The Syllabus: Good for Education?

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Research about the Syllabus
What is a Syllabus?

- A brief, often tabular, statement of the main points of a speech, a book, a course of study, etc.
What is a Syllabus?

- At Michigan State University
  - Instructor name, office hours, contact info
  - Course #, Days, times where
  - Required material
  - Course Objective
  - Grading Procedure
  - Course Outline
The Pitt Syllabi
Syllabus: The Origins

- “The Professors spoke so rapidly that even students with a system of shorthand missed words and phrases. In this situation it was customary for several students to agree literally to compare notes after each lecture;…”
  - Thomas Parke, University of Edinburgh, 1771

Syllabus: The Origin

- And it stayed this way until
- The advent of recording devices
  - Late Seventies
  - Note services began
- Syllabus in the Pitt form was created
- Writer’s cramp greatly diminished
- Ball point pen sales plummeted
So are syllabi good things?

- It depends
  - Some are
  - Many aren’t
- The Evolution of a Syllabus contribution
### CEILING DOSES FOR CONTINUOUS I.V. INFUSION OF LOOP DIURETICS (in mgs per hour)

<table>
<thead>
<tr>
<th></th>
<th>EARLY</th>
<th>MID</th>
<th>LATE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furosemide</td>
<td>10</td>
<td>5</td>
<td>0.5</td>
<td>16</td>
</tr>
<tr>
<td>Bumetanide</td>
<td>1</td>
<td>0.5</td>
<td>0.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Torsemide</td>
<td>10 to 20</td>
<td>5 to 10</td>
<td>8</td>
<td>25 to 40</td>
</tr>
</tbody>
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### WHAT HAPPENS WHEN [DIURETIC] IN TUBULAR LUMEN IS LESS THAN CEILING??

*Postdiuresis Sodium Retention!!*
II. WHAT DO THEY DO?

A. Na⁺-K⁺-2Cl⁻ symport inhibitors (loop diuretics; high ceiling diuretics)
   1. Therapeutic effects
   2. Adverse effects
   3. Other effects

B. Na⁺-Cl⁻ symport inhibitors (thiazide diuretics; thiazide-like diuretics)
   1. Therapeutic effects
   2. Adverse effects
   3. Other effects

C. Na⁺-channel inhibitors (K⁺-sparing diuretics)
   1. Therapeutic effects
   2. Adverse effects
   3. Other effects

D. Mineralocorticoid receptor antagonists (K⁺-sparing diuretics; aldosterone antagonists)
   1. Therapeutic effects
   2. Adverse effects
   3. Other effects

III. WHEN DO I USE THEN?

A. Edema
   1. Classification of edema
The precise details of solute transport are different in each segment of the nephron because the details depend on which transporters are expressed in a given segment and whether the expressed transporters reside in the luminal or basolateral membrane. Moreover, the physical properties of the epithelial barrier can influence transport behavior. Nonetheless, a general model (Figure 7) of renal tubular transport can capture the main theme of how epithelial cells do their job and can be summarized as follows:

**Step 1.** Na⁺, K⁺-ATPase in the basolateral membrane hydrolyzes ATP and transports Na⁺ into the intercellular and interstitial spaces and K⁺ into the cell. This establishes an electrochemical gradient for Na⁺ across the cell membrane directed inward.

**Step 2.** Na⁺ can diffuse down its electrochemical gradient across the luminal membrane via Na⁺ channels (CH). Alternatively, the energy available in the Na⁺ electrochemical gradient may be used by symporters (S) or antiporters (A) in the luminal membrane to cotransport or countertransport, respectively, solute into or out of, epithelial cells. Examples of symport include Na⁺-glucose, Na⁺-H₂PO₄⁻, and Na⁺-amino acid. An example of antiport is H⁺.

**Step 3.** Na⁺ exits the basolateral membrane via the Na⁺ pump or via symporters or antiporters in the basolateral membrane.
And the other complaints...

- Lecture doesn’t follow the syllabus material! (# 1 complaint)
  - Page Rustling
  - Distraction from the lecture
  - Class murmurs to orient friends to where the lecture has gone
And the other complaints...

- The syllabus is poorly written!
- The pages aren’t numbered!
- Why can’t the syllabus be in color?
- The syllabus is too long!
- The notes aren’t complete!
Complaints continue

- The students say “Too Trivial” and the faculty say:
  - “It’s my research, and everyone must be fascinated by it!”
  - “They need to know everything!”
- Fails to teach to level
- Fails to know what has been taught before
Complaints Continue

- Syllabus incomplete and the faculty say:
  - “I’m too busy to do this.”
  - “I turned out just fine without a syllabus.”
  - “We didn’t need this when I was a student.”
  - “I’m only doing this because my Chief/Chair is forcing me to do this.”
  - “We coddle the students too much. In my day…” (Oh Please)
Proposed

- The syllabus doesn’t kill learning
- Teachers unwilling to put in the effort kill learning
The Ideal Syllabus

- Outlines and emphasizes major learning points
  - At level
  - Not too much, not too little (hardest part)
  - References – encourages further exploration and independent learning
  - Space for notes
In defense of note taking

- Note Taking
  - Record Information
  - Aid Reflection
More on Notes

- More than creation of passive info repository
- Taking notes is part of memorization process
  - Creates internal storage
  - ?Kinesthetic Learning
  - ?Visual learning
Best way to use notes

- Reading
- Highlighting
- Recopying

Syllabus Improvement

- Faculty Development
Pitt Med in the future
Pitt Med in the future

2045
The Year Man Becomes Immortal
BY LEV GROSSMAN