Medical Decision-Making

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MEDICAL DECISION-MAKING COMPONENT LOGISTICS
Schedule – Content – Readings/Assignments

<table>
<tr><td colspan="3">Information Retrieval (Ask and Acquire) Thread</td></tr>
<tr><td>August 4
11 AM-12 Noon</td><td>Lecture (1 hour)
The Value of Uncertainty
o The decision-making context
o Differential Diagnoses
o Introduce Computer Session #1 Option and Assignment #1</td><td rowspan="4">Readings:
Syllabus (required)
Background
The Questions
The Search: Basic Concepts

Articles – found in syllabus (required)
Chances Are (New York Times Reprint)
Slaying of a Beautiful Hypothesis by Facts

Users' Guides (strongly recommended) – The MANUAL
Chapters 1-4 (pages 3-58)

User's Guides (optional) – The ESSENTIALS
Chapters 1-4 (pages 1-76)

Assignment (required)
Assignment #1–turn in at Computer Session #2</td></tr>
<tr><td>August 8
9-10 AM</td><td>Lecture (1 hour)
The Information Cycle
o Probability Laws, Bayes Probabilistic Reasoning
o Question-Generation
o Targeting information resources</td></tr>
<tr><td>August 5
1:30-2:30,
2:30-3:30,
3:30-4:30, or
4:30-5:30 PM</td><td>Computer session #1 (1 hour) – OPTIONAL
Introduction to the Information Resource Environment
• Overview of Environment
• Question generation - Apply MDM principles to MDC-Down Syndrome session (August 6, 1-3 PM)
• Introduction to PubMed and OVID</td></tr>
<tr><td>August 19 1-3 PM
or Aug 22 3-5 PM
or August 23
1-3 PM or 3-5 PM</td><td>Computer session #2 (2 hours) - MANDATORY
Basic and Advanced MEDLINE Searching
o Review and Collect Assignment #1
o PUBMED / OVID distinctions
Introduction to Longitudinal Cases Resources
o Advanced background resources
o Psychosocial literature databases
You are the Filter</td></tr>
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<table>
<tr><td colspan="3">Biostatistics and Clinical Epidemiology (Appraise) Thread</td></tr>
<tr><td>August 5
9AM-10 AM
August 8
1PM-2PM</td><td>Lecture (1 hour)
Introduction to Biostatistics
o Hypothesis generation and testing
o Sampling
o Statistical testing
o Statistical significance vs. Clinical Significance
o Confidence Intervals</td><td rowspan="3">Readings:
Syllabus (required)
Fundamentals of Epidemiology and Biostatistics

Users’ Guides (strongly recommended) – The MANUAL
Chapter 5 (pages 59-64)
Chapter 10.1 (partial) (Pages 209-215)
Chapter 10.2 (pages 221-229)
Chapter 12 (pages 363-381)
Chapter 18 (pages 509-520)

User’s Guides – The ESSENTIALS (optional)
Chapter 5 (pages 77-84)
Chapter 9 (pages 141-168)
Chapter 13 (pages 223-238)

Assignments (required)
Assignment #2 – turn in at Small Group Session #1</td></tr>
<tr><td>August 9
11AM-12 Noon
and
1-2 PM</td><td>Lectures (2 hours total)
Observational Studies, Biostatistics and Epidemiology
o Confounding
o Cohort studies
o Case-control studies
o Cross-sectional studies
o Introduce Assignment #2 (covers lectures)</td></tr>
<tr><td>August 11
1-3 PM
or
3-5 PM</td><td>Small Group session #1 (2 hours)
Observational Studies and Basic Biostatistics
o Review and Collect Assignment #2
o Apply principles from lectures to problem sets and cases</td></tr>
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<table>
<tr><td colspan="3">Diagnostic Reasoning (Apply) Thread</td></tr>
<tr><td>August 15
9-10 AM
and
10-11 AM</td><td>Lectures (2 hours)
Diagnostic Reasoning-I and II
o Prevalence/Incidence
o Sensitivity / Specificity / Accuracy / Precision / Likelihood Ratios / Predictive Values
o Diagnostic Question Generation
o Gold standards and blinded-assessment
o Probabilistic Application
o Introduce Assignment #3 (covers lectures)</td><td rowspan="3">Readings:
Syllabus (required)
Fundamentals of Diagnostic Interpretation

Article (required)
Mammogram Math (NY Times reprint)

Users’ Guides (strongly recommended) – The MANUAL
Chapters 15-16 (pages 407-438)
Chapter 17.4 (pages 491-505)

User’s Guides – The ESSENTIALS (optional)
Chapters 11-12 (pages 179-222)

Assignments (required)
Assignment #3 – turn in at Small Group Session #2
Assignment #4 – turn in at Small Group Session #3</td></tr>
<tr><td>August 16
1-3 PM
or
3-5 PM</td><td>Small Group session #2 (2 hours)
Diagnostic Reasoning
o Review and Collect Assignment #3
o Apply principles from lectures to problem sets and cases
o Receiver Operator Characteristic Curves (ROC)
o Introduce Assignment #4 (Covers MDC Colon Cancer)</td></tr>
<tr><td>August 24
3-4 PM
or
4-5 PM</td><td>Small Group session #3 (1 hour)
Diagnostic Reasoning Applied to Colon Cancer
o Apply MDM principles to MDC-Colon Cancer session (August 25 1-3 PM)
o Review and Collect Assignment #4</td></tr>
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