

# Novel Assessment Strategies in an Integrated Curriculum

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HOFSTRA NORTH SHORE-LIJ  
SCHOOL of MEDICINE  
AT HOFSTRA UNIVERSITY™

**Hofstra North Shore-LIJ School of Medicine**



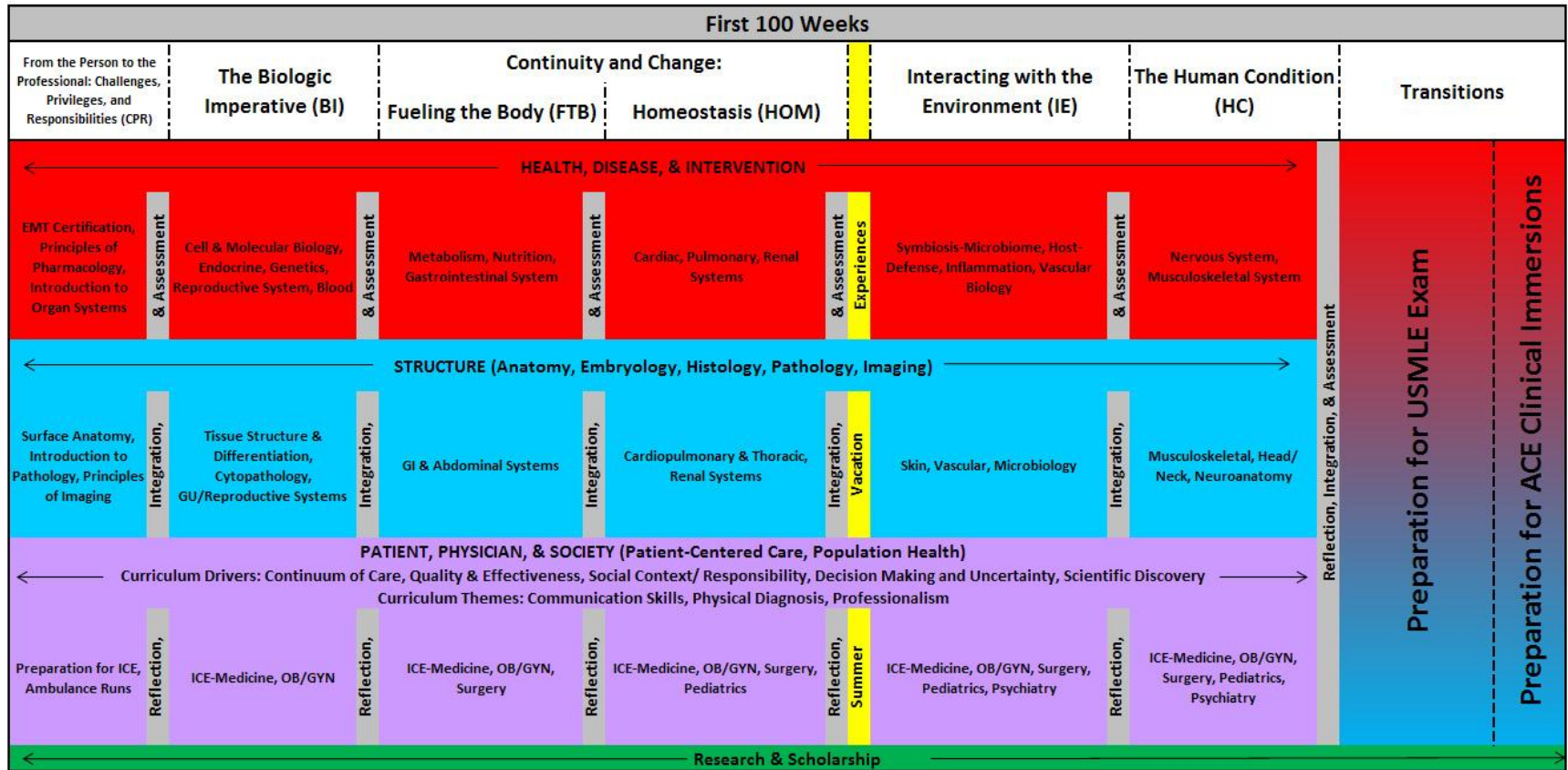
# Goals

- **Discuss general assessment scheme at Hofstra North Shore-LIJ School of Medicine**
- **Discuss different uses of formative assessment**
- **Discuss integration of competency assessment into our UME curriculum**





# Curriculum Overview: 1<sup>st</sup> 100 Weeks

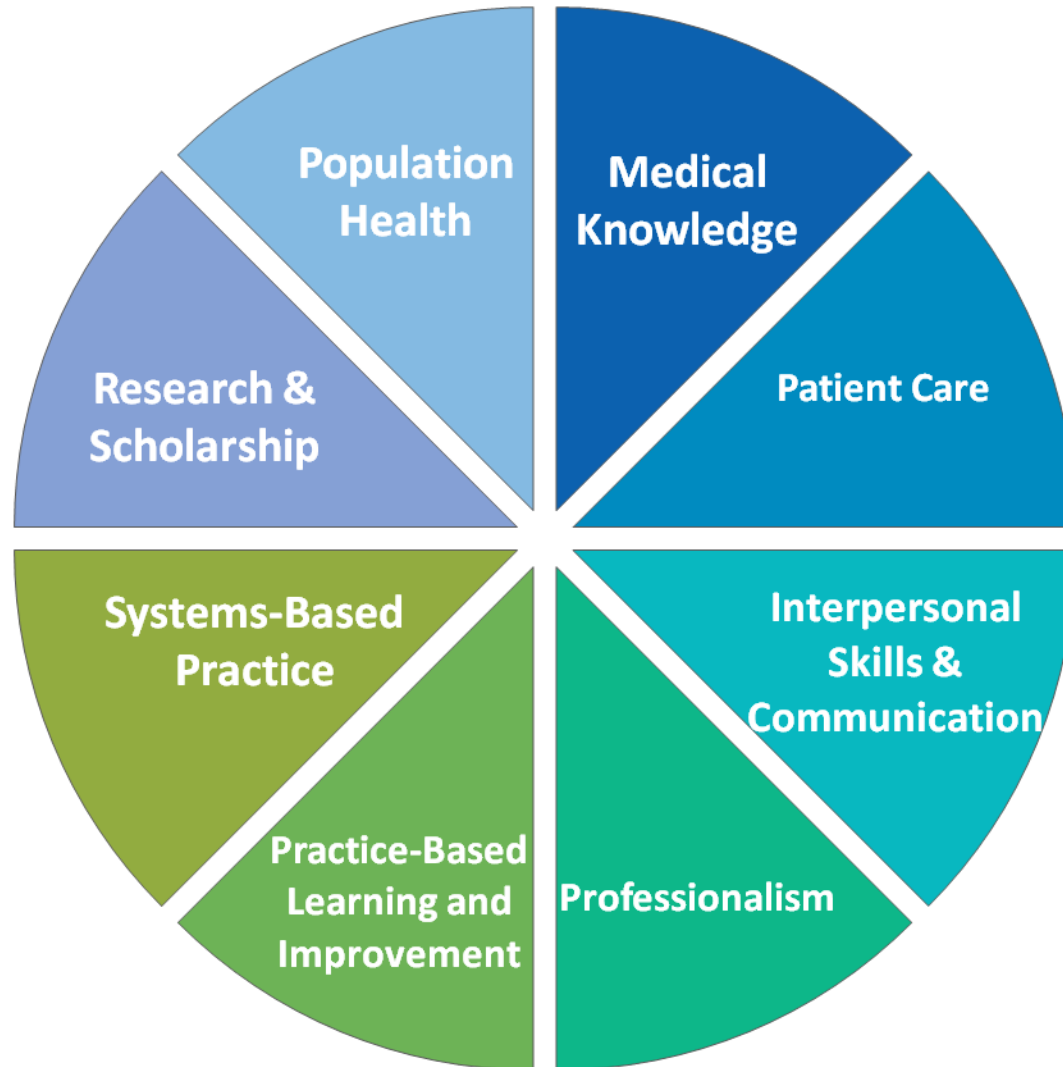


# Typical Week

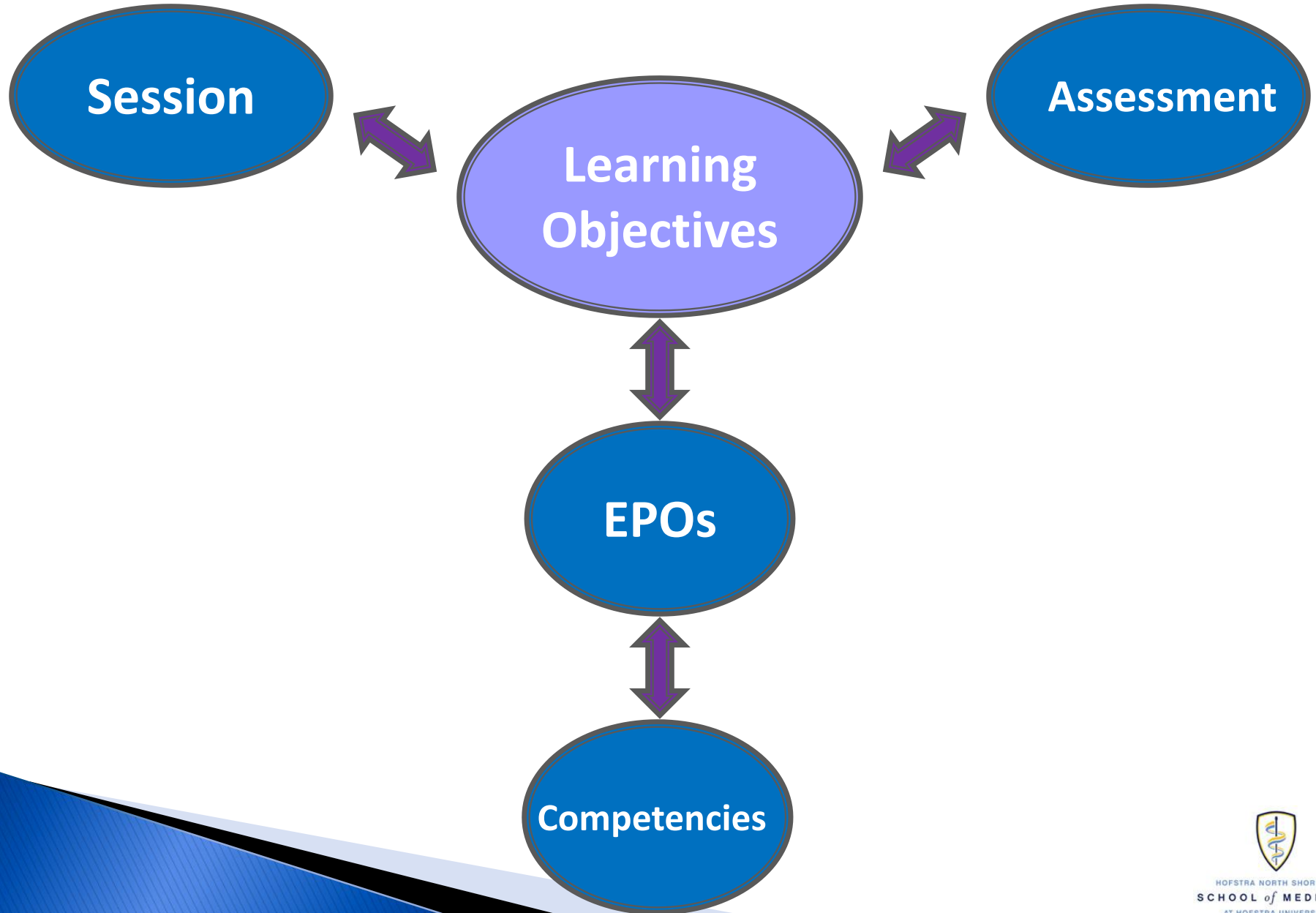
	Monday	Tuesday	Wednesday	Thursday	Friday
8:00am	PEARLS Case 1	Self-Directed Learning	PEARLS Case 1 (continued)	Structure	PEARLS Case 2 (continued)
9:00am					
10:00am	Large/ Medium/ Small Group	Review & Reinforcement	Large/ Medium/ Small Group		Large/ Medium/ Small Group
11:00am					
12:00pm	LUNCH	LUNCH	LUNCH		LUNCH
1:00pm	Initial Clinical Experience (ICE)	Self-Directed Learning	Self-Directed Learning	LUNCH	Self-Directed Learning
2:00pm				Self-Directed Learning	
3:00pm					
4:00pm					



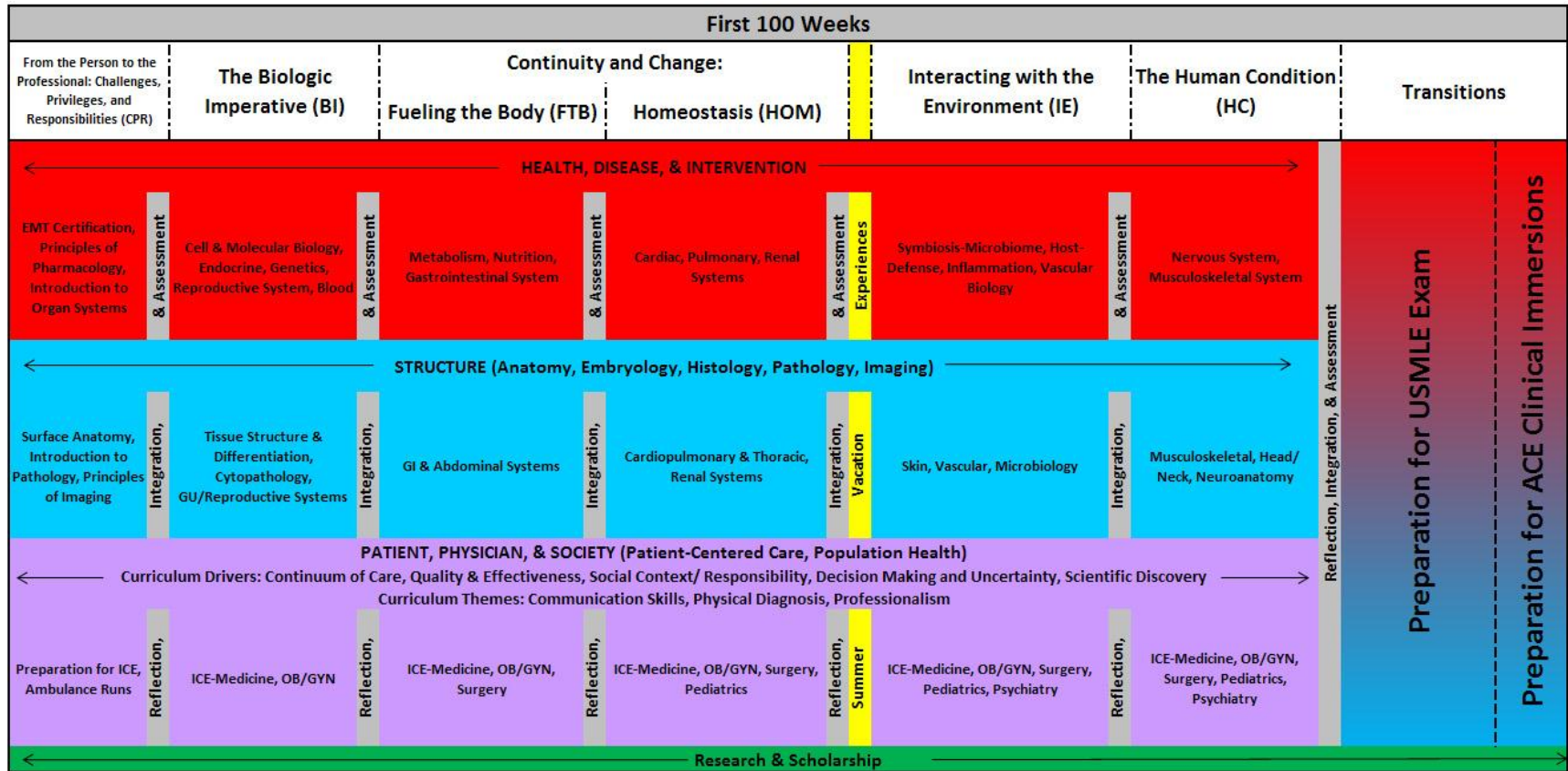
# SOM Competencies



# Connecting the Competencies



# Reflection, Integration & Assessment



Reflection, Integration & Assessment Weeks





# Typical Week

	Monday	Tuesday	Wednesday	Thursday	Friday			
8:00am	PEARLS Case 1	Self-Directed Learning	PEARLS Case 1 (continued)	Structure	PEARLS Case 2 (continued)			
9:00am	PEARLS Case 2		PEARLS Case 1 (continued)		PEARLS Case 2 (continued)			
10:00am	Large/ Medium/ Small Group	Review & Reinforcement	Large/ Medium/ Small Group		Structure	Large/ Medium/ Small Group		
11:00am	Large/ Medium/ Small Group		Large/ Medium/ Small Group	Large/ Medium/ Small Group		Large/ Medium/ Small Group		
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4:00pm	Self-Directed Learning	Self-Directed Learning	Self-Directed Learning			Self-Directed Learning		
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# PEARLS:

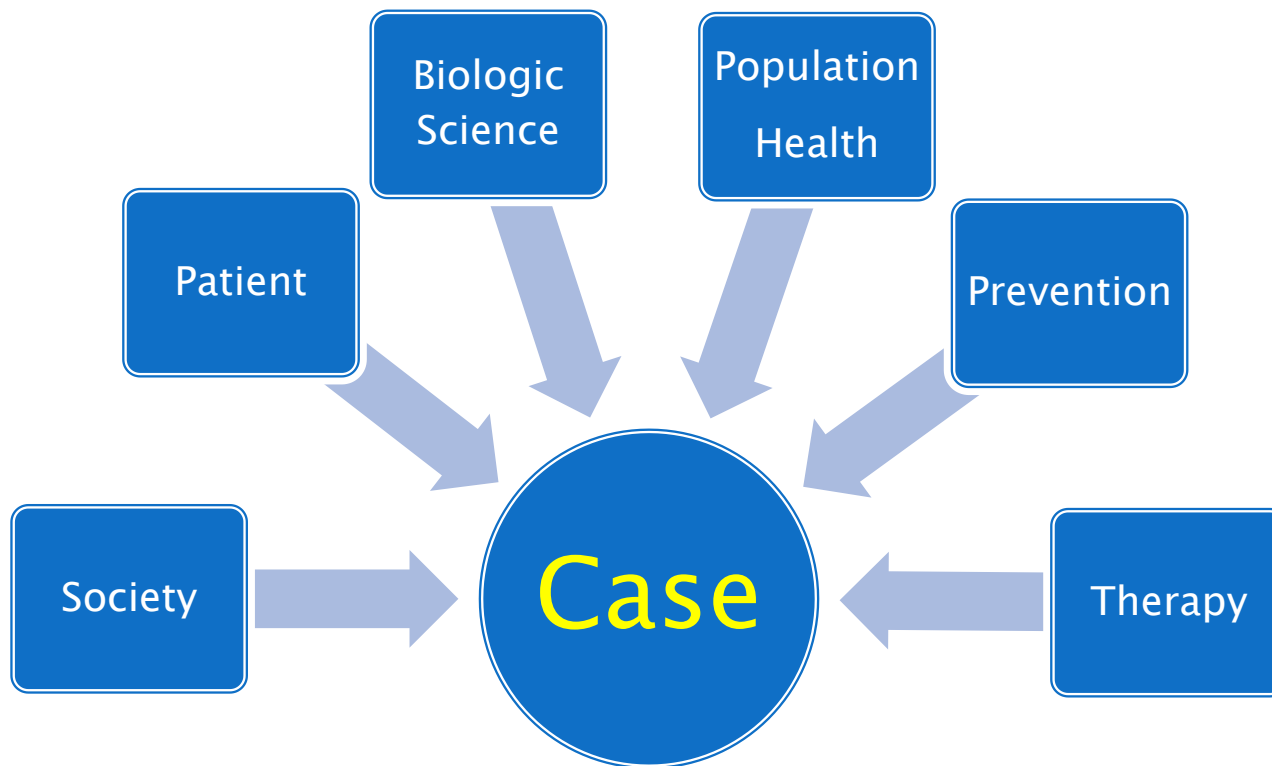
## Patient-Centered Explorations in Active Reasoning, Learning and Synthesis

- Hybrid problem-based/case-based learning pedagogy
- Students synthesize biomedical science in the context of patient-centered clinical cases with peers
- PEARLS relies heavily upon formative assessments to help achieve goals of competency based component of program



# Patient-Centered Cases: Created by Integrated Design Teams to Expand the Perspective for Learning

## Multiple Perspectives



# PEARLS in Action

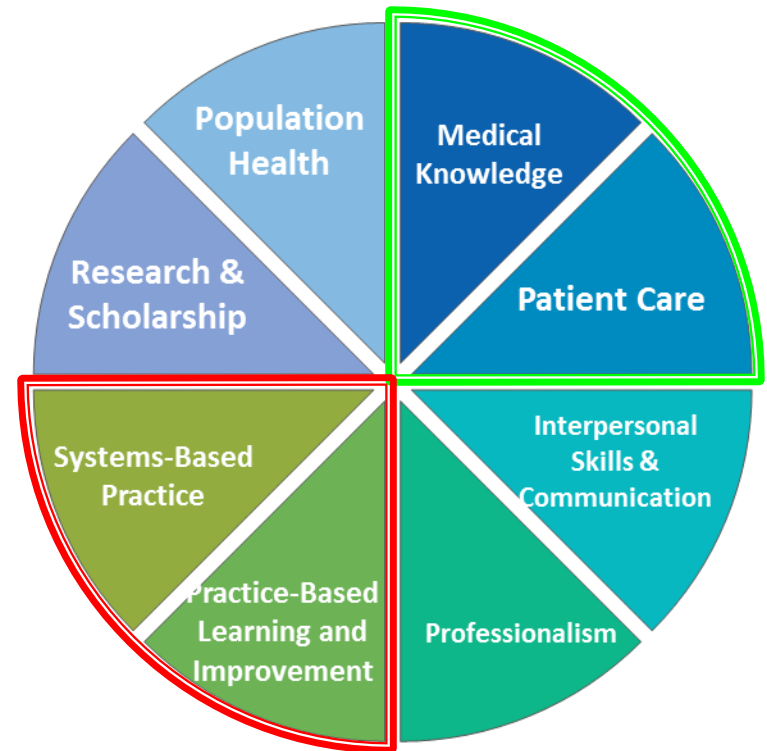
- Monday
- Roles: leader, timekeeper, recorder
- **P**atient-centered cases
- **E**xplore issues and **A**ctively **R**eason through cases to develop learning objectives
- Mon-Wed Self Directed **L**earning
- Wednesday- **S**ynthesize and apply information with peers in group
- Wed-Fri/Friday repeat for second case
- Weekend-complete end of week essay





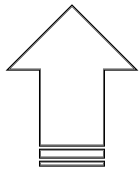
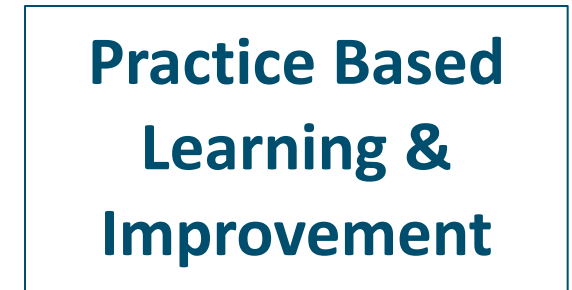
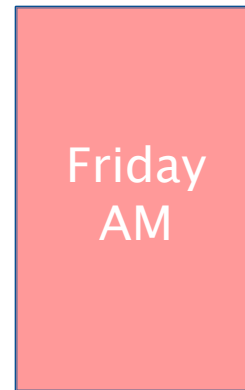
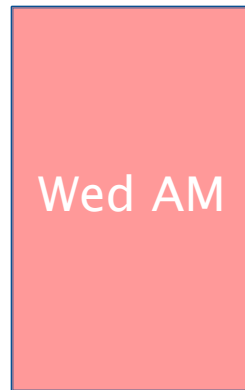
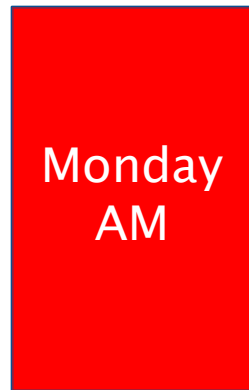
# Traditional PBL/CBL Assessment

- PBL/CBL curricula
  - Medical Knowledge
  - Patient Care
- Challenging competencies
  - PBL&I
  - SBP



# PEARLS Formative Self & Group Assessments Lead to Skills in PBL&I and SBP

## Monday Check-in



- **Self assessment**
- **Reflection**



# PEARLS Formative Self & Group Assessments Lead to Skills in PBL&I and SBP

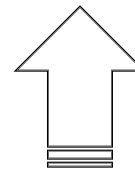
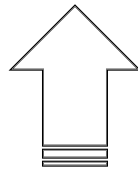
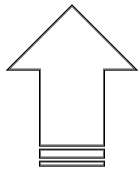
## Mon/Wed/Fri Wrap-up

Monday  
AM

Wed AM

Friday  
AM

**Systems Based  
Practice**



- Self & group assessment
- Content & process
- Facilitator framed component
- Reflection



# PEARLS Formative Self & Group Assessments Lead to Skills in PBL&I and SBP

- **Early Formative Meetings**
  - Compare & contrast self with facilitator assessment
  - Emphasis upon demonstrable changes in areas identified for improvement
- **How am I doing in this curriculum?**
  - Reliance on formative assessments





# PEARLS Competency Based Student Outcomes Driven by Formative & Summative Assessments

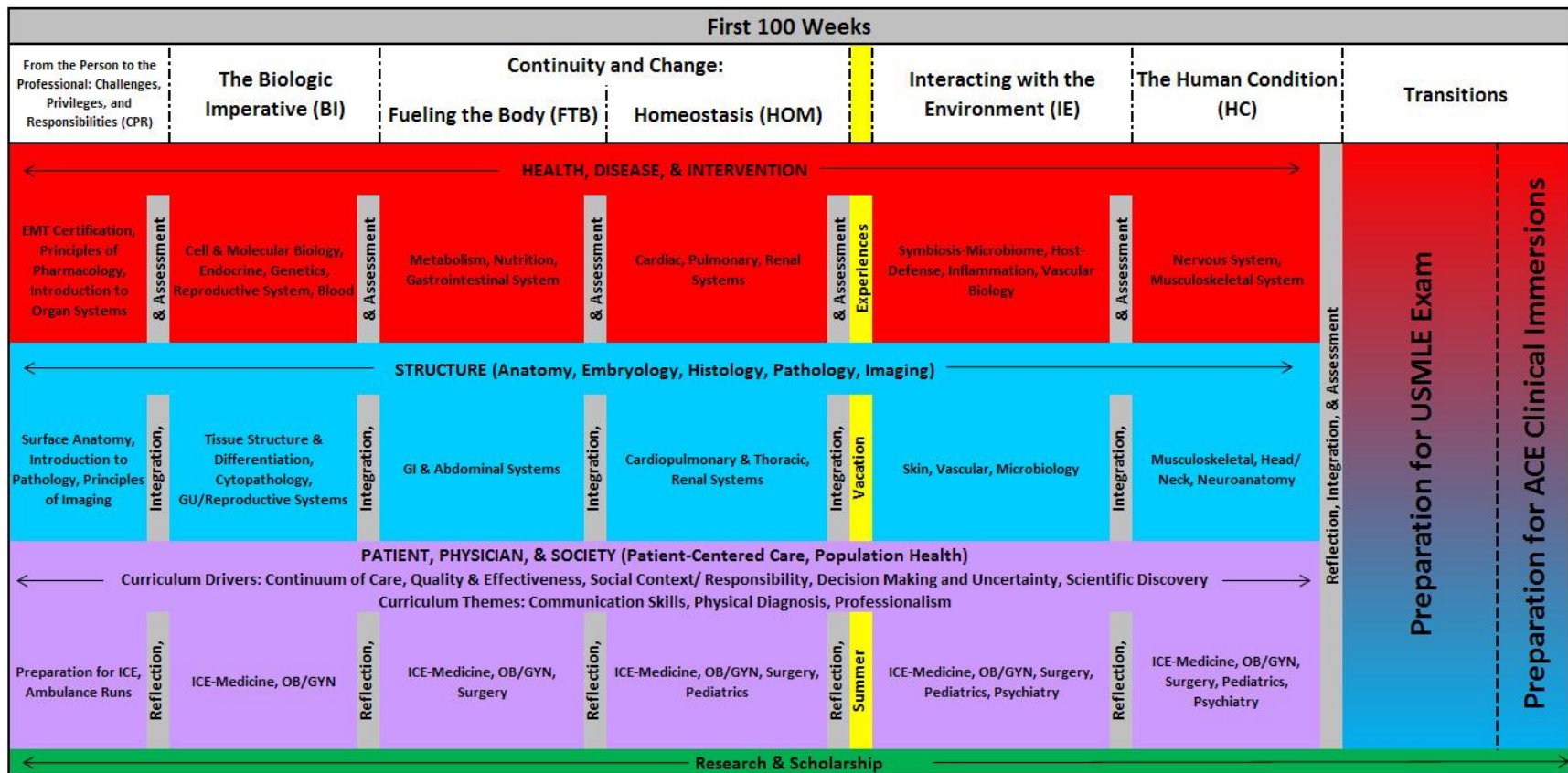
- Life-long learners
- Critical thinkers
- Patient centered
- Leaders
- Teamwork
- Self-assessment
- Modification of behaviors
- Wrap-up discussions around process and system elements

**Medical  
Knowledge  
Patient Care  
IPS&C**

**Professionalism  
PBL&I  
SBP**



# Structure: An Integrated Course in Human Form



How can formative and summative assessments lead to assessment of competencies?



# Structure: An Integrated Course in Human Form

- **Normal Structure**
  - Gross anatomy
  - Embryology
  - Histology
- **Abnormal Structure**
  - Pathology
    - Gross
    - Histologic
- **Interventional/  
Diagnostic Structure**
  - Medical Imaging
  - Physical Diagnosis
  - Ultrasound



## Traditional 'Anatomy' Lab



- No pre-work
- Task (manual) driven
- Minimal faculty interaction

## Structure Laboratory



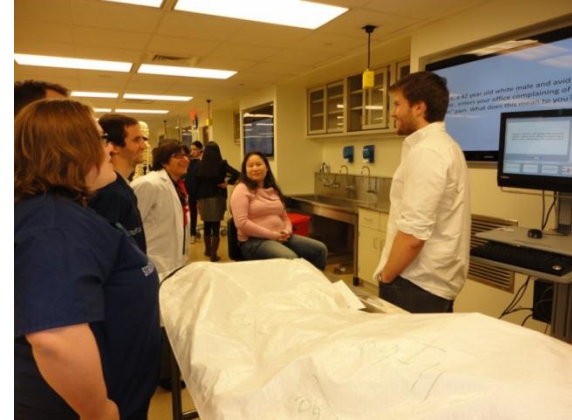
- Preparation required
- Facilitator direct interactions (Socratic)
- Small groups interact with multiple clinical & basic science faculty





# Aspects of Course:

## Structure Lab Sessions & Problem Based Structure



- **Students rotate through stations facilitated by faculty**
- **Group dissection ‘cases’**
- **Conducted over 12 weeks**
- **Student driven**
- **Integrate dissection with other aspects of Structure**
- **Student presentations with faculty assessing**



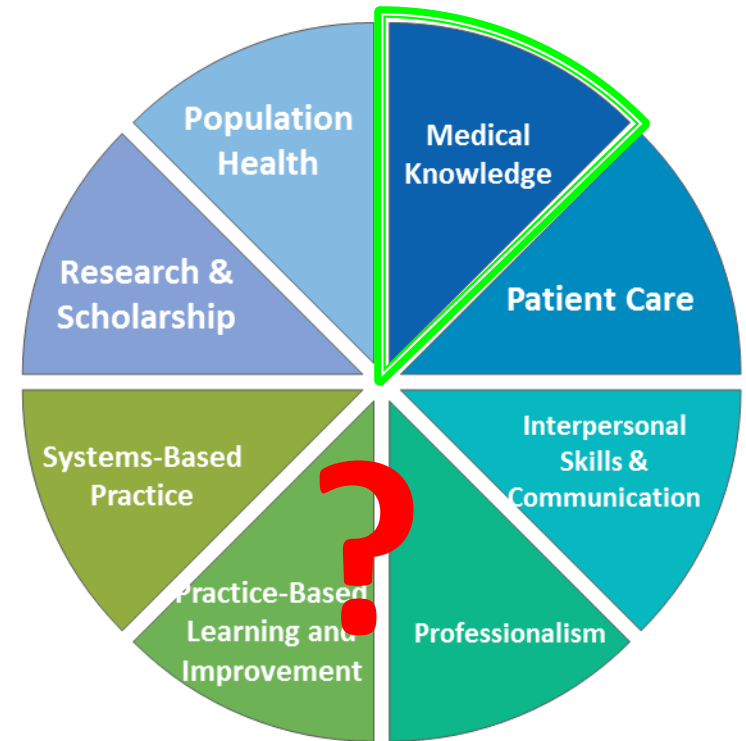
# Why Design Curriculum and Assessments that Address Multiple Competencies?

- **Assessing multiple competencies in a lab based course supports philosophy of integrated curriculum**
- **‘Effective’ doctoring includes all competencies**



# Traditional Laboratory Course Assessment

- Typical laboratory courses
  - Medical Knowledge
- What other opportunities are there?



# Structure Formative Assessments Lead to Competencies

- **Structure Laboratory Sessions: Weekly**
  - Stations allow immediate and relevant assessment with feedback
  - Complements PEARLS formative assessment
- **Complex curriculum- How am I doing?**
- **How am I relaying Information?**

**Medical  
Knowledge**

**Interpersonal Skills  
& Communications**





# Structure Formative Assessments Lead to Competencies

- **Problem-Based Structure**
  - **Developmental Program:**  
Assessment transitions from formative to summative
  - **Peer feedback**  
Giving and receiving

Practice-Based Learning  
& Improvement

Interpersonal Skills  
& Communications



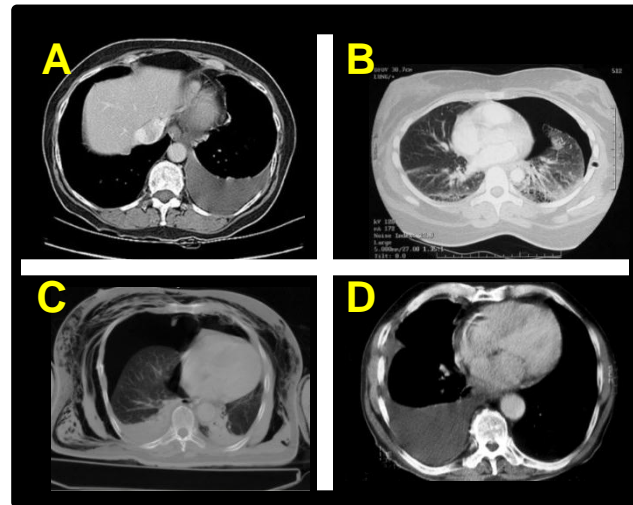
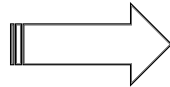
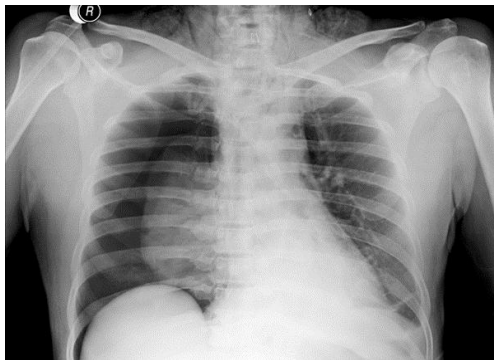
# Formative Assessment Without Curricular Revolution?

- Routine feedback regarding dissection skills
- Slight pedagogy adjustments: Incorporate questioning into laboratory discussions
- If no pre-work, focus on review
- Formative assessment and feedback: timely, specific, suggests ways to improve, encourages reflection, follow-up



# Structure Summative Assessments Lead to Competencies

- **Laboratory Exams**
  - Selection and interpretation of clinical tests



**Patient Care**



# Structure Summative Assessments Lead to Competencies

- **Laboratory Exams: Same Question, Multiple Scores**
  - Oral Examination Questions
  - Path Report Interpretation Questions

<p>LONG ISLAND JEWISH MEDICAL CENTER 270-25 75 Ave., Bay Side Park, New York 11040</p> <p>PATIENT: WILLIAMS, JOHN      DOB/SEX: 06/08/48 - M ACCE#: 80032194      MED DR: STUDENT, MED UNID#: 8994      LOCATION: LAB</p> <p>SURGICAL PATHOLOGY</p> <p>SUBMITTING: STUDENT, MED      SPECIMEN #: 20110083103 500 HOFSTRA UNIVERSITY HEMPSTEAD, NY 11049      DATE OBTAINED: 08/12/12 TELEPHONE: 5164837018      DATE SUBMITTED: 08/12/12 STATUS: ROUT      DATE REPORTED: 08/16/12 DR. STUDENT, MED</p> <p>FINAL DIAGNOSIS</p> <p>A. BRONCHUS, LEFT MAINSTEM - SQUAMOUS METAPLASIA - NO DYSPLASIA NOTED.</p> <p>SYNOPSIS SUMMARY</p> <p>Specimen R ___ Other (specify): Left mainstem bronchus biopsy</p> <p>Procedure R ___ Sigmoidoscopy/needle aspiration</p> <p>Specimen Laterality R ___ Left</p> <p>Histologic Type R ___ Other (specify): Left mainstem bronchus biopsy</p> <p>Signed _____ (signature on file)      Med Student 8/16/12</p>	<p>PATIENT: WILLIAMS, JOHN      ACCE#: 80032194 SPECIMEN #: 20110083103      RECEIVED: 08/12/12      (continued)</p> 
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**Medical  
Knowledge**

**Interpersonal Skills  
& Communications**

- “Hey doc, can you tell me what all this means? What is this metaplasia stuff? Will it go away?”



# Structure Summative Assessments Lead to Competencies

- Problem-Based Structure Presentations

- Do not assess Medical Knowledge

- Ability to draw resources from literature and interpret scientific work Research & Scholarship

Research &  
Scholarship

- Ability to convey scientific and clinical content coherently

Interpersonal Skills  
& Communications





# Individual Competency Reports

## Year 1: Expected level of Competency



# Some Challenges of Competency-Based Assessment

- **Formative and summative assessment- when and how much?**
- **Shifting perspectives on formative assessment- faculty and students**
- **Mapping assessments to competencies**
- **Making competencies meaningful- faculty and students**



# Questions

