Remediation of Basic Science in Integrated Blocks

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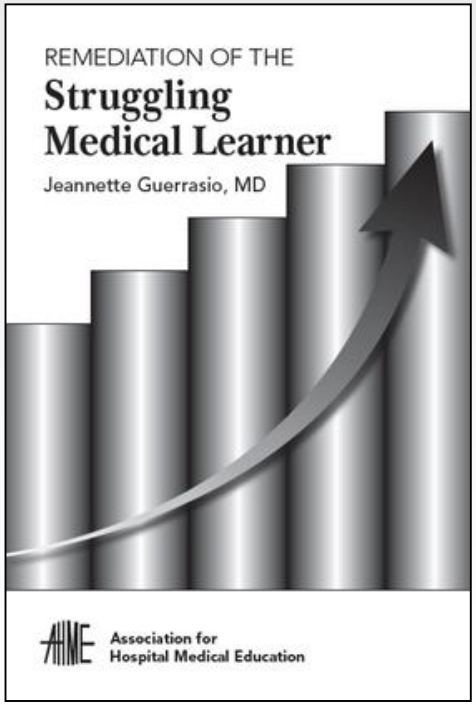
Objectives

- Define remediation
- Understand the unique challenges of medical students
- Identify tools to improve your comfort and ability to provide remedial support
- Review remediation models at two institutions

Disclosures

Dr. Guerrasio

Book Royalties



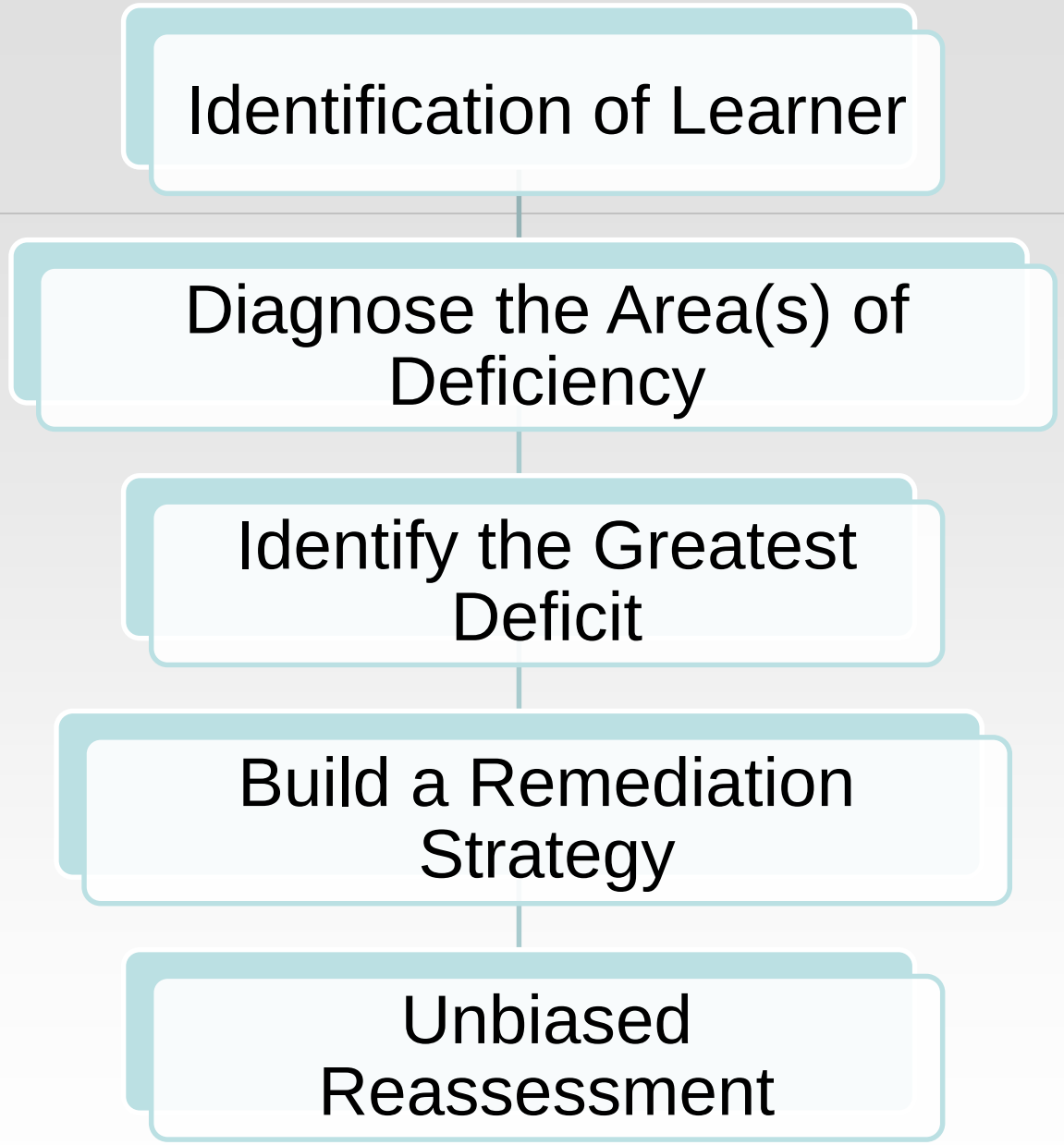
Dr. Bonaminio

Nothing to disclose

Remediation

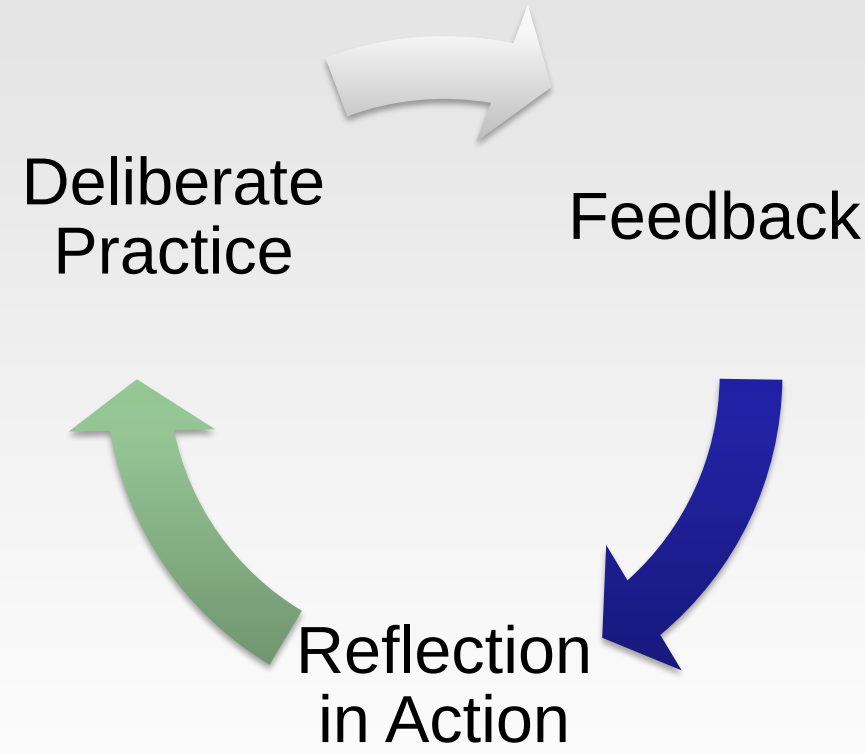
- **Students who require more than the standard curriculum to achieve academic success and sustained professional competency.**

Model for Remediation



Adapted from Hauer KE et al. Acad Med 2009; 84:1822-1832.

Remediation Strategy



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Underperforming Learners

WEAKNESSES

- Lack scaffolding to learning
- Don’t learn from the hidden curriculum
- Trouble identifying feedback
- Can actualize feedback

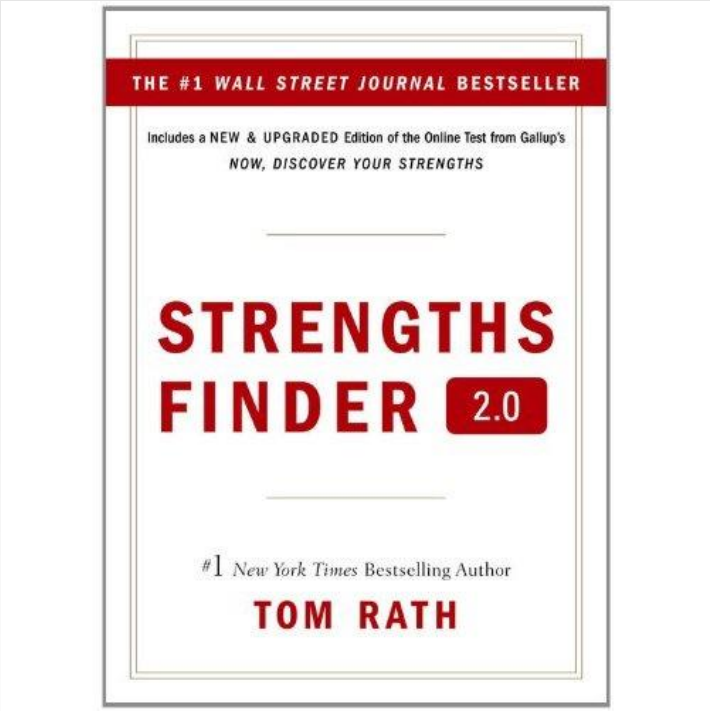
Mismatch

Teaching		Learning
1. Educational Task	→	1. Learner's Competence
2. Assumption of Framework	→	2. Absence of Framework
3. Unconscious/ Abstract Learning	→	3. Need for Concrete Learning
4. Feedback Provided	→	4. Not Receiving Feedback
5. Safe Learning Environment	→	5. Fear of Ridicule

Underperforming Learners

STRENGTHS

- Are teachable
- Have foundational knowledge
- Great memorizers
- Learn from concrete rather than abstract



Proactive Response to Risk Factors

- **Risk Factors for poor USMLE Step 1 performance (characteristics)**
  - **Clinical courses <75%**
  - **Lower MCAT total and verbal scores**
  - **Sat for the MCAT more times**
  - **Delays in USMLE Step 1**
  - **State and federal assistance**
  - **URM status**
  - **Age at matriculation (>30yo)**

Proactive Response to Risk Factors

- Risk Factors for poor USMLE Step 1 performance (adjusted)
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Study Skills Course

- EdD: helps post bacc students identify risks through a learning survey
- Boot camp just prior to medical school
- At orientation:
  - Risk factors
  - Self assessment to recognize strengths and vulnerabilities
  - Seeking help early

Meeting with Course Directors

- Required for failures
- Recommended for borderline performance

Director Checklist

1. Meet face to face with each student
2. Review the exam in person with the student and discuss missed questions
3. If possible, probe/ identify holes in study approach or style with these questions

Director Checklist

4. **Remind student: they received an email from Student Affairs**
5. **Document the discussion of these steps.**
6. **Schedule follow up appointment if appropriate**

Key Struggles and Strategies

- "There is too much material to learn."
  - Pre-read material
  - Focus on objectives
  - Know key concepts

Key Struggles and Strategies

- “I’m studying for hours, but I can’t seem to remember the material.”
  - Active learning
  - Practice recall
  - Understand rather than memorize

Key Struggles and Strategies

- "I am easily distracted"
  - Self care - sleep, meals, exercise
  - Best time of day
  - Active learning
    - Maintain focus better with questions than reading

Key Struggles and Strategies

- **“Where should I study?”**
  - **Limited distraction**
  - **Take practice tests/questions in an environment that simulates the testing environment**

Key Struggles and Strategies

- **“Should I do practice questions?”**
  - **Reinforce retention by applying the knowledge**
  - **Topics first, then random**
  - **How many?**

Key Struggles and Strategies

- **“What do I do if I get a question wrong?”**
  - **Understand the question**
  - **Make any assumptions?**
  - **Identify the middle step**
  - **What would the question have to say…**
  - **Key point**

Key Struggles and Strategies

- **“I can narrow the answer down to 2 choices… and then I pick the wrong answer.”**
  - **Lacks specificity of knowledge**

Key Struggles and Strategies

- **“The grading histogram from the failed exam shows that I score poorly on all topics and sections.”**
  - **Needs to acquire better test taking skills.**

Key Struggles and Strategies

- **“I would do better if I have enough time to finish the questions on the test.”**
  - **Have a consistent approach to answering questions**
  - **Practice larger blocks of questions**
  - **Learn to manage the clock during the exam**

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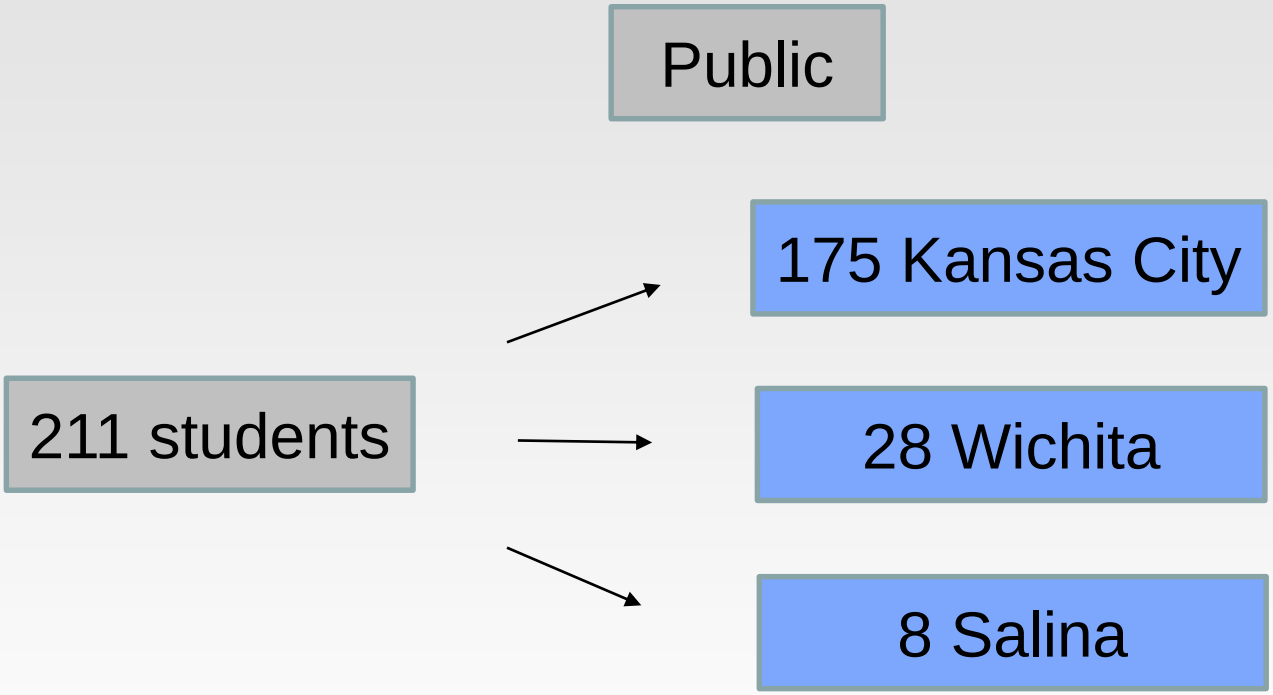
About Us – KU SOM



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Legacy Curriculum

12 integrated foundational science modules

Phase I: Year One

Foundations of Medicine	Genetics and Neoplasia	Inflammation and Immunity	Cardiopulmonary	Renal and Endocrine	Gastro-intestinal Tract and Nutrition	Reproduction and Sexuality
8 weeks	4 weeks	4 weeks	8 weeks	4 weeks	4 weeks	4 weeks

Phase I: Year Two

Musculoskeletal and Soft Tissue	Brain and Behavior	Infectious and Parasitic Diseases	Blood and Lymph	Integration and Consolidation
4 weeks	8 weeks	6 weeks	4 weeks	8 weeks

http://www.kumc.edu/school-of-medicine/office-of-medical-education/curriculum/phase-i-curriculum.html

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Remediate a Course(s)

1 module week → 1 credit

Remediate (summer) → up to 8 credits

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Remediate a Course(s)

Summer

4-week module ⇒ **3-week summer course**

6-8 week module ⇒ **5-week summer course**

Learning Activities

Self-study

Labs

Assignments

Meet with module director

Assessment

Quizzes

MCQ final exam

Lab exam

Tuition

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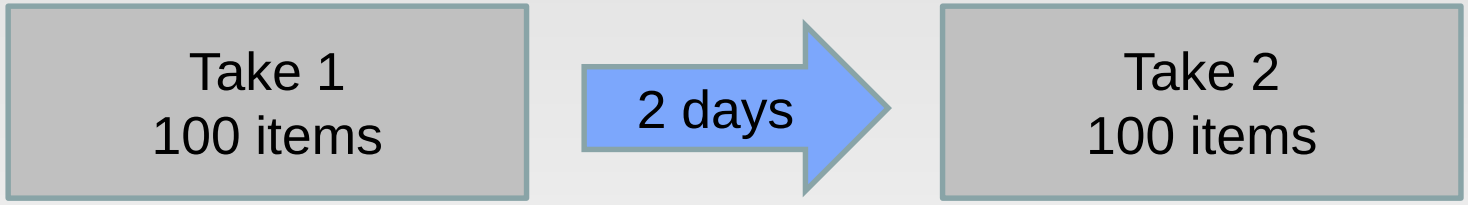
Two-Test System

Module MCQ exams



Test ~every 4 weeks

Items are not the same on the two exams

Must take at least one exam

Higher of the two scores used in final grade

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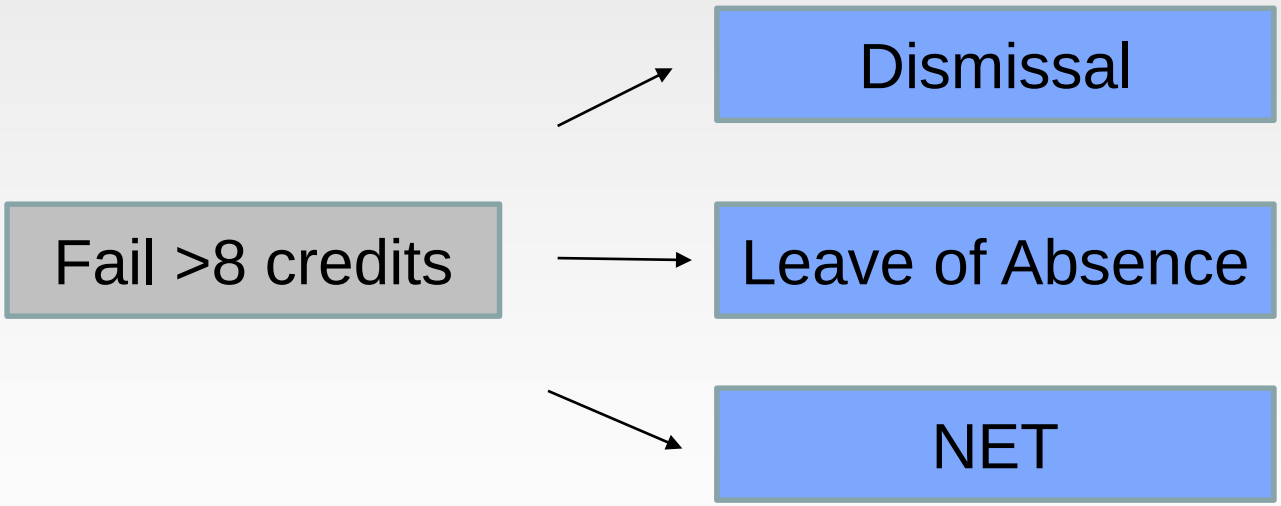
Repeat the Year

Office of Student Affairs
Academic and Professionalism Committee



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Not Evaluated Track - NET

Office of Student Affairs

Enrolled	→	"*audit*" remaining modules in fall and spring semesters
Grade	→	Credit
Must complete	→	all learning activities and assessments (min 60% on exams)
Required	→	meet with Learning Specialist
Required	→	meet with Psychologist
Tuition	→ ↓	

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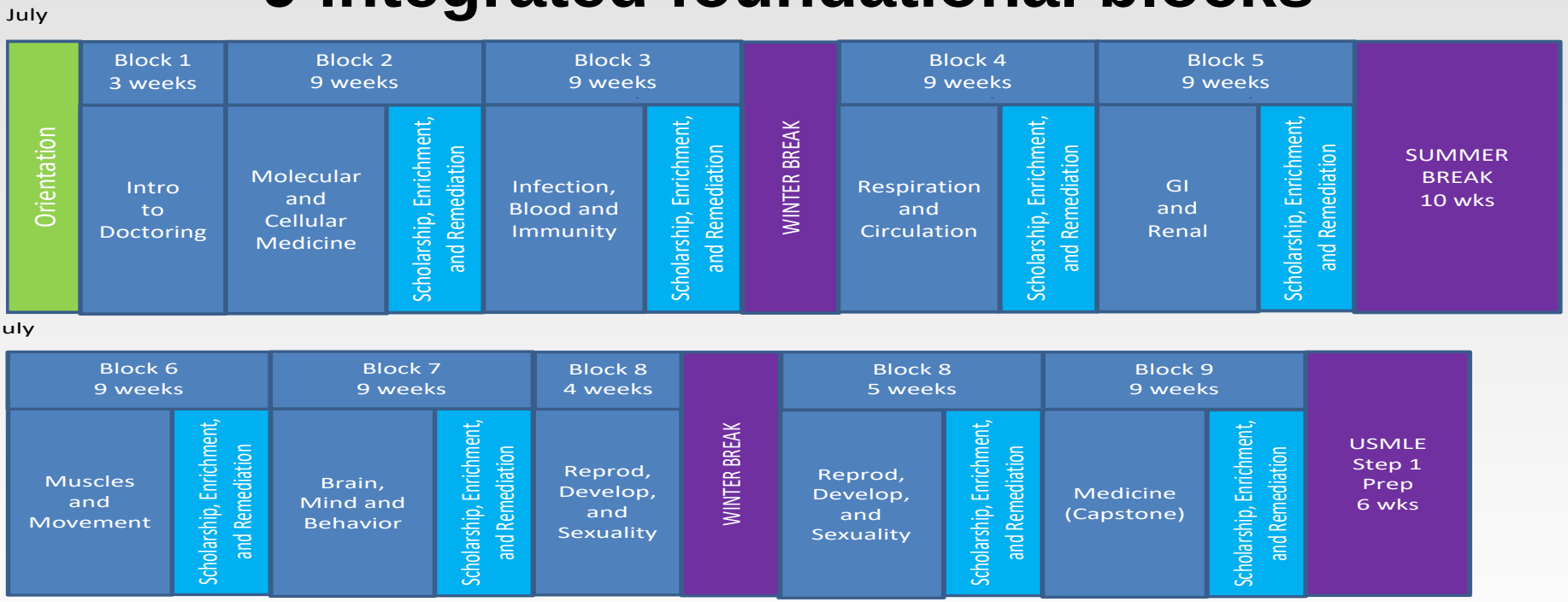
ACE Curriculum (July, 2017)

9 integrated foundational blocks



http://www.kumc.edu/school-of-medicine/education/ace-curriculum/the-curriculum.html

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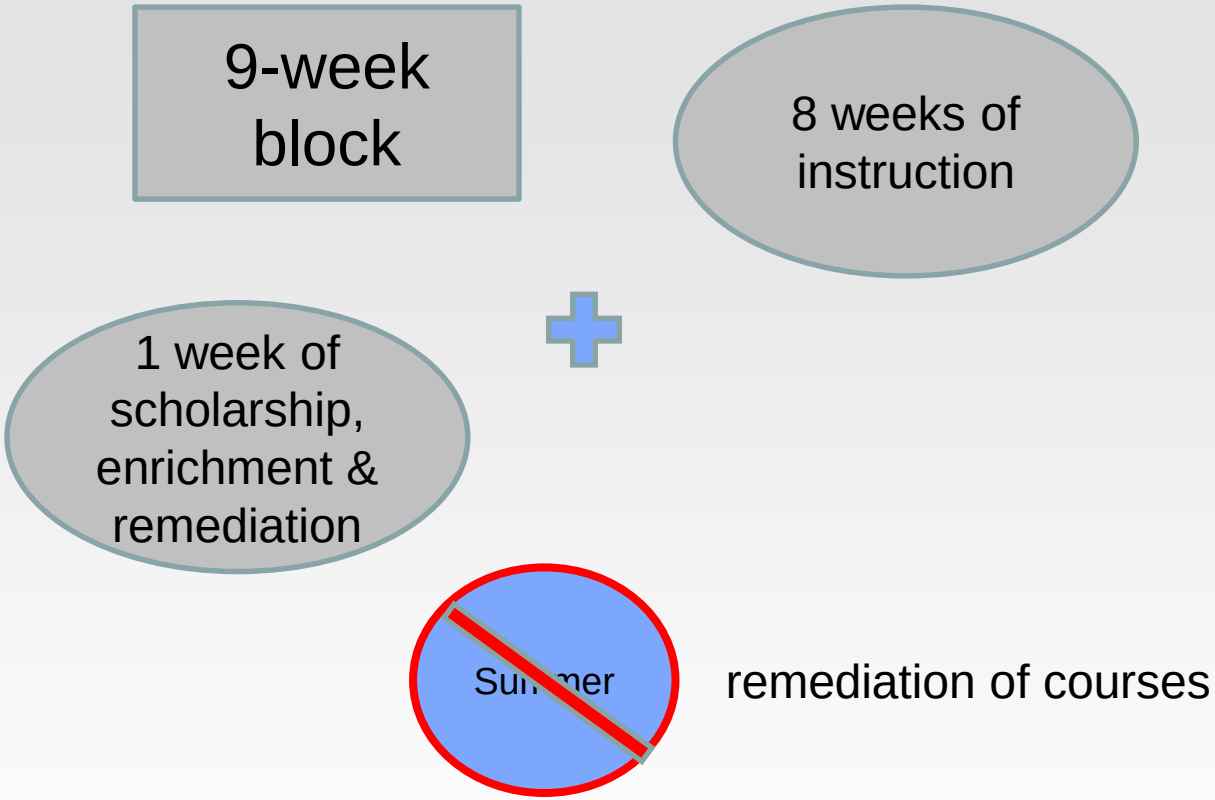
ACE Curriculum



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ACE Remediation

Block MCQ exams

Week 2, 4, 6, 8
50 item exams

Fail exam

SER Week 9
50 item exams

Items ≠ on the two exams

Retake up to 3 of the 4 exams

Fail all 4 exams → fail block

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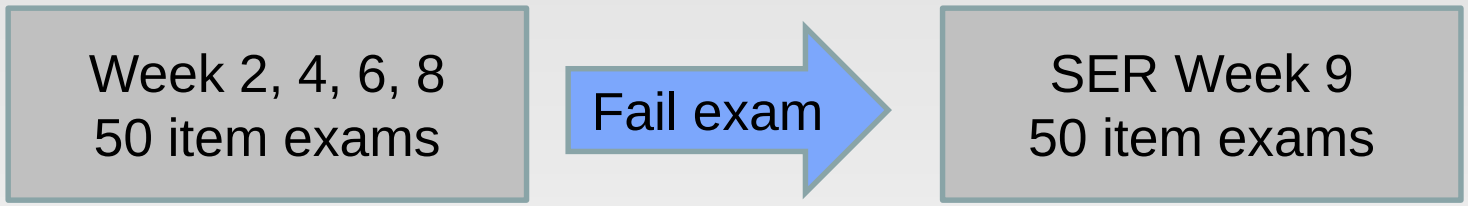
ACE Remediation

Block MCQ exams



Retake up to 3 of the 4 exams

Retake up to 2 exams this SER week

Retake 3rd exam the following SER week

Highest possible exam score → 70%

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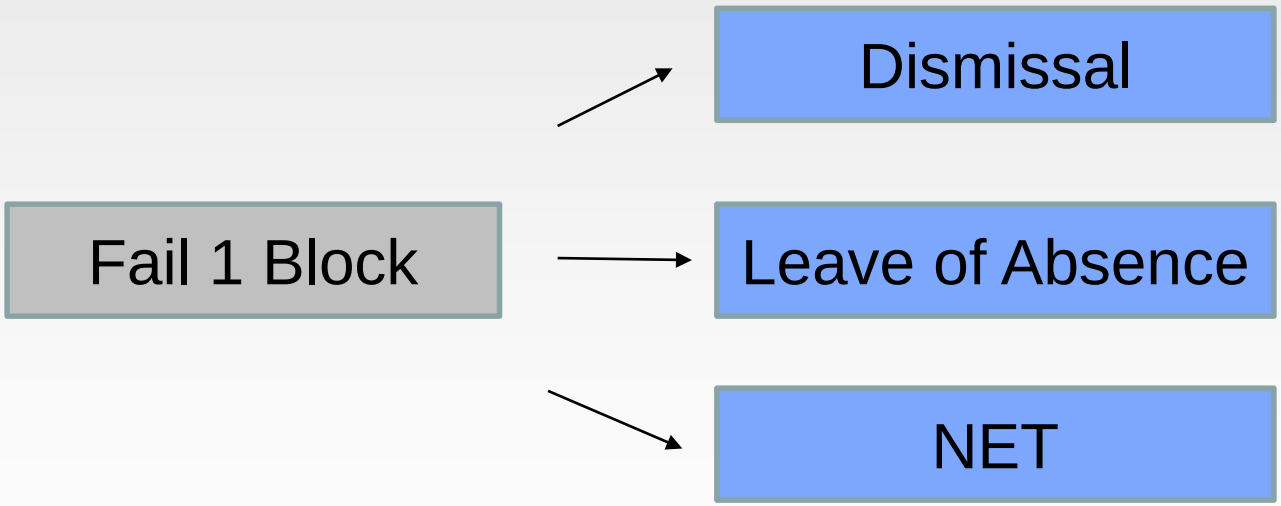
ACE Repeat the Year

Office of Student Affairs
Academic and Professionalism Committee



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Outcomes

Entering classes 2006-2013

1411 students

7% remediated at least 1 module

4% repeated the year

Repeat < Remediate < Regular

MCAT Sum, Undergrad GPA (Science and Cumulative)

Repeat, Remediate < Regular

Phase I GPA, Phase II GPA

Step 1 Score and Passing %

Step 2 CK Score and Passing %

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Outcomes

Entering classes 2006-2011

<u>Graduated in 4 years</u>

Repeat (0%) < Remediate (65%), Regular (94%)

<u>Graduated in 5 years</u>

Repeat (33%) < Remediate (93%), Regular (98%)

<u>Graduated in 6 years</u>

Repeat (49%) < Remediate (96%), Regular (98%)

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U. CO Case Example

- **Weekly Meeting:**
  - **Student Affairs Deans**
  - **Educational Psychologist**
  - **Remediation Specialist**
  - **Support Staff**
    - **Director of Student Affairs**
    - **Administrator**

- **Identification of students with failing and borderline test scores**

U. CO Case Example

- “Maria”
  - MS1, has failed the first two exams of the Blood and Lymph course.
  - Reviewing past performance
    - Failed anatomy and completed remediation over the winter break
    - Was offered a tutor
    - MCAT scores low
    - Less rigorous undergraduate college
    - Learned English at age 8

U. CO Case Example

- **Available resources:**
  - **Meeting with the course director**
  - **Peer tutoring**
  - **QUAR groups**
  - **Meetings with Educational Psychologist or Remediation Specialist**
  - **Mental health evaluation and support**
  - **Neuropsychiatric testing ($)**

U. CO Case Example

- Maria reveals that she has become depressed and anxious
  - Meets with a psychiatrist
  - Meets with the educational psychologist
    - Reviews areas of weakness (studying and test taking)
    - Better understands expectations
    - Implements strategies for improvement
    - Reviews subsequent test performance, identifying new strategies for learning

U. CO Case Example

- Maria exam performances slowly begins to rise
  - No longer failing tests
  - Now is consistently out of the “danger zone”
  - Establishes a study plan for the summer between 1st and 2nd year
  - Continues to work with educational psychologist through 2nd year
  - Joins a QUAR group
  - Takes a CBSSA practice exam taken in December of 2nd year

Thank You

- Carol Lay, EdD
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- Joe Fontes, PhD