





## Elements Required for Curricular Map

- Courses – required vs. elective (Standard 10)
- Curricular outcomes (Standard 12)
- Content (Standard 13)
- Teaching and learning methods (Standard 11)
- Assessment methods (Standard 15)



## How do you collect information for your curricular map?

- Course coordinators
- Course syllabi
- Students
- One person meets with each faculty member to compile information
- Others?



## University of Pittsburgh SOP Course Syllabus Template

- Course description
- Curricular outcomes associated with course
- Science/Practice foundation of course
- Ability outcomes of course
  - Each linked to curricular outcome(s)
- Methods of learning
- Course requirements and grading
- Textbooks / other learning resources
- Schedule
- Required academic statements (University-based)



## Pharmacotherapy of Cardiovascular Diseases (PHARM 5216)

**Key Words – Identify Curriculum Outcomes Associated with Course:** Critical Thinking; Development of Knowledge & Skills; Communication Skills (Oral and Written), Patient Assessment; Pharmaceutical Care Plan Development; Pharmacotherapy Decision Making; Public Health

**Key Words – Identifying Science/Practice Foundation of Course:** Pharmacology; Anatomy & Physiology; Pathophysiology; Molecular Biology/Genetics; Medicinal Chemistry; Pharmacotherapy; Patient Assessment Laboratory



## Pharmacotherapy of Cardiovascular Diseases (PHARM 5216)

### Ability outcomes:

1. Describe how available drug classes are used to ameliorate pathophysiologic effects of cardiovascular disease. (General Curriculum Outcome 1. Critical Thinking; General Curriculum Outcome 2. Development of Knowledge & Skills; General Curriculum Outcome 3. Communication Skills (Oral and Written))
2. Design an individualized treatment plan, based upon the pathophysiology of the major cardiovascular disease states as well as in consideration of other disease states. (Professional Practice Curriculum Outcome 2. Pharmaceutical Care Plan Development; General Curriculum Outcome 1. Critical Thinking; General Curriculum Outcome 2. Development of Knowledge & Skills; General Curriculum Outcome 3. Communication Skills (Oral and Written))
3. Interpret population-specific data to assess the health needs of a community or population. (Practice Curriculum Outcome 7. Public Health)



## Pharmacotherapy of Cardiovascular Diseases (PHARM 5216)

### Methods of Learning

1. Large group sessions (lectures)
2. Case presentations
3. Reading assignments
4. Computer-assisted learning
5. Human patient simulation
6. Practica time will be used to evaluate the following skills
  - Blood pressure monitoring
  - Monitoring and assessment of ECGs
  - Cardiovascular patient exam (heart sounds, JVD, PMI, etc)
  - Pharmacotherapy decision making skills



### Pharmacotherapy of Cardiovascular Diseases (PHARM 5216)

#### Course Requirements and Grading

1. Major examinations (4 / term)
2. Case evaluations
  - Written assignments for cases presented during course
  - Oral presentations of cases during practica
  - Clinical performance on patient cases during simulation



### Curricular Map Data Collection

- Course syllabus template
- Checklists developed for:
  - Curricular outcomes
  - Appendix B keywords
  - Teaching & Learning methods
  - Assessment methods
- Professional Year Coordinators
  - Individual meetings with course coordinators



Can we produce a sustainable product that can assist with ongoing activities related to curricular development?



### Curricular Mapping Products

- K-12
  - Not suitable for pharmacy education
- Medicine
  - CurrMIT
- Pharmacy
  - Pharmacy Curriculum Management Systems
  - E\*Value™
  - Academic Management Systems




### Why develop our own curricular map?

- Budget
- Time constraints
- Databases already in place
- Diligence of core people
  - Faculty
    - Curriculum Committee
  - Staff




### University of Pittsburgh SOP Curricular Map

- Database driven
  - FileMaker® Pro
- Links elements from course syllabi to key curricular map requirements
- Designed to generate course syllabi



## Building a Curricular Map


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## Initial Direction

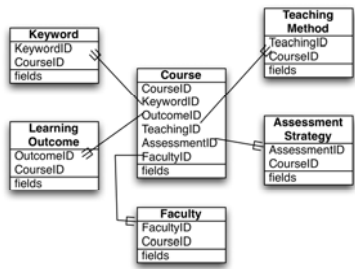
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- U of Tennessee shared with Susan Meyer@ Pitt that they had built a map in FileMaker Pro, and we were given a map, that looked like an Excel spreadsheet.
- Since I knew FileMaker, and we were already using it for other database needs, I used the paper map, to lay out an ERD
- I reviewed our existing Databases and determined how to best use what we had for what we needed.




## Basic Structure

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```


    erDiagram
        Keyword ||--o{ Course : "has"
        LearningOutcome ||--o{ Course : "has"
        Faculty ||--o{ Course : "has"
        Course ||--o{ TeachingMethod : "has"
        Course ||--o{ AssessmentStrategy : "has"
    
```



## Roadmap for Project

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- Maps needed for Accreditation Report
- Course/Curriculum Evaluation
- Syllabus Builder
- Weekly Grid Builder



## Connected Projects

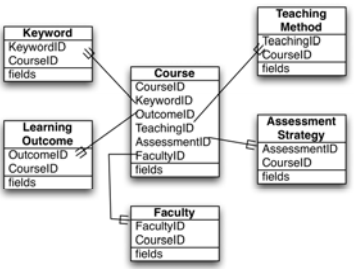
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- PAGE
- Annual Review WebApp
- University Digital Vitae



## Basic Structure

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```

    erDiagram
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```





## Sustainability of the Map

- Maps “set” but data can change/ be revised
- Course Coordinators to update on timeline.
- Types of changes trigger Curriculum Committee Review.
- Annual use by Curriculum Committee for Course Review.

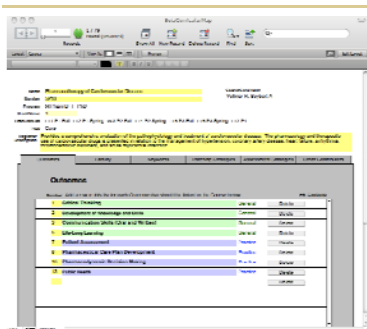


## Investment

- Staff Involvement
  - Database Development
  - Administrative Staff
- Course Coordinator Involvement
- Curriculum Committee Involvement



## Initial Build



## Syllabus Builder

- The purpose of the syllabus Builder was to generate an easy to use engine for generating PDF's of a standard syllabus template, providing faculty and students with a standardized, easy to follow and complete document in a digital form.
- Limited testing to begin for Fall 2010.




## Syllabus Builder

- Standardized elements:
  - Mission Statement
  - University Policies
- Unique elements:
  - Day, time, and location of class




## How the Curricular Map is Used


Perspective of the Curriculum Committee

 **The curricular map is a tool used to organize a vast amount of information in a systematic fashion**

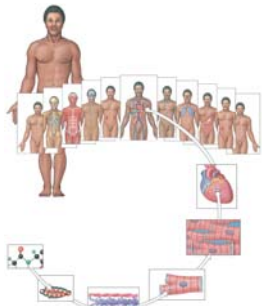
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Curriculum Individual course


 **Whole organism down to the molecular level.**

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Like the organism, the map is constantly changing and must be adaptable


Advantage of having a dynamic curricular map



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Navigation tool

Planning tool

 **How the Curricular Map is Used:**

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1. Meet ACPE accreditation standards
2. Content organization
3. Identify gaps and redundancies
4. Course review process
5. Support more informed discussions about curriculum
6. To make the curriculum transparent for all stakeholders
7. Generate better syllabi
8. Close the loop with Curricular Assessment
9. Insure the mix and interaction of basic science and practice faculty

 **How the Curricular Map is Used:**

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1. Meet ACPE accreditation standards

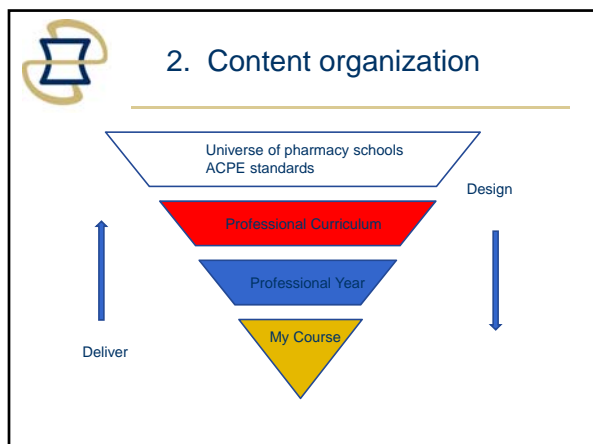
Standard 8 - The Goal of the Curriculum  
Standard 10 - Curricular Development, Delivery, and Improvement (4)  
Standard 11 - Teaching and Learning Methods (4)  
Standard 12 - Professional Competencies and Outcome Expectations (5)  
Standard 13 - Curricular Core - Knowledge, Skills, Attitudes, and Values (2)  
Standard 14 - Curricular Core - Pharmacy Practice Experiences  
Standard 15 - Assessment and Evaluation of Student Learning and Curricular Effectiveness

 **How the Curricular Map is Used:**

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1. Meet ACPE accreditation standards
2. Content organization

horizontal and vertical integration - linking elements of the curriculum



2. Content organization (cont.)

Identify sequencing issues –

1. Drug Development Course could be better placed
2. Profession of Pharmacy (6-courses) sequence
3. Threads and themes across the curriculum
4. Vertical integration
5. Building levels of competency

1. Meet ACPE accreditation standards
2. Content organization
3. Identify gaps and redundancies

Pharmacogenomics:

ACCP COMMENTARY

American College of Clinical Pharmacy  
Recommended Basic Science Foundation Necessary to  
Prepare Pharmacists to Manage Personalized  
Pharmacotherapy.

Pharmacotherapy, 6, 625, 2010.

*PharmGenEd™*  
UC San Diego - The Skaggs School of  
Pharmacy & Pharmaceutical Sciences  
University of California San Diego

What do

1. Meet ACPE accreditation standards
2. Content organization
3. Identify gaps and redundancies
4. Course review process

4. Course review process

**Schedule for course reviews is linked to curricular map – four year cycle**

**The map is a valuable information resource for the course reviewers**

**Map identifies major changes that prompt course review**



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1. Meet ACPE accreditation standards
  2. Content organization
  3. Identify gaps and redundancies
  4. Course review process
  5. Support more informed discussions about curriculum



#### How the Curricular Map is Used:

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#### 8. Close the loop with Curricular Assessment

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1. Assessment Committee provides feedback to the Curriculum Committee for programmatic curricular change
2. Assessment matrix links each curricular objective to specific courses
3. This allows the Curriculum Committee to close the loop between the designed curriculum, the delivered curriculum and the impact of the curriculum



#### How the Curricular Map is Used:

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Mapping specific content:

1. Pharmacology (e.g., drug classes)
2. Medicinal chemistry
3. Pharmacogenomics
4. Ethics
5. Diseases



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Development of "Super Rubrics"

1. Examples
  - a. oral presentations
  - b. SOAP notes



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Syllabus Generator

Path to all documents



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Activity Code  
DJG1Q8