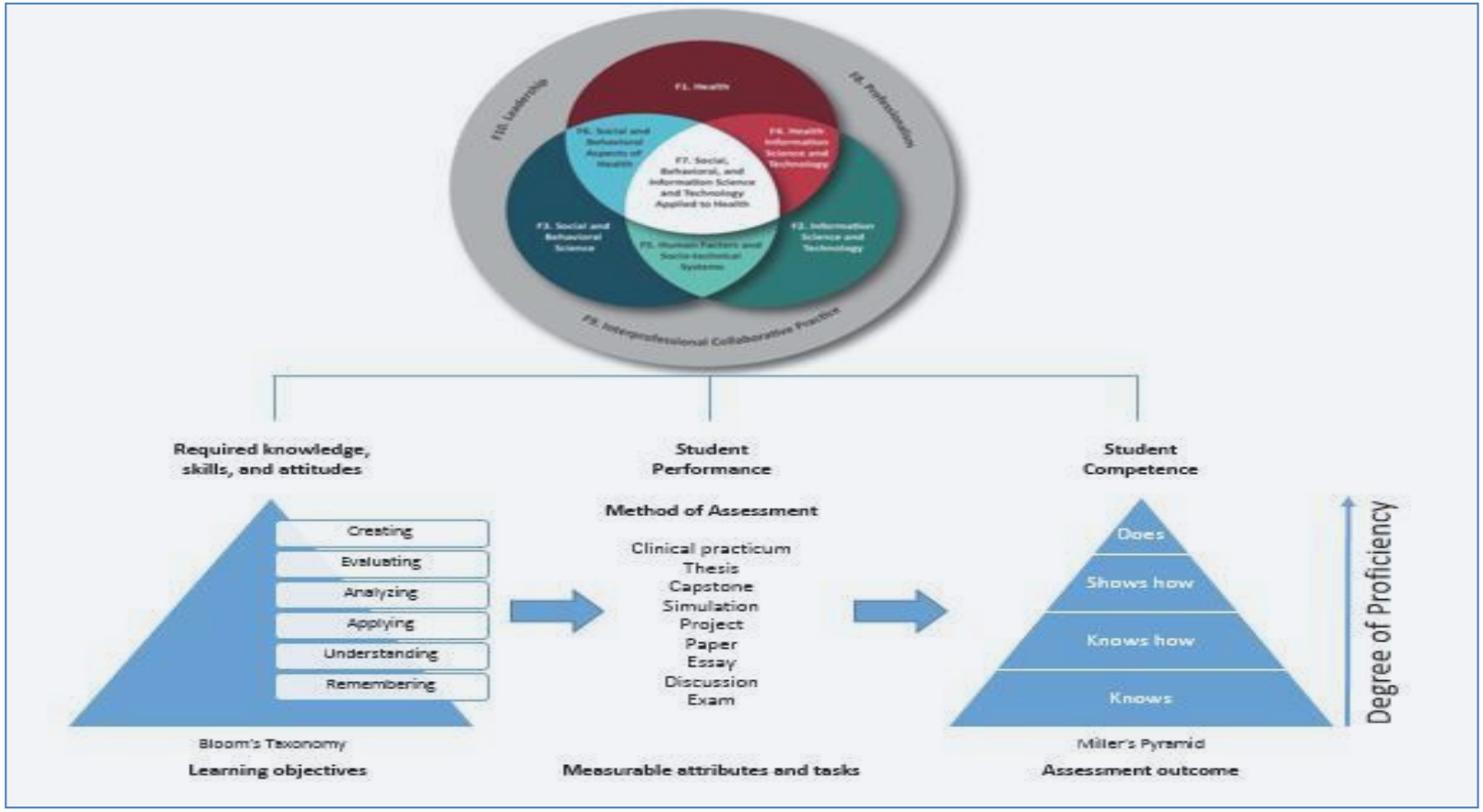
User Guide: Using the CAHIIM Curriculum Self -Evaluation Tool (CSET)

Using the Curriculum Self- Evaluation Tool (CSET): Applying the curriculum evaluation tool for curriculum self-review

Before you begin using the CSET

- **Establish a Team to help with the curriculum review** - Program director, course directors, instructors, instructional designers, internship supervisors, lab directors, curriculum committee.
- **Communicate** an overview to all faculty, frequent updates and discussions one-on-one for each faculty, involve the skeptics, faculty driven timeline.
- **Identify** Requirements, assessments and activities - Courses, projects, internships, lab rotations.
- **Ensure that course syllabi contain** course syllabi outcomes, understand the requirements of the AMIA Foundational Domains, have a comprehension of Competency Driven Education (CDE) and the new context of assessment in the curriculum evaluation process.

  ***Instructors must plan carefully to align their objectives, instruction, and assessment to AMIA's Foundational Domains*.**



What is competency education?

Developing Competency Driven Education:

- Identify the desired abilities, skill, and knowledge needed of graduates
- Define the required competencies and their curricular components
- Define curricular milestones along a development path for the competencies
- Select educational activities, experiences, and instructional methods
- Select tools to measure progress during matriculation
- Design an outcomes evaluation/ assessment of the program

Assessment is an essential component of Competency Driven Education (CDE) and can include:

- Multiple interconnected elements
- Varying assessment methods, disciplinary needs
- Differing learning environments
- Validity – Course Objectives should be clear, observable, and measurable. This will help ensure that the observed task or attribute being assessed was taught.

The type of assessment, and the way it is completed, will determine which competencies are met. CSET will/should provide a mapping document that describes what is done by the learner and observed in a program. Be aware that the learner may have met or exceeded multiple competencies at varying levels of proficiency in AMIA's Foundational Domains.

Examples of Assessments

Direct assessments measure /assess student performance of identified learning outcomes, students to directly demonstrate or perform the desired knowledge or skill

Indirect assessments measure opinions or thoughts about student knowledge, skills, attitudes, learning experiences, and perceptions. These are measures that ask students to self-report or reflect on their knowledge and skills in order to allow instructors or program leaders to make assumptions about the student learning.

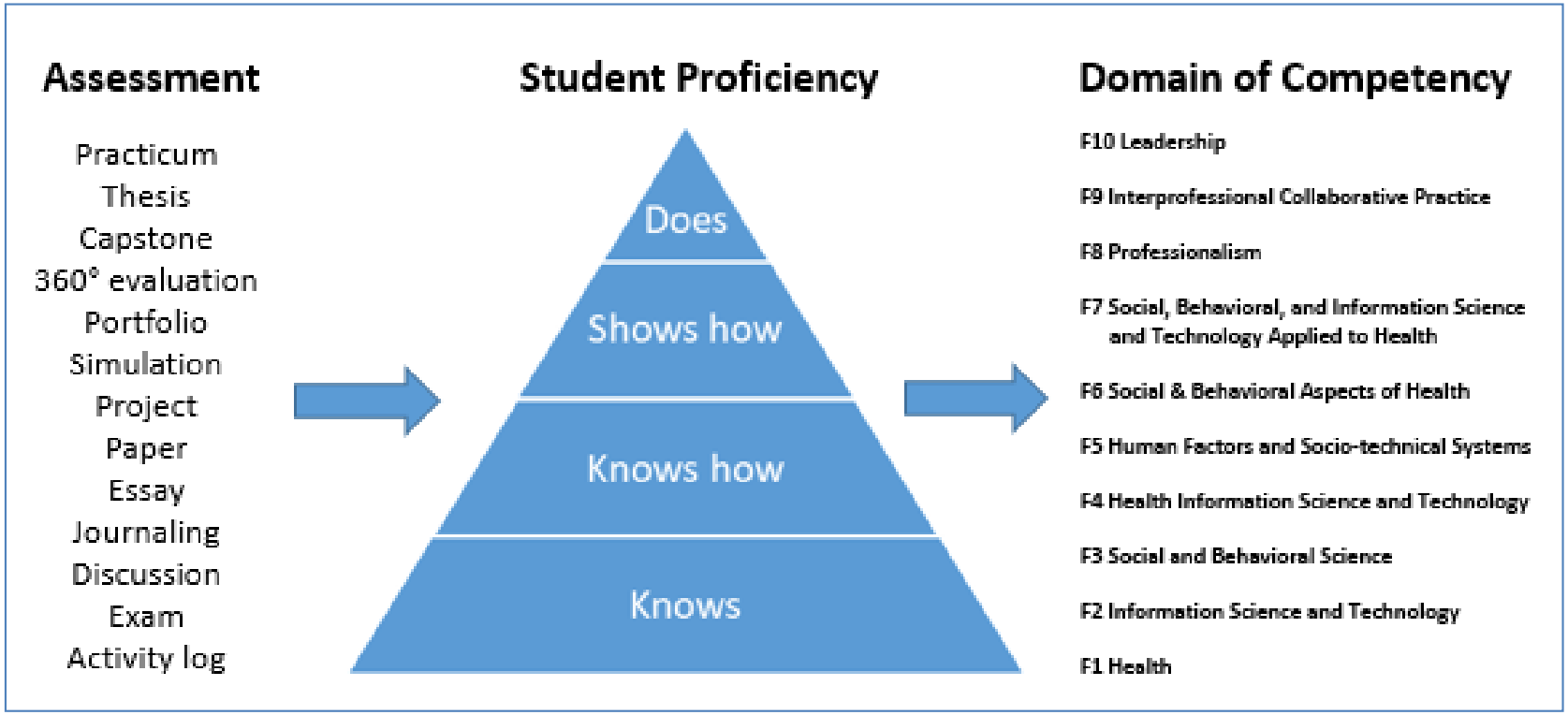
Direct Assessment	Indirect Assessment
Clinical practicum	360° Evaluation
Thesis	Surveys (national, local)
Capstone	Peer review
Simulation/Role play	Employer/supervisor survey
Research/Minute paper	Reflective journaling
Case study	Activity and study log
Portfolio	Structured interview
Tests and exams	

It is important that all learners earning a degree or credential in a discipline meet core curriculum competencies; however, students meet competencies in different ways.

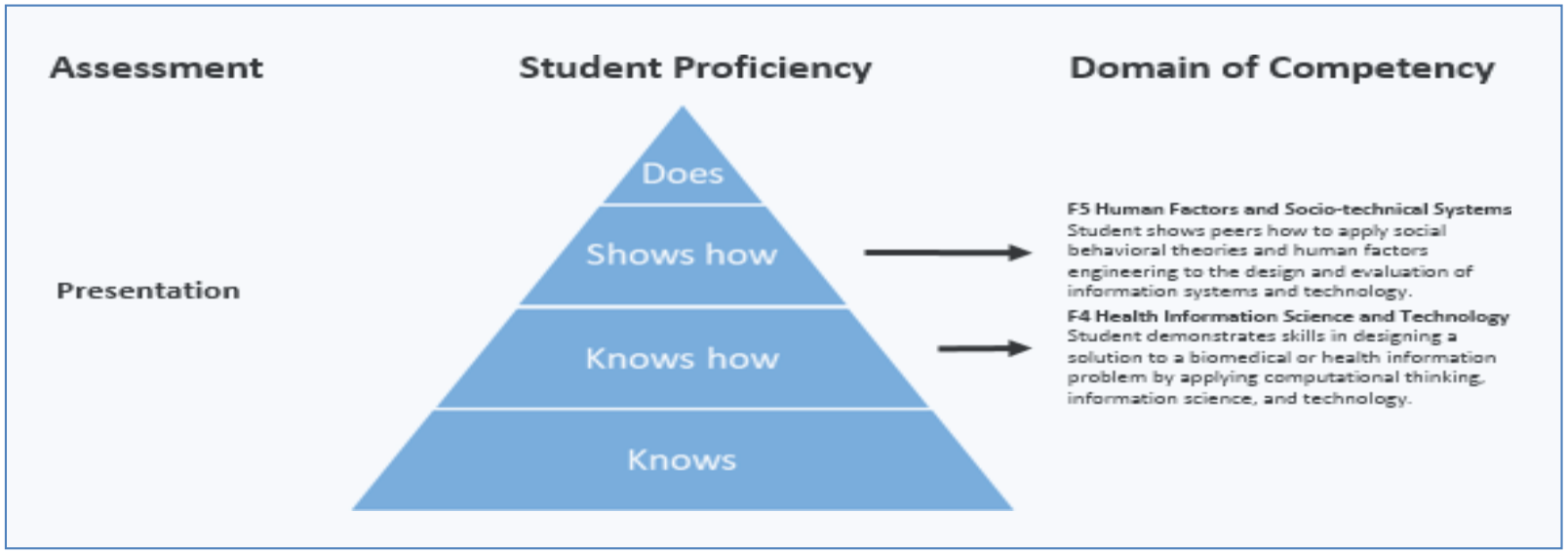
MILLERS Pyramid of Competency Assessment

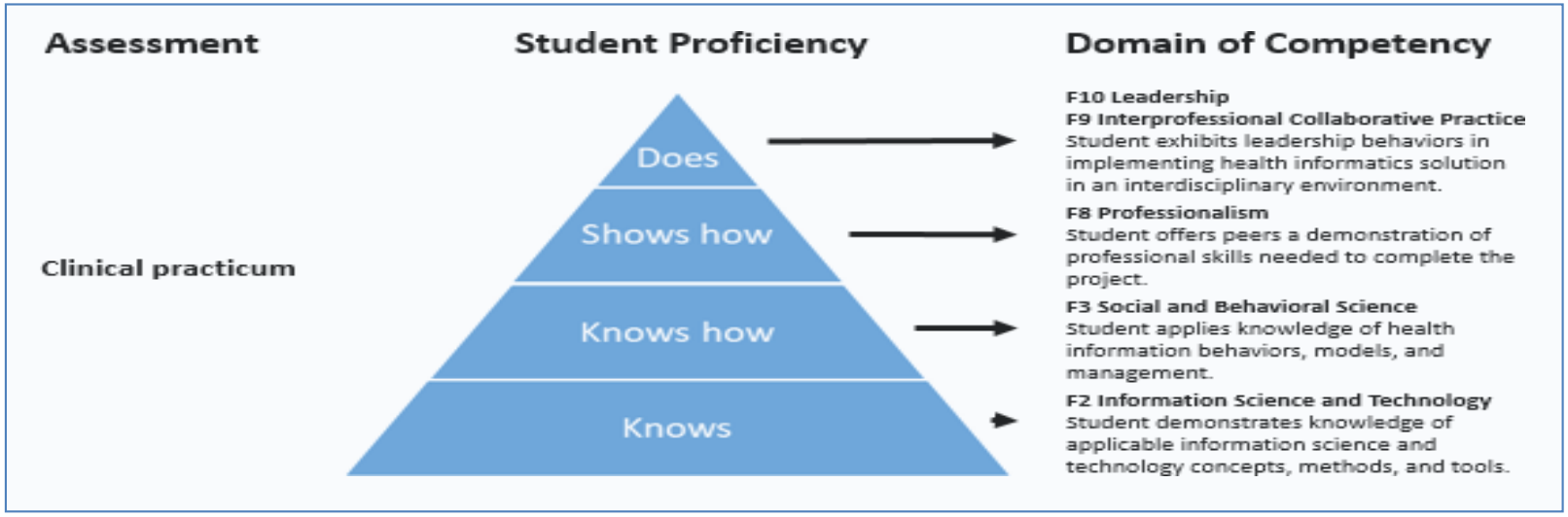
- Competencies refer to educational standards that establish the minimum that students in some disciplines are expected to know to receive their academic credentials.
- Competency = Knowledge + Skills + Attitudes/ability
- Knowledge, skills, and attitudes are assessed through observable, measurable tasks and attributes
- One well-recognized framework for performance measurement is Miller's Pyramid of Competency Assessment, which considers not just what a learner knows, but *how* they know it – the quality of their knowledge in terms of cognition and affective behavior.

Examples of the Relation of Assessment Outcomes to AMIA's Foundational Domains, with Miller's Pyramid of Assessment Model



Examples of the Relation of Assessment Outcomes to AMIA's Foundational Domains, using Miller's Pyramid of Assessment as a guide to student proficiency



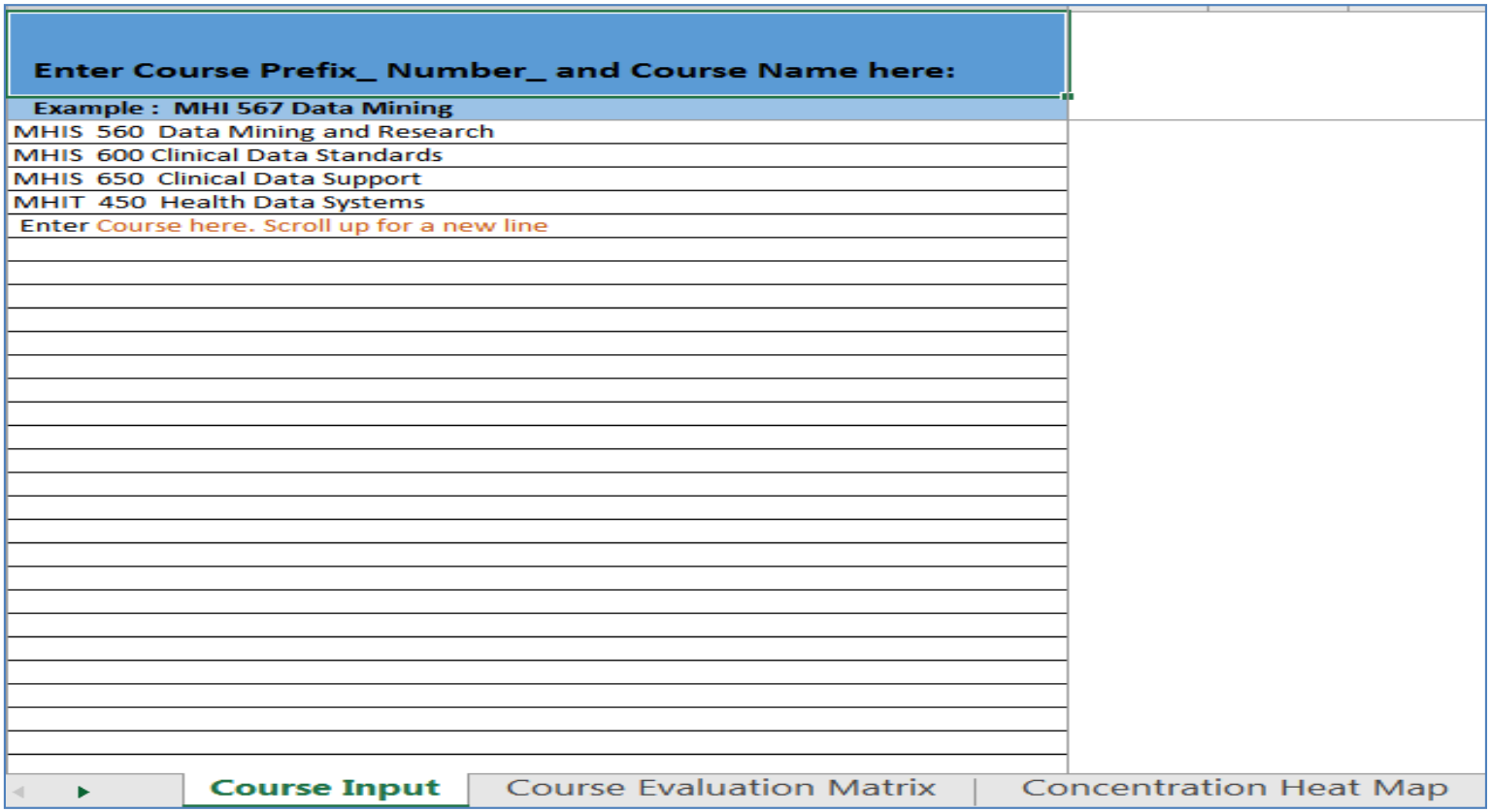


CAHIIM Self Evaluation Tool

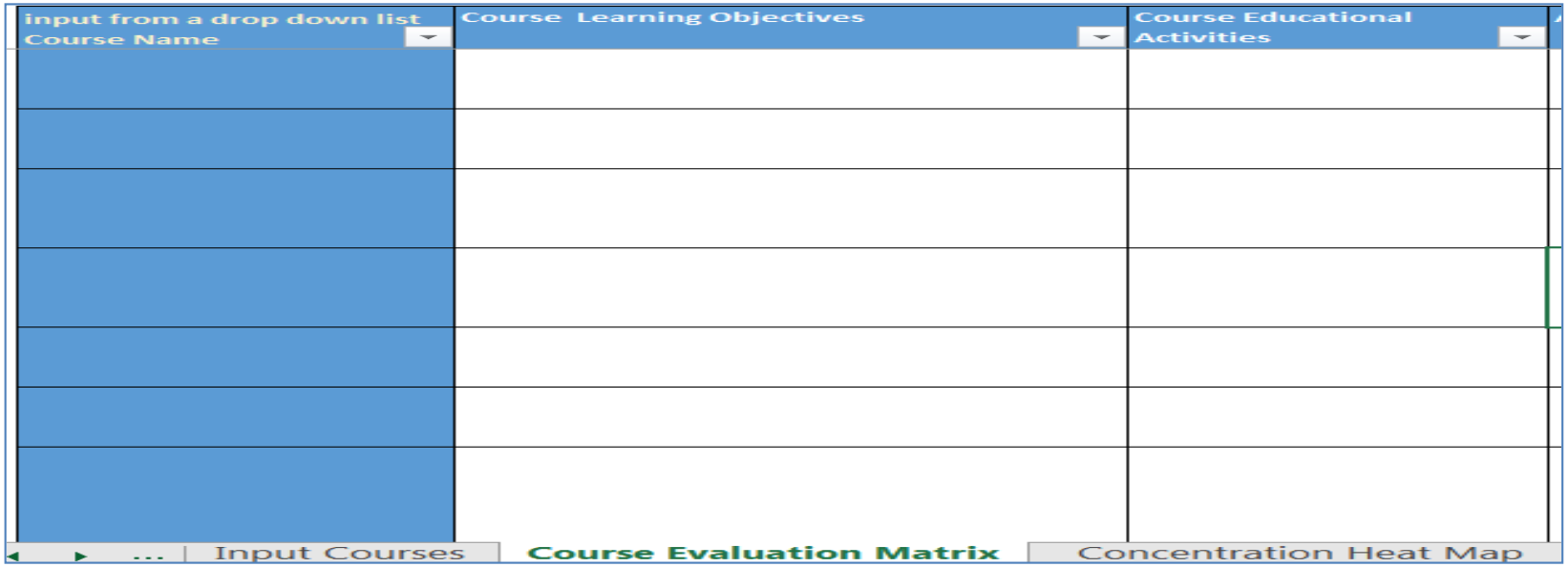
CAHIIM Self-Evaluation Tool (CSET) includes three worksheets: The Course Input sheet, Course Evaluation Matrix worksheet and the Concentration Heat Map. The user will input data for their Courses and Course Evaluation Matrix work sheets and this information will then populate the Concentration Heat Map.

Course Input

Step 1. Input Courses. Enter all courses needed to complete the health informatics program. This can include electives, but you will need to know the course objectives for these elective courses.



Step 2. Create the Course Evaluation Matrix



Course Evaluation Matrix

1. Choose the course you will be working on. There are drop down course options on the right side of the course boxes that will allow you to select courses from the courses entered in Step 1. If you make an incorrect course selection, just hit Delete and begin again.

Select a course

input from a drop down list Course Name	Course Objectives	Educational Activities	Assessments	Knowledge Domain	E Millers Level of Compe	This is pre-calculated and locked to user input KSA
MHC 500 Healthcare Informatics Quality and Paitent Safety						

2. Enter Course Learning Objectives from the course syllabus. The Course Learning Goals / Objectives describe outcomes that are measurable and are written to convey what the student will know/understand or be able to do upon completion of the course

- Please enter one course learning objective per row: If the course has five (5) objectives, this will take up five (5) separate rows.

Input from a drop down list Course Name	Course Learning Objectives	Course Educational Activities	Assessments	Knowledge Domain	Miller's Pyramid	This is automatic. No data entered
MHC 500 Healthcare Informatics of Quality and Patient Safety	Describe evidence-based medicine, clinical practice guidelines, and quality indicators in medicine. Identify key organizations involved in					
MHC 500 Healthcare Informatics of Quality and Patient Safety	Discuss the key issues driving healthcare reform in the US.					

3. The Course Education Activities. These are learner interactions or the activities that promote or support the achievement of the stated Course Learning Objective.

Examples can include lectures, readings, case studies, web modules, speakers, presentations, class or online discussions, simulation exercises.

Input from a drop down list Course Name	Course Learning Objectives	Course Educational Activities	Assessments	Knowledge Domain	Miller's Pyramid	This is automatic. No data entered
MHC 500 Healthcare Informatics of Quality and Patient Safety	Describe evidence-based medicine, clinical practice guidelines, and quality indicators in medicine. Identify key organizations involved in	3 Lectures, 3 writing assignments,				
MHC 500 Healthcare Informatics of Quality and Patient Safety	Discuss the key issues driving healthcare reform in the US.	Health Care Data project				

4. Assessments. The learning Assessments measure/evaluate achievement of the stated Course Learning Objectives. The learners are prepared for the assessments through the Course Activities.

Examples can include exams, papers, reports, logs or journals, team projects and team effectiveness assessment, Capstone, graded discussion, Thesis, Case Project Review and feedback, Reflective modeling.

Input from a drop down list Course Name	Course Learning Objectives	Course Educational Activities	Assessments	Knowledge Domain	Miller's Pyramid	This is automatic. No data entered
MHC 500 Healthcare Informatics of Quality and Patient Safety	Describe evidence-based medicine, clinical practice guidelines, and quality indicators in medicine. Identify key organizations involved in	3 Lectures, 3 writing assignments,	1 writing assignment, 1 quiz			
MHC 500 Healthcare Informatics of Quality and Patient Safety	Discuss the key issues driving healthcare reform in the US.	Health Care Data project	Patient Safety Report, Informatics paper			

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5. **Knowledge Domains**. Which Foundation/Knowledge Domain is the Course Learning Objective covering? There can be more than one Knowledge Domain covered in Course Learning Objectives.

Input from a drop down list Course Name	Course Learning Objectives	Course Educational Activities	Assessments	Knowledge Domain	Miller's Pyramid	This is automatic. No data entered
MHC 500 Healthcare Informatics of Quality and Patient Safety	Describe evidence-based medicine, clinical practice guidelines, and quality indicators in medicine. Identify key organizations involved in	3 Lectures, 3 writing assignments,	1 writing assignment, 1 quiz	F4-Health Information Science and Technology		
MHC 500 Healthcare Informatics of Quality and Patient Safety	Discuss the key issues driving healthcare reform in the US.	Health Care Data project	Patient Safety Report, Informatics paper	F7-Social, Behavioral, and Information Science and Technology Applied to Health		

If that is the case, then there must be a separate data row for each Knowledge Domain covered

6. **Millers Pyramid.** What level of proficiency is the Learner expected to achieve for the Course Learning Outcome? Choose the desired Millers level from the pull- down menu on the right side of the column

Input from a drop down list Course Name	Course Learning Objectives	Course Educational Activities	Assessments	Knowledge Domain	Miller's Pyramid	This is automatic. No data entered
MHC 500 Healthcare Informatics of Quality and Patient Safety	Describe evidence-based medicine, clinical practice guidelines, and quality indicators in medicine. Identify key organizations involved in	3 Lectures, 3 writing assignments,	1 writing assignment, 1 quiz	F4-Health Information Science and Technology	Knows	
MHC 500 Healthcare Informatics of Quality and Patient Safety	Discuss the key issues driving healthcare reform in the US.	Health Care Data project	Patient Safety Report, Informatics paper	F7-Social, Behavioral, and Information Science and Technology Applied to Health	Knows How	
					Knows Knows How Shows How Does	

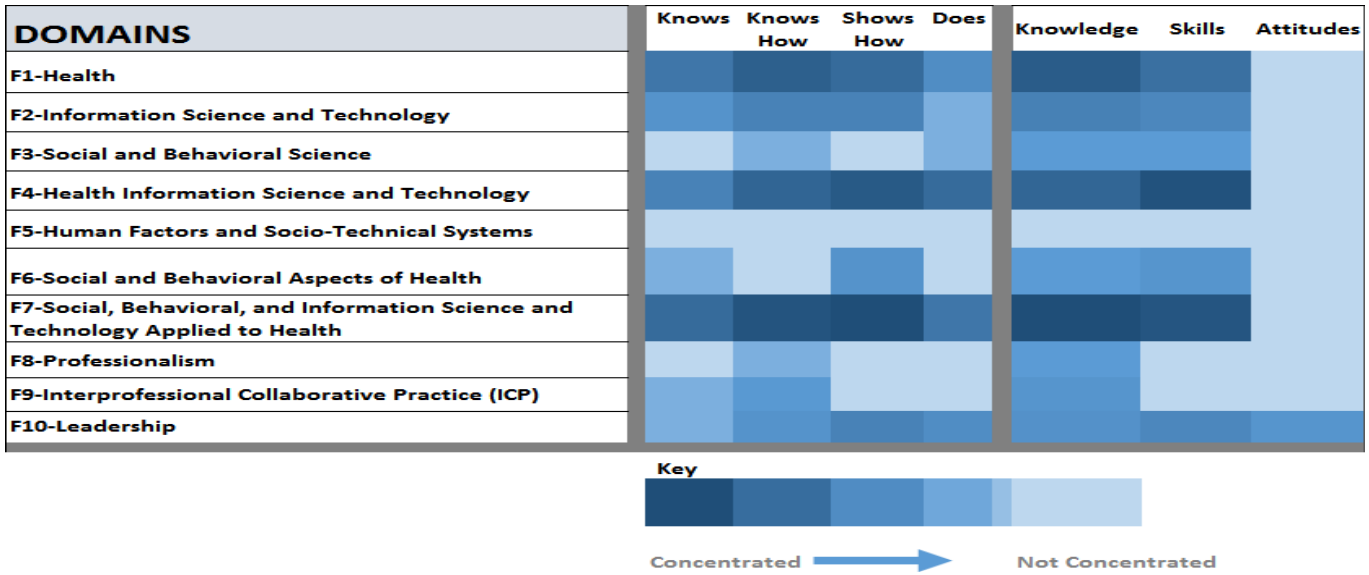
7. KSA (Knowledge Skill Ability) Level. No input needed. Results are driven from Millers Pyramid level selected. This captures the competency level associated with the chosen Miller's assessment level.

Input from a drop down list Course Name	Course Learning Objectives	Course Educational Activities	Assessments	Knowledge Domain	Miller's Pyramid	This is automatic. No data entered
MHC 500 Healthcare Informatics of Quality and Patient Safety	Describe evidence-based medicine, clinical practice guidelines, and quality indicators in medicine. Identify key organizations involved in	3 Lectures, 3 writing assignments,	1 writing assignment, 1 quiz	F4-Health Information Science and Technology	Knows	Knowledge
MHC 500 Healthcare Informatics of Quality and Patient Safety	Discuss the key issues driving healthcare reform in the US.	Health Care Data project	Patient Safety Report, Informatics paper	F7-Social, Behavioral, and Information Science and Technology Applied to Health	Knows How	Knowledge

You may modify or delete content in each column as often as you would like, and you can sort each column by using the scroll option in each column heading. There are approximately 500 rows that can be used for Course Learning Object. All columns are formatted to word wrap and auto fit the row height. If this does not appear to happen when text is added, place your mouse in the cell you are working in and double click. This should format the cell to adjust to the text entered.

Heat Map

Courses and Course Data entered produces a Heat Map which will allow the user to see areas of concentration/ saturation in their program. When you begin, the heat map will be a single color, a dark blue for Master degree programs and green for Baccalaureate/ Bachelor degree. As you add data to the Curriculum Matrix worksheet, you will begin to see variation in the colors in the heat map



Master of Health Informatics (MHI) mapping

DOMAINS	Knows	Knows How	Shows How	Does	Knowledge	Skills	Attitudes
F1-Health							
F2-Information Science and Technology							
F3-Social and Behavioral Science							
F4-Health Information Science and Technology							
F5-Human Factors and Socio-Technical Systems							
F6-Social and Behavioral Aspects of Health							
F7-Social, Behavioral, and Information Science and Technology Applied to Health							
F8-Professionalism							
F9-Interprofessional Collaborative Practice (ICP)							
F10-Leadership							

Bachelor of Health Informatics (BHI) Mapping

If you have any questions, please contact CAHIIM staff @ info@cahiim.org