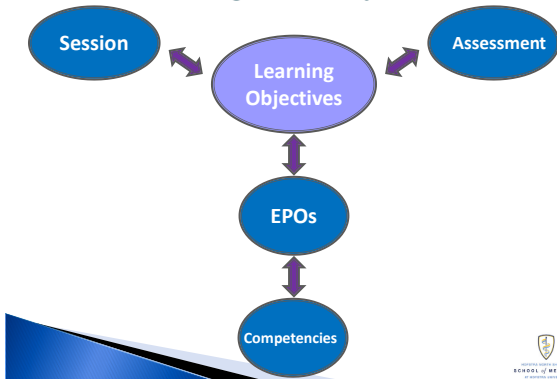
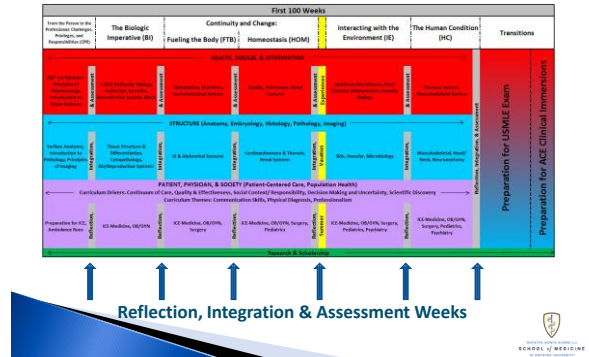


Connecting the Competencies



Reflection, Integration & Assessment



Typical Week

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00am	PEARLS Case 1	Self-Directed Learning	PEARLS Case 1 (continued)		PEARLS Case 2 (continued)
9:00am	PEARLS Case 2				
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
12:00pm	LUNCH	LUNCH	LUNCH		LUNCH
1:00pm				LUNCH	
2:00pm	Initial Clinical Experience (ICE)	Self-Directed Learning	Self-Directed Learning	Self Directed Learning	Self-Directed Learning
3:00pm					
4:00pm					

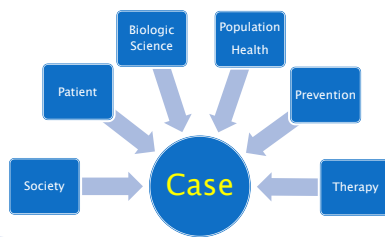
PEARLS:

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

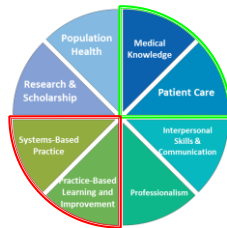


PEARLS in Action

- Monday
- Roles: leader, timekeeper, recorder
- Patient-centered cases
- Explore issues and **Actively Reason** 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

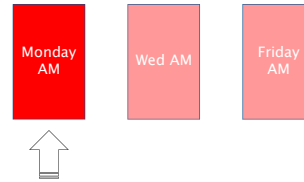
Traditional PBL/CBL Assessment

- 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

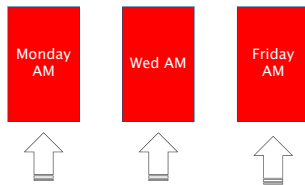


- Self assessment
- Reflection



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

Mon/Wed/Fri Wrap-up



- 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

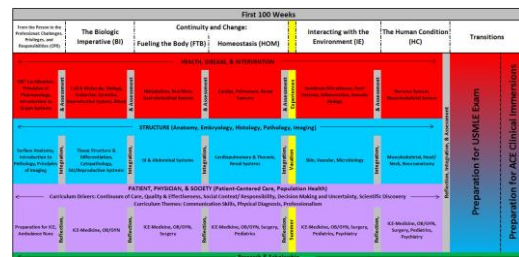
- Life-long learners
- Critical thinkers
- Patient centered
- Leaders
- Teamwork
- Self-assessment
- Modification of behaviors
- Wrap-up discussions around process and system elements

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

Practice-Based Learning
& Improvement

- Peer feedback
Giving and receiving

Interpersonal Skills
& Communications



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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

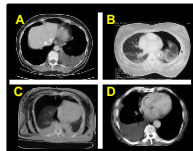


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Structure Summative Assessments Lead to Competencies

- Laboratory Exams

- Selection and interpretation of clinical tests



Patient Care



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Structure Summative Assessments Lead to Competencies

- Laboratory Exams: Same Question, Multiple Scores

- Oral Examination Questions
- Path Report Interpretation Questions



Medical
Knowledge

Interpersonal Skills
& Communications

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



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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
- Ability to convey scientific and clinical content coherently

Research &
Scholarship

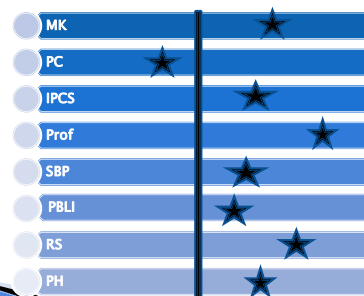
Interpersonal Skills
& Communications



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Individual Competency Reports

Year 1: Expected level of Competency



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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

