CMED 301
Medical Informatics

Course Orientation

1435 - 2014

Who are we?
Medical Informatics and e-learning Unit (MIELU)

Dr. Amr Jamal, *MD, SBFM, ABFM, MRCGP, GCCI, MBI* (amrjamal@ksu.edu.sa)

Dr. Ahmed Albarrak, *PhD* (albarrak@ksu.edu.sa)

Dr. Nasriah Zakaria, *PhD* (nzakaria@ksu.edu.sa)

Suliman Al Omran, *RHIA*(sualomran@ksu.edu.sa)

Dr. Tameem Alghanam, *MBBS* (talghanam@ksu.edu.sa)

MIELU staff

Grades and Attendance

Mamdoh Alali

Technical

Diab Mahmood (ddiab@ksu.edu.sa)

Asrar Ansari (aansari@ksu.edu.sa)

Health/Clinical/Biomedical Informatics

× The science of health/clinical / bio/ medical

× **data/informatio n/knowledge** is

× Acquired/Colle cted
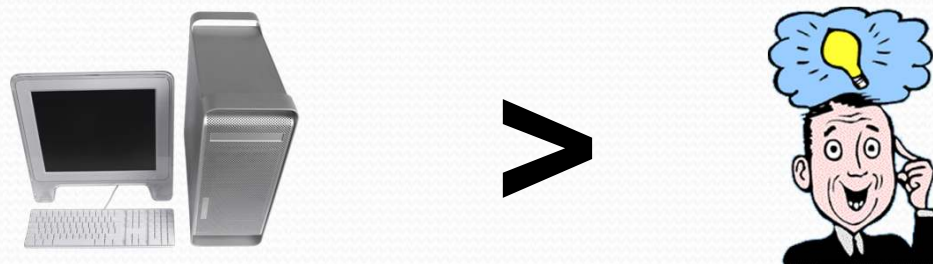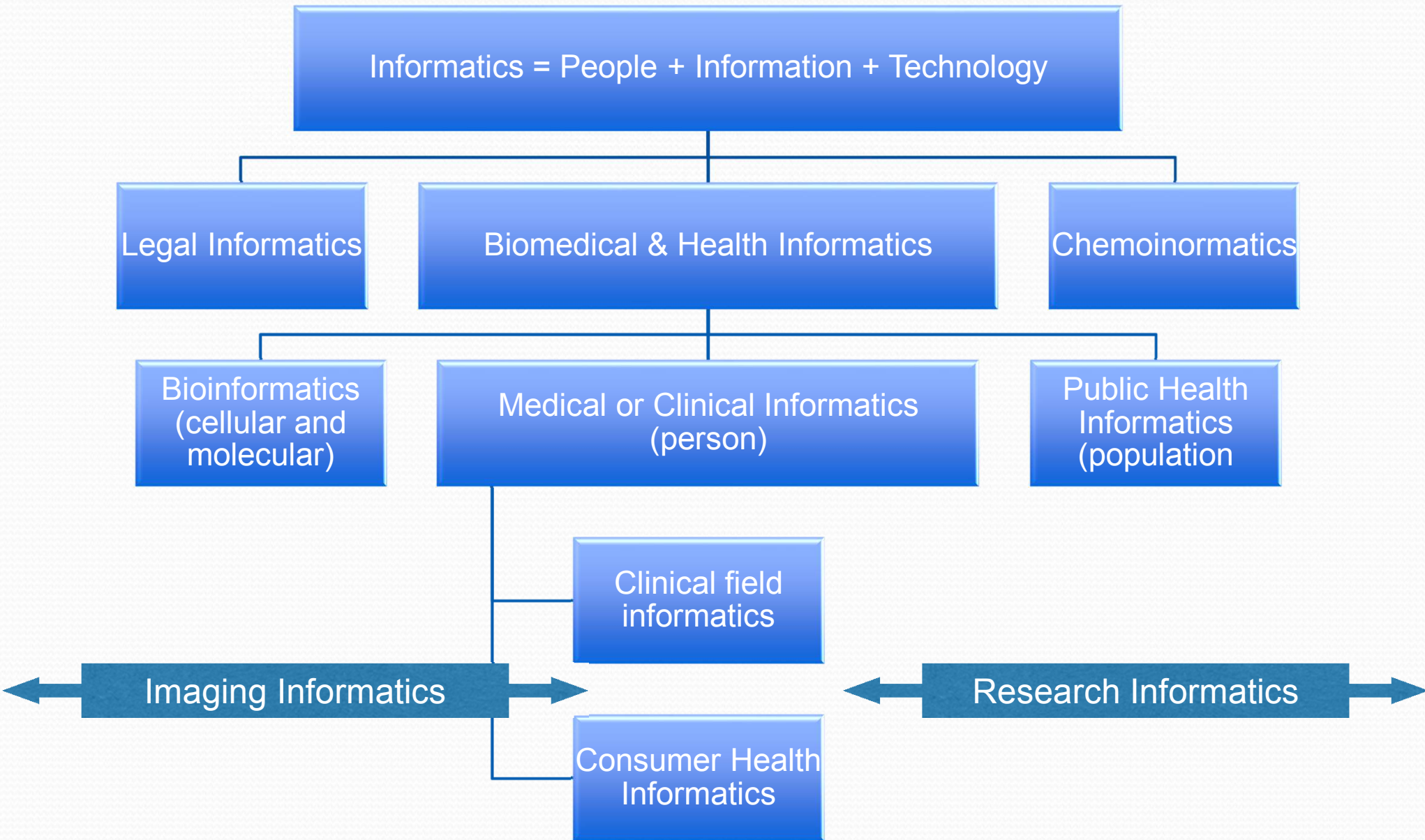× Manipulated
× Classified
× Organized
× Retrieved
× Stored

The Fundamental Theorem of Informatics (Friedman, 2009)

× **Goal of informatics is**

× **Goal of informatics is not**

Medical Informatics

✕ This course is designed to provide 3rd year students with **knowledge and skills about Medical Informatics**.

✕ Students will learn how **data, information and knowledge is created, managed and processed using Information and Communication Technology**.

✕ This course will also introduce the students to electronic health record, computerized physician order entry, imaging, and Internet health applications.

Learning Objectives (LO)

At the end of the course, students will be able :

LO1: To understand the current trends in medical informatics as they apply to the healthcare field and the health profession

LO2: To **increase awareness** of the ways in which information technology is used in **health-related situations**

LO3: To explore computer applications in health education, practice, administration and health research. Identify various types of information systems used within healthcare institutions.

Learning Objectives

LO4: To explore computer applications in health education, practice, administration and health research.

LO5:To identify various types of information systems used within **various units** in healthcare institutions

LO6:To **conduct online search in healthcare** literature **as educational resources**

Learning Objectives	Topics Covered	Assessments
LO1	All topics esp Consumer Health Informatics, Telehealth	Quiz, Midterm, Finals
LO2	Workshops, EHR, DSS, Telehealth, CPOE	Quiz, Midterm, Final, Workshop
LO3	EHR, DSS, Telehealth, CPOE	Quiz, Midterm, Final
LO4	CIS field visit, Ethics	CIS field visit report
LO5	Clinical Informatics as A Career for Physician, Ethics	Quiz, Midterm, Final
LO6	Tutorials & Workshops	Tutorials & Workshops

Task　Edit　View　Patient　Chart　Links　Notifications　Navigation　Help

🏠 Home　👥 Patient List　✉ InBox　🔍 Cerner　🔒 PMLaunch　📝 New Sticky Note　View Sticky Notes　📺 Tear Off　📎 Attach　🔧 Change　🔲 Suspend　🎬 AudioVideo　💲 Charges　📄 Charge Entry　📤 Exit　　🔒 Orders: 0　Rx: 0

Brooks, Henri　X	Ragwood, Christy　X	Morgan, Lydia　X

⬅ List ➡ | 🕐 Recent ▾ | Name

Brooks, Henri　　　Age:54 years　　　Sex:Male　　　Location: BW1N; 1N09; 02　Isolation Status:　　　**Allergies: penicillin, Shellfish allergy**

Inpatient Summary　　　　🖨 Print 🔄 4 minutes a[go]

🔍 📄 🖨 📄 🔍 🔍 | 150% ▾ | ⚫ ⚫ 🏠

Inpatient Summary

Expand All　Customize View　🔵Help

Brooks, Henri M 54 Years DOB: 05/27/1955 MRN: BWMC 008-024 FIN: 019000 Visit Reason: **AMI**
This page is not a complete source of visit information.

Patient Information　　　−

Chief Complaint:	Chest Pain
Primary Physician:	Zimmerman MD, Phyllis
Emergency Contact:	Wallace, Adrian
Emergency #:	(913) 931-2212
Advance Directive:	Yes

Diagnoses　(1 Active)　−

ACUTE MYOCARDIAL INFARCTION (410)

Problems　(7 Active)　−

Alteration in comfort: pain (34240014)
Back pain (2646370015)
Benign essential hypertension (3135013)
Chest pain (49966017)
Diabetes mellitus - adult onset (493775015)
Diabetes mellitus without complication (178796018)
Esophageal reflux (GERD) (530.81)

Allergies　(2 Active)➕Add　−

penicillin	rash
Shellfish allergy	

Medications　(5)➕Add　−

Inderal 10 mg oral tablet 1 tab(s), PO, BID, 180 tab(s)
Lasix 10 mg/ml oral liquid 1 mL, PO, Once Daily, 30 mL
lisinopril 10 mg oral tablet 10 mg, 1 tab(s), PO, Once Daily
metformin 500 mg oral tablet 500 mg, 1 tab(s), PO, BID
omega-3 polyunsaturated fatty acids oral capsule PO

Past Medical　(2)　+

Procedures　(1)　+

Vitals and Measurements　Last 2 years ➕Add　−

	Latest	Previous	Previous
TEMP:	⬆37.5	36.5	37.0
	2 wks ago	13 mos ago	13 mos ago
HR:	65	95	80
	13 mos ago	13 mos ago	13 mos ago
Respiratory Rate:	16	16	17
	13 mos ago	13 mos ago	13 mos ago
BP:	120/65	112/65	105/75
	13 mos ago	13 mos ago	13 mos ago
Weight Measured:	73.400	76.000	78.000
	13 mos ago	13 mos ago	13 mos ago
Weight Dosing:	73.400	76.000	78.000

Labs　Last 2 years　−

	Latest	Previous	Previous
Sodium Level :	⬆146	135	139
	13 mos ago	13 mos ago	23 mos ago
Potassium Level :	4.5	4.0	5.0
	13 mos ago	13 mos ago	23 mos ago
Chloride :	110	100	110
	13 mos ago	13 mos ago	23 mos ago
CO2 :	⬆40	30	⬆40
	13 mos ago	13 mos ago	23 mos ago
AGAP :	⬇0	⬇9	⬇-6
	13 mos ago	13 mos ago	23 mos ago
Glucose, Random :	⬆195	⬆178	⬆178
	13 mos ago	13 mos ago	13 mos ago
BUN :	⬆20	18	13
	13 mos ago	13 mos ago	23 mos ago
Creatinine :	.6	1.0	⬆1.4
	13 mos ago	13 mos ago	23 mos ago

Diagnostics　(0) Last 6 months　−

	Within	Status
EKG (0)		
No results found.		

Microbiology　(0) Last 6 months　+

Pathology　(0) Last 5 results　+

Documents　(2) Last 2 years ➕Add ▾　−

	Author	Date
Admission Note-Physician	Morris MD, Lee	03/26/10
Admission Note-Physician	Zimmerman , Phyllis	03/02/09

My Favorite Orders ➕Add　−

Meds	Labs	Imaging	Billing	Other

amoxicillin 250 mg oral capsule 1 cap(s), PO, TID, 10 day(s), 30 cap(s)
atenolol 50 mg oral tablet 1 tab(s),Tab,PO,Once Daily,90.00 tab(s)
Capoten 50 mg oral tablet 1 tab(s),Tab,PO,BID,180.00 tab(s)
ibuprofen 800 mg oral tablet 1 tab(s), PO, TID, 90 tab(s), PRN, as needed for pain
Lasix 40 mg oral tablet 1 tab(s),Tab,PO,Once Daily,90.00 tab(s)
metformin 500 mg oral tablet 1 tab(s),Tab,PO,BID,180.00 tab(s)
simvastatin 20 mg oral tablet 1 tab(s), PO, At Bedtime, 30 tab(s)

Scratch Pad

Select Order
　No Orders on Scratch Pad

☐ Search Mode　**Submit for Signature**

Outstanding Orders　(31) Last 2 years　−

Admission History Adult
Admission Assessment Adult
furosemide 20 mg Tab UD
Propranolol 20 mg tab
Lipid Panel

Notes/Reminders　(0)　−

Sticky Notes (0)

Author	Date	Text

Assessments

1. Two Online quiz (10%)

2. Workshop & Tutorial Participation (10%)

3. Clinical Information System Site Visit Report Project (20%)

4. Midterm (20%)

5. Final Exam (40%)

Use of Computer and Web

× Blackboard

× Search Engine

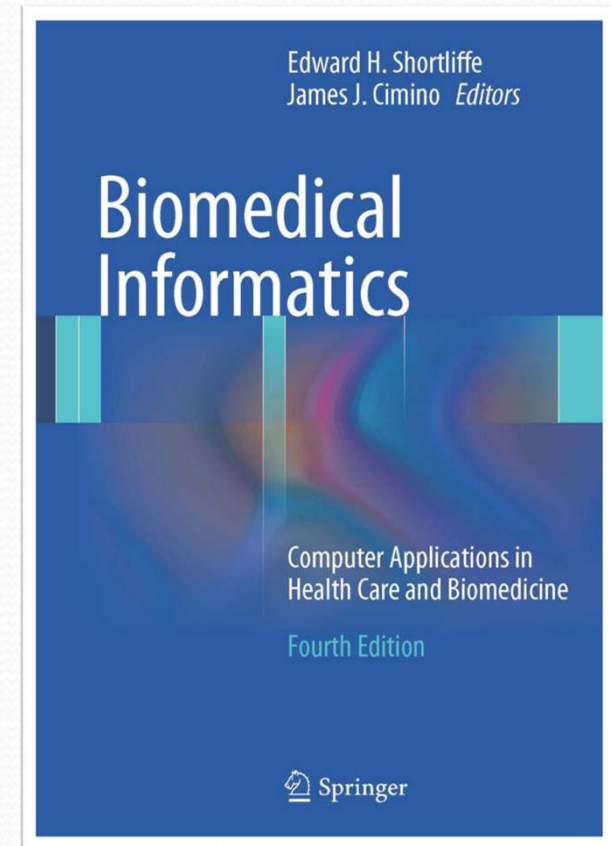× Googledoc, SlideShare, Dropbox

Blackboard- Learning Management System

- www.lms.ksu.edu.sa
- Logging In
- Course name
- Download lecture slides/View lecture slides
- Announcements
- Online Quiz
- Upload report

Resources

×Notes from lecture

×Readings from textbook

Shortliffe, E., Cimino, J. (2013).Biomedical Informatics: Computer Applications in Healthcare and Biomedicine, 4th Edition, Springer

×Readings from selected papers

×Discussion with faculty members/KKUH staff

Edward H. Shortliffe
James J. Cimino *Editors*

Biomedical Informatics

Computer Applications in
Health Care and Biomedicine

Fourth Edition

Springer

Attendance

- Class Attendance
  Please come on time of the class
  10% missing- 1st warning letter
  20% missing- 2nd warning letter
  25%- will be barred from taking the final examination
- Workshop & Tutorial participation
  Attendance
  Active Participation

Tutorial Sessions

a. Discussion

b. Quizzes

c. Brainstorming Centers

d. Review articles

e. Guest Lecture and Demo

f. Group presentations

Course Policy

i. Lecture Hours

- × Attend class regularly
- × Pay attention
- × Questions are welcomed
- × Respect each other

ii. Tutorial and Workshop Hours

- × Be prepared
- × Avoid flaming and arguing without basis
- × Open discussion
- × Discussion within given topics
- × Other issues can be brought up outside classroom

Course Policy

iii. Grades

- × Follow grading criteria (available on Blackboard)
- × Re-grading can only be done by submitting written requests and **within one week** after grade is announced.
- × Always check **<u>Grade Center</u>** from time to time and contact us if there's any error as soon as possible

Clinical Information System Site Visit

- To visit **ONE clinical information system** used in a healthcare organization/center/wards.
- Examples
  - Electronic Health Record,
  - Radiology Information System
  - Computerized Physician Order Entry
  - PACS

Clinical Information System Site Visit

CIS Milestone

Week 2: Announcement of the Project

Week 5: Select system & write letter to organization

Week 7-10: Visit Organisation (choose one convenient date)

Week11-15: Prepare CIS Site Visit Report

Week 22: CIS Presentation Day

Week 24: Submit Report

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Thank You

amrjamal@ksu.edu.sa
@amrjamal
www.amrjamal.com