ALIGNING AND ASSESSING COURSE OBJECTIVES

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GUIDING QUESTIONS

• What do you want your students to be able to do by the end of the course?
• What Bloom’s level is appropriate? (Should increase in complexity and sophistication with each course)
• How will you know they’ve gotten there? (Assessment)
• How do the goals of your course align with the goals of the MD program?
BLOOM’S COGNITIVE DOMAIN

BLOOM’S REVISED TAXONOMY:
RELATED VERBS

- **CREATE**
  - Generate new ideas and products or compile information in a new way.
  - Associated verbs: Design, Create, Compose, Plan, Formulate, Write, Compile, Construct, Develop, Produce, Assemble, Propose, Invert

- **EVALUATE**
  - Defend opinions and decisions and justify a course of action by making judgements about information.
  - Associated verbs: Evaluate, Judge, Recommend, Assess, Evaluate, Measure, Predict, Test, Defend, Criticize, Debate, Argue, Justify, Mark, Verify, Decode

- **ANALYSE**
  - Examine and break information into parts to explore relationships.
  - Associated verbs: Analyse, Compare, Contrast, Classify, Distinguish, Select, Categorize, Differentiate, Investigate, Conclude, Deduce, Correlate, Separate, Solve

- **APPLY**
  - Use existing knowledge to solve new problems or apply acquired knowledge in new situations.
  - Associated verbs: Apply, Practise, Illustrate, Use, Calculate, Choose, Relate, Show, Complete, Interpret, Articulate, Dramatize, Execute, Teach, Change, Operate

- **UNDERSTAND**
  - Demonstrate an understanding of the facts by explaining ideas or concepts.
  - Associated verbs: Explain, Describe, Discuss, Identify, Extend, Demonstrate, Interpret, Outline, Predict, Paraphrase, Convert, Summarize, Review, Research

- **REMEMBER**
  - Exhibit memory of previously learned material by recalling facts, concepts and answers.
  - Associated verbs: Outline, Recall, Recognize, Name, Quote, Label, List, Cite, Locate, Find, Reproduce
## Aligning Goals with Assessments

<table>
<thead>
<tr>
<th>Bloom’s Level</th>
<th>Assessment examples</th>
<th>How to measure</th>
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| Remember      | Objective test: MCQ, labeling, fill in the blank | • Accuracy – correct vs incorrect (individual)  
• Item analysis (group) |
| Understand    | Papers, written exam questions, problems, compare/contrast | Scoring/performance rubric |
| Apply         | Application activities, labs, prototyping, simulation | Developmental rubric, check list |
| Analyze       | Cases, papers, critiques, reflections | Developmental rubric |
| Evaluate      | Cases, presentations, critiques, reviews, journals | Developmental rubric |
| Create        | Research projects, product development, performances, business plans, web designs, prototype | Developmental rubric, juried evaluation, one-on-one meeting |

Adapted from: https://www.cmu.edu/teaching/designteach/design/assessments.html
UUSOM PROGRAM OBJECTIVES

Adapted from the Physician’s Competency Reference Set (PCRS): Observable abilities of health professionals, integrating multiple components, such as knowledge, skills, and attitudes.

Entrustable Professional Activities (EPAs): Units of professional practice, defined as tasks or responsibilities that trainees are entrusted to perform unsupervised once they have attained sufficient, specific competence.

EPAs by definition require the integration of competencies, and competencies are best assessed in the context of performance (as can be provided by the EPA framework) – AAMC, Core Entrustable Professional Activities for Entering Residency

http://medicine.utah.edu/students/programs/md/curriculum/competencies.php
ADDITIONAL RESOURCES

- **Curriculum Development for Medical Education: A Six-Step Approach second edition** by David E. Kern (Editor), Patricia A. Thomas (Editor), Mark T. Hughes (Editor)
  
  https://www.amazon.com/Curriculum-Development-Medical-Education-Six-Step/dp/0801893674 (note: we have copies of this text in the core educator library)

- **Bloom’s Taxonomy:** http://ctle.utah.edu/resources/Blooms-Taxonomy.php