 1302):

Students will be able to discuss the evolution of twentieth-century American foreign policy and the influences which have shaped those policies in order to develop historical viewpoints which they can articulate and defend.

Curriculum Mapping Process



NSU

CURRICULUM ALIGNMENT FOR STUDENT ACHIEVEMENT:
Processes, Tools, and Outcomes

CURRICULUM MAPPING PROC

SEMESTER:

LEGEND

[i] OUTCOME STATEMENT:

The program outcome is *(E) EXPLICITLY* or *(I) IMPLICITLY* stated in the course syllabus as being one of the learning outcomes for this course.

[ii] LEVEL OF CONTENT DELIVERY:

(I) INTRODUCES - Students are not expected to be familiar with the content or skill at the collegiate or graduate level. Instruction and learning activities focus on basic knowledge, skills, and/or competencies and entry-level complexity.

(E) EMPHASIZES - Students are expected to possess a basic level of knowledge and familiarity with the content or skills at the collegiate or graduate level. Instruction and learning activities concentrate on enhancing and strengthening knowledge, skills, and expanding complexity.

(R) REINFORCES - Students are expected to possess a strong foundation in the knowledge, skill, or competency at the collegiate or graduate level. Instructional and learning activities continue to build upon previous competencies and increased complexity.

(A) APPLIES - Students are expected to possess an advanced level of knowledge, skill, or competency at the collegiate or graduate level. Instructional and learning activities focus on the use of the content or skills in multiple contexts and at multiple levels of complexity.

[iii] DEMONSTRATION OF LEARNING:

(X) Students are asked to demonstrate their learning on the outcome through homework, projects, tests, etc. and are provided formal feedback.

GENERAL EDUCATION CORE COURSES	SELECTED GENERAL EDUCATION OUTCOMES																	
	2. INFORMATION TECHNOLOGY LITERACY Student is able to: (1) Use and apply computers, software applications, and other resources to achieve a wide variety of academic, professional, and personal goals; (2) Use a set of abilities to solve problems, collect data, manage information, communicate with others, create effective presentations, and use information to make informed decisions.			3. SCIENTIFIC REASONING Student is able to: (1) Propose relationship between observed phenomena; (2) Design experiments which test hypotheses concerning proposed relationships; (3) Predict logical consequences of observed phenomena and determine possible alternative outcomes; (4) Judge the degree to which a particular conclusion is justified based on the empirical evidence related to observed phenomena.			4. QUANTITATIVE REASONING Student is able to solve problems within: (1) Numeric or arithmetic contexts; (2) Conceptual contexts; (3) Geometric contexts; (4) Data representation and chance element contexts.			5. CRITICAL THINKING Student is able to consistently and systematically: (1) Identify main ideas and/or themes; (2) Make comparative judgments from data; (3) Determine the validity/ credibility and implication of a supposition; (4) Identify limitations and contradictions in an event; (5) Analyze and evaluate arguments and issues; (6) Demonstrate creative problem-solving skills; (7) Implement and evaluate a plan to work towards a goal or conclusion.			6. ORAL COMMUNICATION Student is considered to have oral communication competency if he or she is able to express him or herself in a structured, meaningful, and productive manner. The student must also be able to convey his/her intentions or ideas in messages crafted to introduce, inform, or persuade the listener.		
	[i] Outcome Statement (E, I)	[ii] Level (I, E, R, A)	[iii] Demonstrate (X)	[i] Outcome Statement (E, I)	[ii] Level (I, E, R, A)	[iii] Demonstrate (X)	[i] Outcome Statement (E, I)	[ii] Level (I, E, R, A)	[iii] Demonstrate (X)	[i] Outcome Statement (E, I)	[ii] Level (I, E, R, A)	[iii] Demonstrate (X)	[i] Outcome Statement (E, I)	[ii] Level (I, E, R, A)	[iii] Demonstrate (X)
COMMUNICATIONS: ENG 101 Communication Skills I	E																	
DIGITAL, COMPUTER & TELECOMMUNICATIONS: CSC 150 Computer Literacy	E						E			E			E					
NATURAL SCIENCES: BIO 100 Biological Science	I						E						E			E		
NATURAL SCIENCES: BIO 100L Biological Science Lab	I						E			E			E			I		
HEALTH & PHYSICAL EDUCATION: Fundamentals of Fitness for Life										I			E					
COMMUNICATIONS: ENG 102 Communication Skills II	E																	
NATURAL SCIENCES: PHY 100 Physical Science	I						E			I			I			I		
SOCIAL SCIENCES: SOC 101 Introduction to Social Sciences	I						E			I			E			I		
MATHEMATICS: MTH 103 Contemporary Mathematics	E						I			E			I			I		
HEALTH & PHYSICAL EDUCATION: Personal and Community Health													I			I		
SOCIAL SCIENCES: HIS 101 History of World Civilization II	I																	
HUMANITIES: FIA 201 Basic Art Appreciation	I												E			E		
HUMANITIES: HUM 210 Humanities I	I						I						E			I		
COMMUNICATIONS: SCM 285 Principles of Speech	E															E		
CULTURAL ELECTIVE: PSY 340 Psychology of African Americans	E			E			E						I			E		

Curriculum Mapping Process: STEP 4

STEP 4

Make *professional judgments* and indicate whether each program outcome is **I**ntroduced, **E**mphasized, **R**einforced, or **A**dvanced in the course. (re: SACS CR 2.7.2/2.7.3)

******See Handout: Rubric***

- **Levels/Codes can be modified!**
  - Many institutions merge E and R levels

Why Take Step 4?

- Proxy for *enacted curriculum*
  - "[Enacted] curriculum is behavioral, and may vary significantly across classrooms and from original design specification" (Ewell, 1997, p. 613).
- Integrative Learning
  - Development of integrative thinkers who "can see connections in seemingly disparate information and draw on a wide range of knowledge to make decisions. They adapt the skills learned in one situation to problems encountered in another" (AAC&U, 2002, pp. 21).

Why Take Step 4?

- Developmental nature of learning
  - Developmental perspective "manifests a logical order – an order in which one form leads to another through differentiations and reorganizations required for the meaningful interpretation of increasingly complex experience" (Perry, 1970, p. 3).
  - The first step that educators need to take to effectively help students to achieve core learning outcomes "is to understand the developmental foundation that makes achievement of these outcomes possible" (Baxter Magolda & King, 2007, p. 491).

Why Take Step 4?

- Developmental nature of learning
  - Awareness of Prior Knowledge
    - What students "bring to the class will determine to a great extent what they take from it" (Svinicki, 2004, p. 223).
    - "Few faculty members are aware of what their entering students already know about the subject, and as a consequence they cannot be sure that the assumptions they make about their students are accurate. We more commonly overestimate skills, prior knowledge, and competencies than underestimate them" (Diamond, 2008, p.96).

General Factors Defining Levels of Instruction

1. Student readiness level

2. Instruction and learning activities

3. Scope of outcome coverage

Level of Instruction: Introduced

(I) STUDENTS ARE INTRODUCED TO CONTENT/SKILL

1. Students are not expected to be familiar with the content or skill at the collegiate level.

2. Instruction and learning activities focus on basic knowledge, skills, and/or competencies and entry-level complexity.

3. Only one or a few aspects of a complex program outcome is addressed in the given course.

Level of Instruction: Emphasized

(E) THE CONTENT / SKILL IS EMPHASIZED AND TAUGHT IN DEPTH

1. Students are expected to possess a basic level of knowledge and familiarity with the content or skills at the collegiate level.

2. Instruction and learning activities concentrate on enhancing and strengthening knowledge, skills, and expanding complexity.

3. Several aspects of the outcome are addressed in the given course, but these aspects are treated separately.

Level of Instruction: Reinforced

(R) THE CONTENT/SKILL IS REINFORCED WITH ADDITIONAL EXPOSURE TO THE INFORMATION

1. Students are expected to possess a strong foundation in the knowledge, skill, or competency at the collegiate level.

2. Instructional and learning activities continue to build upon previous competencies and increased complexity.

3. All components of the outcome are addressed in the integrative contexts.

Level of Instruction: Advanced

(A) THE CONTENT / SKILLS ARE ADVANCED and APPLIED IN MULTIPLE CONTEXTS

1. Students are expected to possess an advanced level of knowledge, skill, or competency at the collegiate level.

2. Instructional and learning activities focus on the use of the content or skills in multiple contexts and at multiple levels of complexity.

3. Outcome is applied in all of its complexity across multiple contexts or is turned reflexively on oneself.

STEP 4 *: Course Mapping Worksheet

to facilitate I,E,R,A decisions

*(*Optional)*

***See Rubric

Curriculum Mapping Proce… ’d)

[ii] Level (I, E, R, A)
R
A
A
E
R
A
I

CURRICULUM … ENT ACHIEVEMENT:
…ools, and Outcomes

CURRICULUM MAPPING PROCESS STEPS – STEP 4

SEMESTER:

LEGEND

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COMMUNICATIONS: ENG 101 Communication Skills I		R			R													
DIGITAL, COMPUTER & TELECOMMUNICATIONS: CSC 150 Computer Literacy					E						R							
NATURAL SCIENCES: BIO 100 Biological Science		A			A			R									A	
NATURAL SCIENCES: BIO 100L Biological Science Lab		A			R			A			A						R	
HEALTH & PHYSICAL EDUCATION: PED 100 Fundamentals of Fitness for Life		E									A							
COMMUNICATIONS: ENG 102 Communication Skills II		A			A													
NATURAL SCIENCES: PHY 100 Physical Science		R			E			I			E						R	
SOCIAL SCIENCES: SOC 101 Introduction to Social Sciences		R			E			I			R						R	
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HEALTH & PHYSICAL EDUCATION: HED 100 Personal and Community Health		R			A						I						E	
SOCIAL SCIENCES: HIS 101 History of World Civilization II		A			I													
HUMANITIES: FIA 201 Basic Art Appreciation		I			I												I	
HUMANITIES: HUM 210 Humanities I		E			A			R									E	
COMMUNICATIONS: SCM 285 Principles of Speech		R			R												A	
CULTURAL ELECTIVE: PSY 340 Psychology of African Americans		A			A			A						A			A	

Step 4

Curriculum Mapping Process: STEP 5

STEP 5

- **Analyze** course syllabi. Indicate (***F***) if students have opportunities to (i) demonstrate what has been learned on each program outcome and (ii) receive feedback in a formal way. (re: SACS CS 3.3.1.1/3.5.1)

Why Take Step 5?

- Assessed curriculum
  - "From our students' point of view, assessment always defines the actual curriculum" (Ramsden in Biggs & Tang, 2007, p. 169).
- Effective learning requires systematic feedback
  - Repeated testing better than repeated study for understanding and retention (Roediger & Karpicke, 2006)
- Identify *courses* to embed *program* outcomes assessment (re: SACS CS 3.3.1.1)
  - Keep program assessment focused and manageable

Demonstration and Formal Feedback: Example

(*F*) Program Outcome 1 (Communication/Writing Competency)

Course (HIST 1302) syllabus:

"Students must complete at least three critiques of assigned scholarly articles. These critiques should be 4-5 pages, typed and double-spaced. They should have an introduction, thesis statement, body, and conclusion. Poor usage and spelling will reduce your grade. Please proofread your work!"

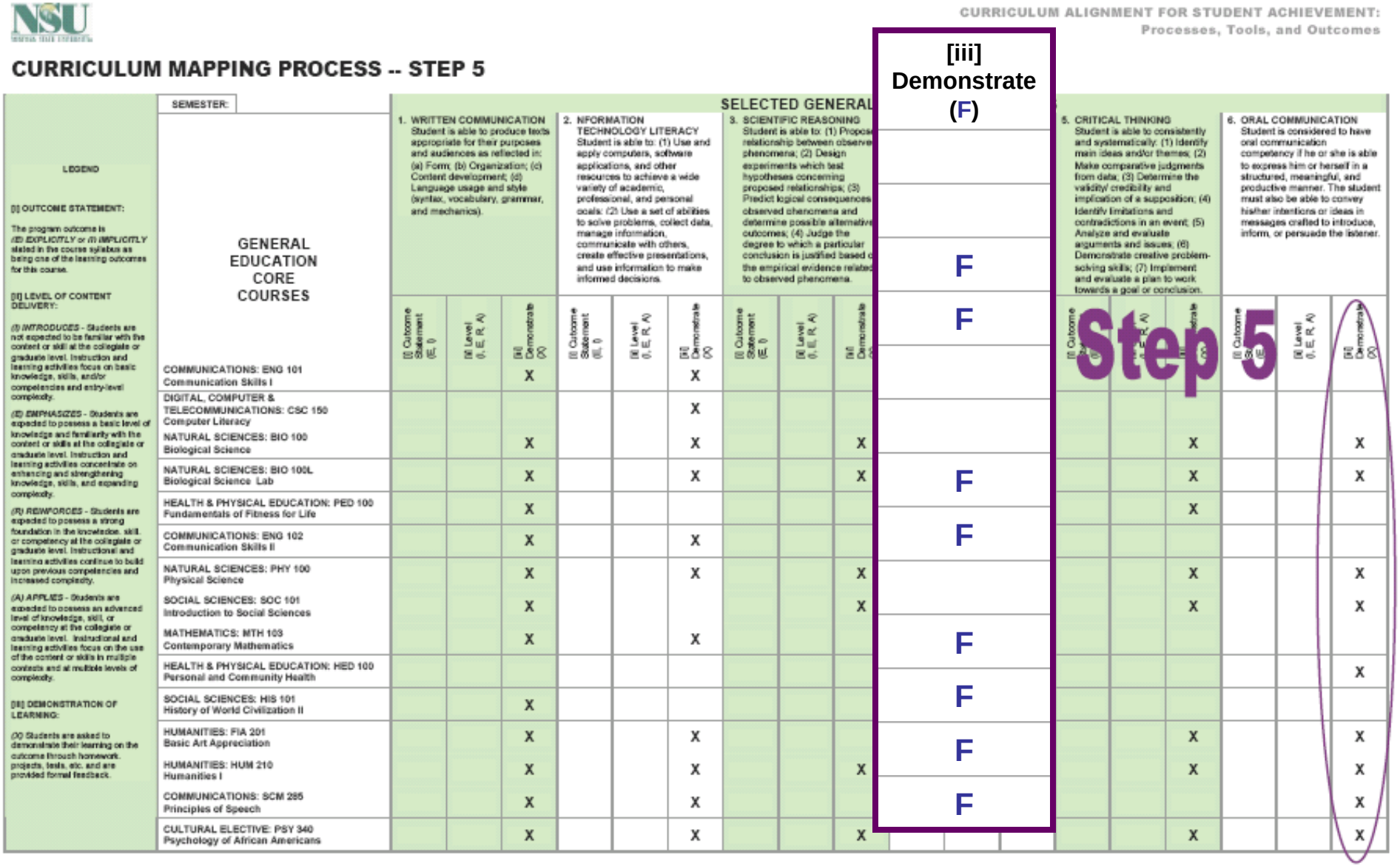
Demonstration and Formal Feedback: Example

( ) Program Outcome 1 (Communication/ Writing Competency)

Course (PE 1164) syllabus:

"There is one (1) article each student is expected to read, in addition to reading assignments from the text, and to write a critical review."

Curriculum Mapping Process



* *Quantitative Indicators*

(* Optional)

HANDOUT: Curriculum Mapping Steps

* Quantitative Indicators *(Optional)*

(i) Outcome Communication score

(ii) Outcome Saturation score

(iii) Outcome Feedback Points score

(iv) Course Breadth score

(v) Course Depth score

(vi) Course Assessment Focus score

* Quantitative Indicators: A Word of Caution

- Facilitate comparative analyses (not benchmarking) *within* the program
  - Scores
  - Indices
- "Although one can say that the larger the value of the index, the better the alignment, there is still no easy way to think about how big the alignment index must be to be considered 'good' " (Porter, 2002, p. 6).

III. Analyzing and Interpreting Maps

HANDOUTS

B.S., Management Information Systems

Guide for Analysis and Interpretation of Maps

* Exercise

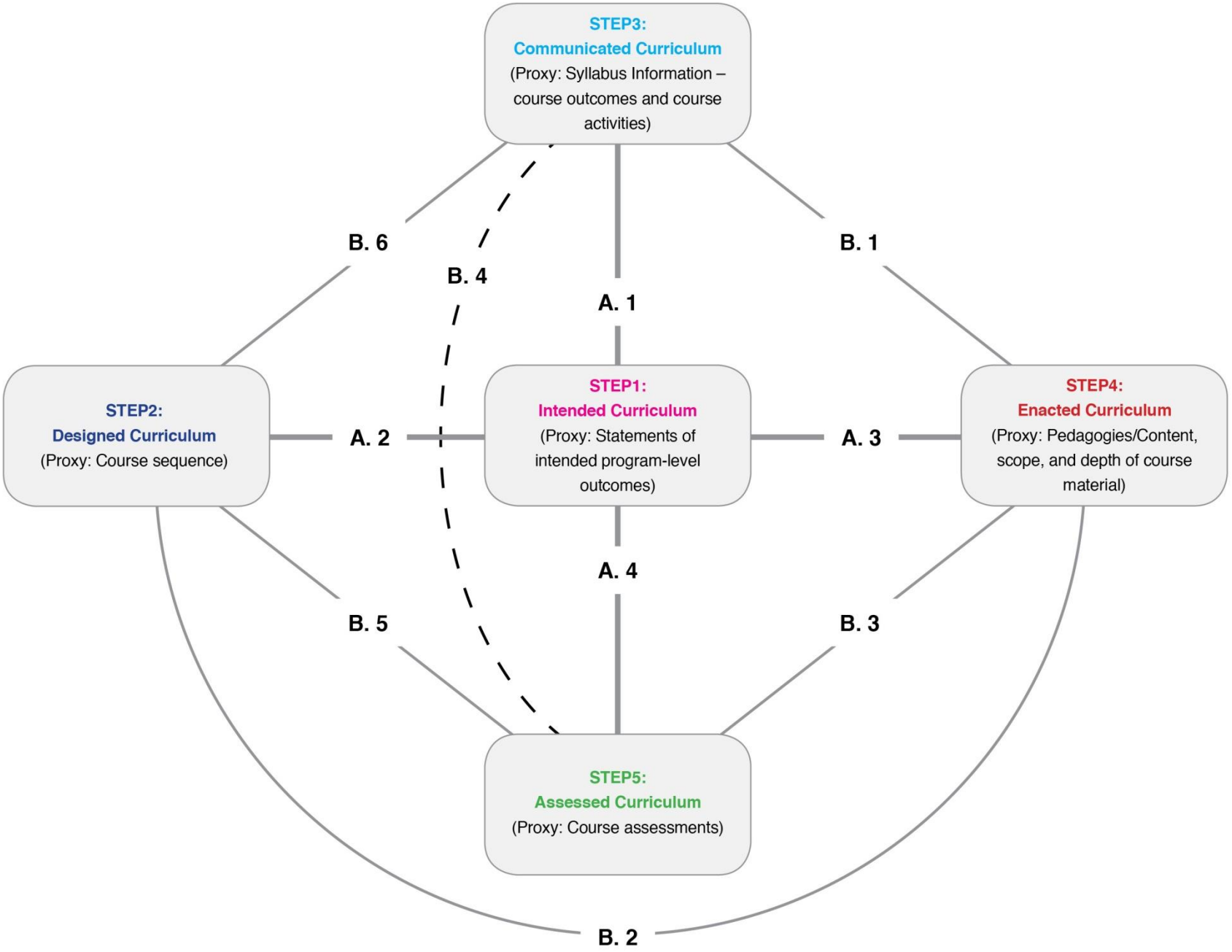
- Reflect on the sample general education outcomes map provided.

- *What does the map tell you about the coherence of the hypothetical BS in MIS curriculum?*
- *Does this BS in MIS curriculum effectively afford the development of the intended institutional outcomes?*

Structured Analysis of Curriculum Map Data

HANDOUT

Guide for Analysis and Interpretation of Curriculum Maps


STEP3:
Communicated Curriculum
(Proxy: Syllabus Information – course outcomes and course activities)
B. 6
B. 4
A. 1
B. 1
STEP2:
Designed Curriculum
(Proxy: Course sequence)
A. 2
STEP1:
Intended Curriculum
(Proxy: Statements of intended program-level outcomes)
A. 3
STEP4:
Enacted Curriculum
(Proxy: Pedagogies/Content, scope, and depth of course material)
A. 4
B. 5
B. 3
STEP5:
Assessed Curriculum
(Proxy: Course assessments)
B. 2

Interpretation of Maps

- Curriculum Mapping is a *tool* to stimulate reflection and discussion.
  - Curriculum coherence can be defined "as the extent to which students and faculty find meaning in the curriculum" (Johnson & Ratcliff, p. 93).
- Results of a curriculum mapping analysis are not *"information for action."* They are *"food for thought and discussion"* as we align curricula for student achievement and success.

Interpretation of Maps

- Curriculum mapping provides a tool not only to *stimulate* thinking, it is also designed to help academics *organize* thinking about program curricula.

- "It is the interpretations of events (or constructs) within a *structured 'meaning making' environment* whereby learning can occur" (Sutherland & Katz, 2005, p. 257; emphasis added).

IV. Hands-On Exercise

Holistic Analysis of Curriculum Maps

1. Are statements of intended program outcomes well-articulated?
2. Do students receive appropriate syllabus guidance?
3. Do students have sufficient learning opportunities to develop program outcomes?
4. Is content organized in a logical manner to reflect increasing progression ?
5. Do courses provide students with opportunities to integrate program learning outcomes?
6. Are students provided with feedback on their progress to achieving intended program learning outcomes?

V. Lessons Learned / Tips for Success

Tips for Success

1. Ensure that all degree programs have well-developed statements of intended learning outcomes

2. Conduct syllabi review

   - Common format

Tips for Success

3. Develop clear procedures for the curriculum mapping process
   - Program faculty collectively select courses to be mapped
   - Faculty members individually complete the map for the courses they teach
     - If several faculty members teach the same course, then they might choose to work collectively. Alternatively, course coordinator can complete the map for the course.
   - Program coordinator or department head compiles the program map
   - Faculty collectively analyze and interpret the program curriculum map

Tips for Success

4. Design or adapt a user-friendly data collection tool
   - simple and straightforward to use;
   - require a minimum of background reading in order to be completed;
   - cover the core learning outcomes;
   - indicate whether explicit learner support is provided and whether the outcome is assessed; and
   - provide the facility to demonstrate students' progression in outcomes attainment over time

(Tariq et al. 2004)

Tips for Success

5. Educate faculty about the curriculum mapping concept
   - Understandings
   - Behaviors
   - Attitudes

Tips for Success

6. Consider developing Program Map *Portfolio*
   - To verify and confirm the information presented on the curriculum map,
   - To create a repository of materials supporting subsequent planning, assessment, and reporting activities, and
   - To document the substantial time and effort faculty and staff invest in developing and delivering courses.

Next Steps

- Student-led curriculum mapping (Romkey & Bradbury, 2007)
- Web-based, database-backed mapping system
- Mapping of co-curricular areas

Conclusion / Final Thoughts

- "…[C]ollege is meaningless without a curriculum, but it is more so when it has one that is meaningless." (Van Doren, 1943, quoted from Birnbaum, 2004, p. 118).
- "Thinking about the curriculum . . . [r]equires a willingness to accept surprise, ambiguity, and a certain unavoidable messiness. If the world does not always make sense, why should the curriculum?" (Rudolph, 1977 quoted from Birnbaum, 2004, p. 120.)

Conclusion / Final Thoughts

"To map learning is also to affirm the possibility of surprise – discovering that learning does, or does not, happen when and where, and how it was expected. … Mapping learning teaches the contours, relationships, pathways, and distances of learning itself, and what comes to be known about learning, and how and where it happens can influence institutional policy and strategy for supporting student achievement" (Keeling et al., 2008, pp. 57-58).

Questions, Comments, Discussion

Curriculum Mapping:
A Roadmap for Curriculum Coherence and Student Achievement

Thank You!!

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