

Automated Curriculum Mapping: Tracking and Understanding What You Have Taught

OsEAN – 1/6/2014

Gerald Thrush, PhD & Scott Helf, DO, MSIT

Western University of Health Sciences

College of Osteopathic Medicine of the Pacific



**Western
University**
OF HEALTH SCIENCES
*The discipline of learning.
The art of caring.*



Albert Einstein College of Medicine
OF YESHIVA UNIVERSITY

Terence P. Ma, PhD

Albert Einstein College of Medicine

Conflict of Interest Disclaimer

ExamSoft Worldwide, Inc. is financially supporting Dr. G. Thrush's travel expenses for this meeting.

Tensions in Medical Education

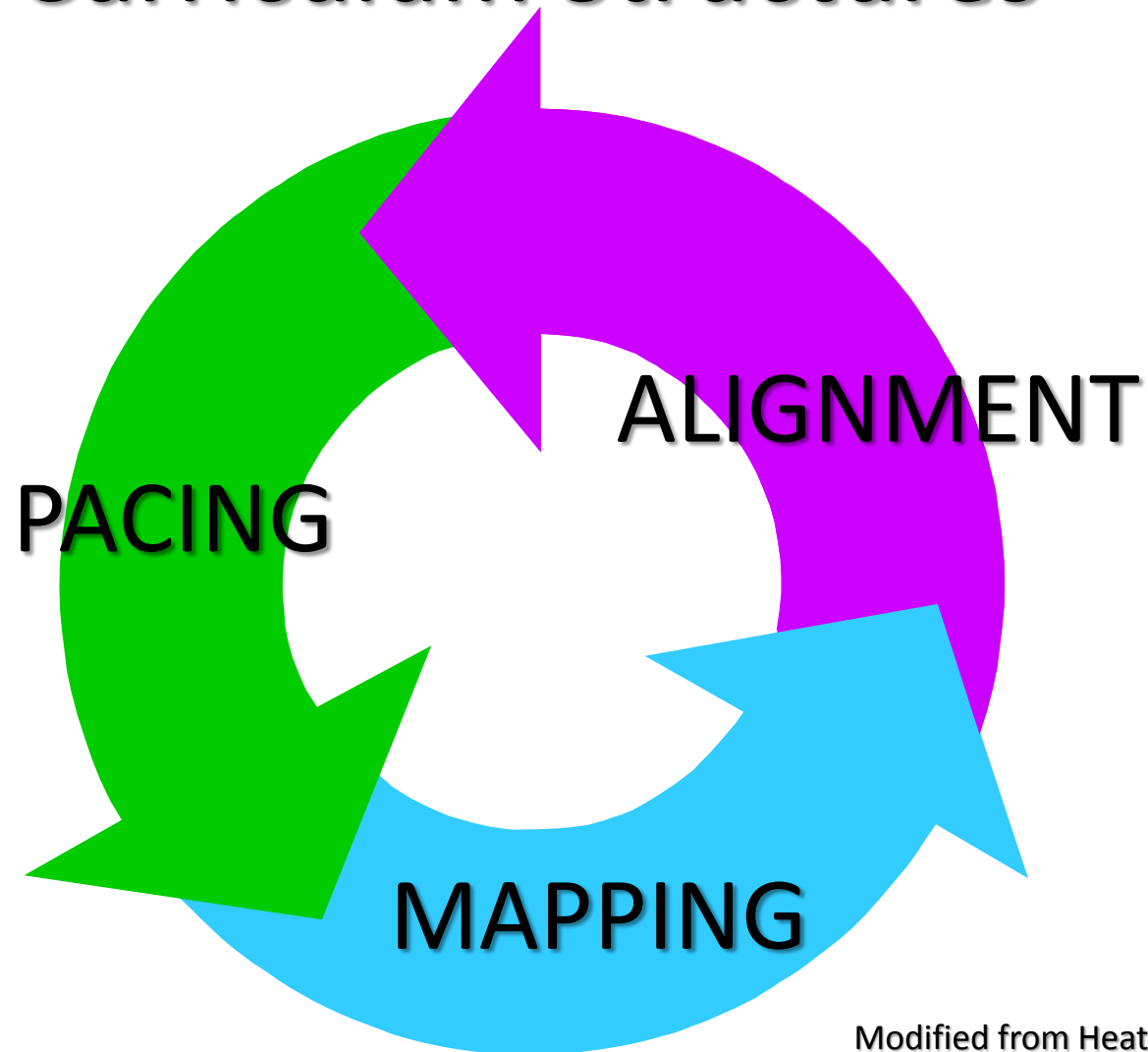
- Need to teach more
- Need to teach effectively
- Need to teach clinically-relevant information
- Teach in less time
- Teach for understanding
- Teach foundations for clinical understanding



Purposes of Curriculum Mapping

- Allows educators to review the curriculum to **check for unnecessary redundancies, inconsistencies, misalignments, weaknesses, and gaps**;
- Documents the **relationships between** the required **components of the curriculum and** the intended **student learning outcomes**;
- Helps **identify opportunities for integration** among disciplines;
- Provides a **review of assessment methods**; and
- **Identifies what students have learned**, allowing educators to focus on building on previous knowledge

Curriculum Structures



Modified from Heath, 2001
Virginia Department of Education

Curriculum Mapping Goals

- **100% posting of the curriculum material**
- **Accurate and consistent “tagging” of each learner activity**
- **Be able to report to stakeholders**



6 Monday		7 Tuesday		8 Wednesday		9 Thursday	10 Friday
OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics - Pathology: Cell Injury and Cell Death I and II - Cyrus Parsa Pomona: HEC Lecture Hall 1		OM 5145 Introduction to Disease, Immunity, and Therapeutics -	OM 5145 Introduction to Disease, Immunity, and Therapeutics -
OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics -	OM 5145 Introduction to Disease, Immunity, and Therapeutics -
OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics - Microbiology: Bacterial Structure and Function I and II - Jeffrey Felton Pomona: HEC Lecture Hall 1		OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics -	OM 5145 Introduction to Disease, Immunity, and Therapeutics -
OM 5145 Introduction to Disease, Immunity, and Therapeutics -				OM 5145 Introduction to Disease, Immunity, and Therapeutics -		OM 5145 Introduction to Disease, Immunity, and Therapeutics -	OM 5145 Introduction to Disease, Immunity, and Therapeutics - IDIT Exam 1
OM 5180 Essentials of Clinical Medicine II - ECM II Group B - Steven Lam Pomona: Other, Lebanon: Other	OM 5190 Osteopathic Principles and Principles II - OPP II Group A - Rebecca E. Giusti Pomona: Other, Lebanon: Other	OM 5180 Essentials of Clinical Medicine II - ECM II Group A - Steven Lam Pomona: HEC	OM 5190 Osteopathic Principles and Principles II - OPP II Group B - Rebecca E. Giusti Pomona: HEC	PM 5180 Essentials of Clinical Medicine II - Session 1: Underst the Focus Hx &	OTHER (Non-Curriculum) - IPE 5100 - Raj Kandpal Pomona: Other		
						OM 5145 Introduction to Disease, Immunity, and Therapeutics -	

	Thursday
7 AM	
8	OM 5145 Introduction to Disease, Immunity, and Therapeutics - Pharmacology: Drug Metabolism - Manish Issar Pomona: HEC Lecture Hall 1
9	OM 5145 Introduction to Disease, Immunity, and Therapeutics - Immunology: Cells and Organs of the Immune System - Vishwanath Venketaraman Pomona: HEC Lecture Hall 1
10	OM 5145 Introduction to Disease, Immunity, and Therapeutics - Immunology: Innate Defenses - Vishwanath Venketaraman Pomona: HEC Lecture Hall 1
11	OM 5145 Introduction to Disease, Immunity, and Therapeutics - Microbiology: Microbiological Methods - Michelle Steinauer Lebanon: Lecture Hall 1
12 PM	
1	OM 5145 Introduction to Disease, Immunity, and Therapeutics - Microbiology: Introduction to the Protozoa/Fungi/Worms (PRE-RECORDED) - Michelle Steinauer Pomona: Other, Lebanon: Other
2	

Keywords: Ensure Correct Concept Choice

- Medical Subject Headings (MeSH)
 - Controlled vocabulary from NLM used for indexing, cataloging, and searching biomedical and health-related information and documents.
 - 2014 edition
 - Contains 27,149 descriptors
- Unified Medical Language System (UMLS)
 - 2013AB Release
 - Contains 8,547,943 English concept names
 - Contains 11,399,743 total concept names from 21 different languages

This List: Content Calend

carbohydrate



1-2 of 2 results



[Biochemistry: Insulin and Glucagon; Integration of Metabolism](#)

Pomona: HEC Lecture Hall 1; Katherine Mitsouras ... InsulinGlucagonMetabolism**Carbohydrate**
MetabolismFatty AcidsFatsDiabetes Mellitus, Type 1 ... OM 5025 The Molecular and Cellular Basis of ...
Authors: Valerie Gonzales Date: 12/12/2013
[https://mydocs.westernu.edu/curriculum/COMP/DO2017/Lists/Content Calendar/DispForm.aspx?ID=430](https://mydocs.westernu.edu/curriculum/COMP/DO2017/Lists/Content%20Calendar/DispForm.aspx?ID=430)



[Biochemistry: Fed State, Fasting & Starvation; Carbohydrates](#)

Pomona: HEC Lecture Hall 1; Katherine Mitsouras ... **Carbohydrate**
BiochemistryDisaccharidasesIsomerismCarbohydratesGlucose Transport Proteins ... OM 5025 The Molecular
and Cellular Basis of ...
Authors: Valerie Gonzales Date: 11/1/2013
[https://mydocs.westernu.edu/curriculum/COMP/DO2017/Lists/Content Calendar/DispForm.aspx?ID=584](https://mydocs.westernu.edu/curriculum/COMP/DO2017/Lists/Content%20Calendar/DispForm.aspx?ID=584)

Instructional Methods

[Case-Based Instruction/Learning](#)
[Clinical Experience - Ambulatory](#)
[Clinical Experience - Inpatient](#)
[Concept Mapping](#)
[Conference](#)
[Demonstration](#)
[Discussion, Large Group \(>12\)](#)
[Discussion, Small Group \(≤12\)](#)
[Games](#)
[Independent Learning](#)
[Journal Club](#)
[Laboratory](#)
[Lecture](#)
[Mentorship](#)
[Patient Presentation - Faculty](#)
[Patient Presentation - Learner](#)
[Peer Teaching](#)
[Preceptorship](#)
[Problem-Based Learning \(PBL\)](#)
[Reflection](#)
[Research](#)
[Role Play/Dramatization](#)
[Self-Directed Learning](#)
[Service Learning Activity](#)
[Simulation](#)
[Team-Based Learning \(TBL\)](#)
[Team-Building](#)
[Tutorial](#)
[Ward Rounds](#)
[Workshop](#)

Assessment Methods

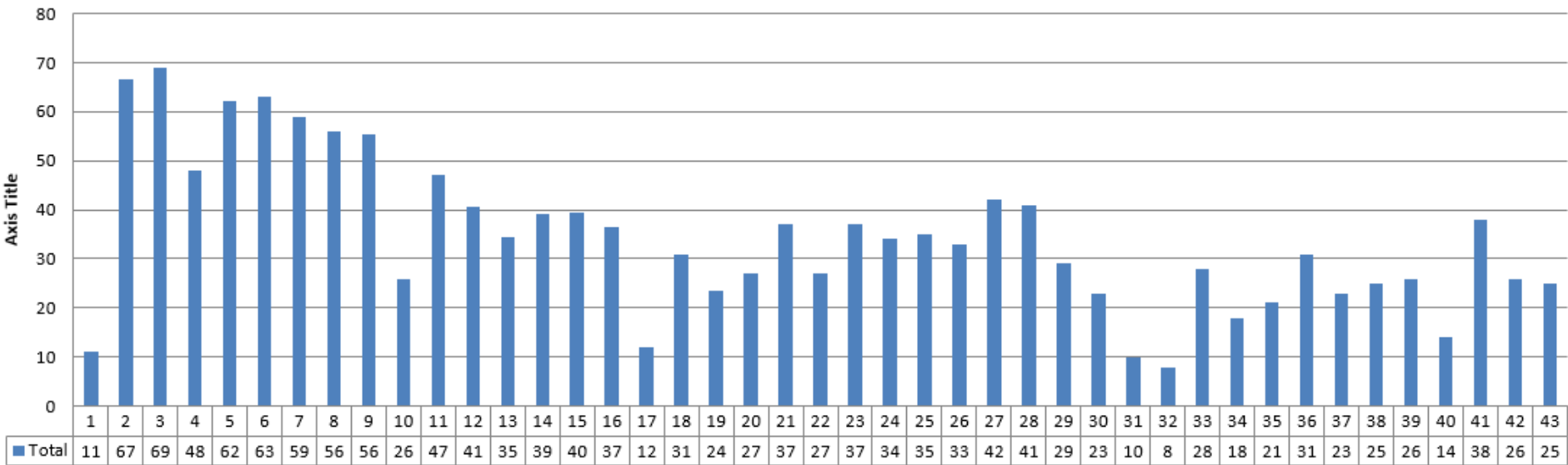
[Clinical Documentation Review](#)
[Clinical Performance Rating/Checklist](#)
[Exam - Institutionally Developed, Clinical Performance](#)
[Exam - Institutionally Developed, Written/Computer-based](#)
[Exam - Institutionally Developed, Oral](#)
[Exam - Licensure, Clinical Performance](#)
[Exam - Licensure, Written/Computer-based](#)
[Exam - Nationally Normed/Standardized, Subject](#)
[Multisource Assessment](#)
[Narrative Assessment](#)
[Oral Patient Presentation](#)
[Participation](#)
[Peer Assessment](#)
[Portfolio-Based Assessment](#)
[Practical \(Lab\)](#)
[Research or Project Assessment](#)
[Self-Assessment](#)
[Stimulated Recall](#)

Resource Types

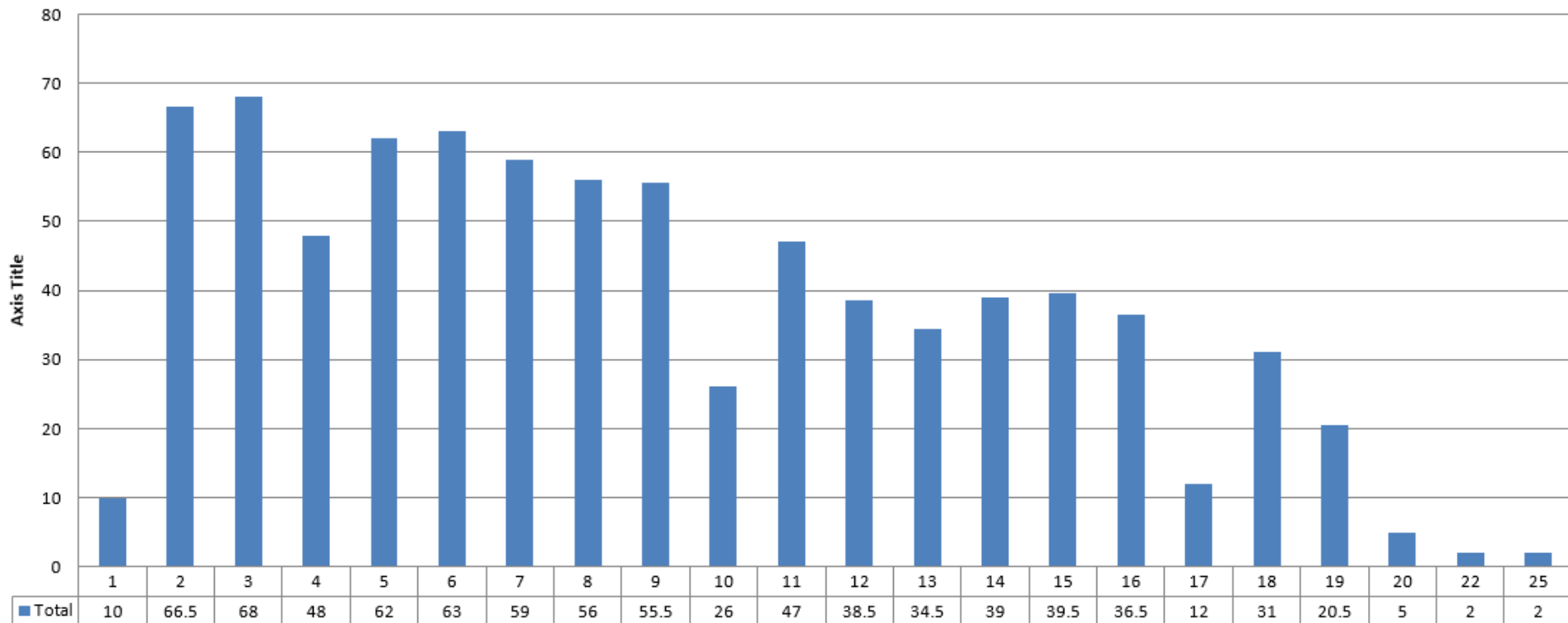
[Audience Response System](#)
[Audio](#)
[Cadaver](#)
[Clinical Correlation](#)
[Distance Learning - Asynchronous](#)
[Distance Learning - Synchronous](#)
[Educational Technology](#)
[Electronic Health/Medical Record \(EHR/EMR\)](#)
[Film/Video](#)
[Key Feature](#)
[Mannequin](#)
[Plastinated Specimens](#)
[Printed Materials \(or Digital Equivalent\)](#)
[Real Patient](#)
[Searchable Electronic Database](#)
[Standardized/Simulated Patient \(SP\)](#)
[Task Trainer](#)
[Virtual Patient](#)
[Virtual/Computerized Laboratory](#)
[Wet Laboratory](#)

Basic MedBiquitous Terms

Hours per Curriculum Week



Hours per Week per Learning Outcome / MeSH Term



Type

PLO

ILO

MeSH

NBOME

(blank)

LearningOutcome

(1) Osteopathic Phi...

(2) Medical Knowle...

(5) Professionalism

Change Me

(1) Critical Thinking

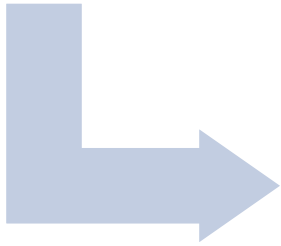
(2) Breadth and De...

(3) Interpersonal C...

(4) Collaboration Sk...

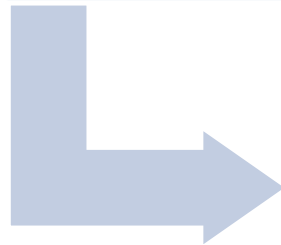
Standardize

- Vocabulary
- Classification



Design
Interface

- Input
- Output
- Export



Map

- Visualize
- Pivot
- Drill Down

Discussion

Thank You!

Terence “Tere” Ma, PhD: Terence.Ma@einstein.yu.edu

Gerald “Jerry” Thrush, PhD: gthrush@westernu.edu

Scott Helf, DO, MSIT: shelf@westernu.edu