Cover Sheet: Request 11528

HSA 4XXX Healthinformatics & Emerging Healthcare Technologies

Info

Process	Course|New|Ugrad/Pro
Status	Pending
Submitter	Vogtle,Candice Raquel cvogtle@ufl.edu
Created	2/28/2017 9:47:59 AM
Updated	6/9/2017 1:16:35 PM
Description of request	This course provides a fundamental understanding of health care information systems and infographics. Key topics will include: electronic health records, computerized provider order entry, telemedicine, HIPAA privacy and security regulations, and cyber-security.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	PHHP - Health Services Research, Management and Policy 313308000	Young, Ikiah Lachar		2/28/2017
Deleted Health-Informatics Rationale.pdf					2/28/2017
College	Approved	PHHP - College of Public Health and Health Professions	HANSON, STEPHANIE L.		2/28/2017
No document changes					
University Curriculum Committee	Comment	PV - University Curriculum Committee (UCC)	Case, Brandon	Added to the April agenda.	3/28/2017
No document changes					

Step	Status	Group	User	Comment	Updated
University Curriculum Committee	Recycled	PV - University Curriculum Committee (UCC)	Griffith, Casey Todd	Please obtain consults from BME, Public Relations, Digital Worlds, and Journalism regarding the title and content of the course. An alternative title may also be submitted for consideration. The course description does not contain any items related to Social Media, please address this and provide support for Social Media being in the title. Grade includes 5% attendance and 5% professionalism (subjective): Please provide a breakdown of how students may earn or lose points for both attendance and professionalism. How will this portion of the grade component be measured? For questions please contact C. Griffith in Office of APUA.	4/19/2017
No document changes					

Step	Status	Group	User	Comment	Updated
College	Recycled	PHHP - College of Public Health and Health Professions	HANSON, STEPHANIE L.	Please further clarify attendance. If a student is present for fewer than 5 checks, is their attendance graded proportionally. If a student does not do well on the 20-point formative questions, is there some type of reduction in attendance points even if the student is present for all 5 checks? In other words, is this all or none grading, proportional grading based only on the number of times the student is present for attendance checks, or are there additional performance criteria based on the questions that potentially affect the total attendance % awarded?	5/23/2017
Replaced HSA4XXX HealthInformatics & Social Media Syllabus_REVISED.pdf Added BME Consult for HSA 4XXX Healthinformatics.pdf					5/4/2017 5/4/2017
Department	Approved	PHHP - Health Services Research, Management and Policy 313308000	Young, Ikiah Lachar		5/23/2017
No document changes					
College	Approved	PHHP - College of Public Health and Health Professions	HANSON, STEPHANIE L.	Given title change suggested by UCC, there was a modified consult requirement for BME only, which is attached.	6/9/2017
Replaced HSA4XXX HealthInformatics__Syllabus_v7_REVISED APPROVED.pdf Added HSA4930_Health_Informatics__Syllabus_v9_2017.pdf					6/6/2017 6/6/2017
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			6/9/2017
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					

Step	Status	Group	User	Comment	Updated
Student Academic Support System					
No document changes					
Catalog					
No document changes					
College Notified					
No document changes					

Course|New for request 11528

Info

Request: HSA 4XXX Healthinformatics & Emerging Healthcare Technologies
Description of request: This course provides a fundamental understanding of health care information systems and infographics. Key topics will include: electronic health records, computerized provider order entry, telemedicine, HIPAA privacy and security regulations, and cyber-security.
Submitter: Vogtle,Candice Raquel cvogtle@ufl.edu
Created: 6/6/2017 10:12:43 AM
Form version: 5

Responses

Recommended PrefixHSA
Course Level 4
Number XXX
Category of Instruction Advanced
Lab Code None
Course Title Health Informatics & Emerging Healthcare Technologies
Transcript Title Health Informatics
Degree Type Baccalaureate

Delivery Method(s) On-Campus
Co-Listing No

Effective Term Spring
Effective Year2018
Rotating Topic?No
Repeatable Credit?No

Amount of Credit3

S/U Only?No
Contact Type Regularly Scheduled
Weekly Contact Hours 3
Course Description This course provides a fundamental understanding health informatics, healthcare information systems and emerging healthcare technologies, starting with the core informatics competencies and the foundation of knowledge model.
Prerequisites Upper division standing
Co-requisites Upper division standing
Rationale and Placement in Curriculum Health informatics is a multidisciplinary profession encompassing Dental Informatics, Nursing Informatics, Pharmacy Informatics, Public Health Informatics and other medical specialties that integrate computer technology to improve healthcare, health education and biomedical research.

Health Informatics professionals are in demand as the healthcare systems in the U.S. continuously evolves with the advances in technology,

The course objectives, assignments, and activates are designed to contribute towards mastery of key competencies in the Health Sciences and Public Health bachelor degree curriculum.

Course Objectives Apply core health informatics principles to examine emerging health care technologies and their role in acquisition, transmission, processing, storage, and retrieval of medical and healthcare sector information.

Apply the systems development life cycle (SDLC) process to a case scenario to fit with the strategic alignment of an organization.
Identify and discuss the key elements of the HIPAA Security Rule in relation to current HIPAA violations.
Identify barriers- legal, ethical, and regulatory issues associated with technology-based connection and engagement strategies.
Define the roles of federal, state, and local public health agencies in the development of public health informatics.
Evaluate evidence-based practice and translational research related to health Informatics and emerging healthcare technologies.

Course Textbook(s) and/or Other Assigned Reading Textbooks:
Required: Mastrian & McGonigle, Informatics for Health Professionals. (2017) Jones & Bartlett Learning. ISBN-13: 978-1284102635, ISBN-10: 1284102637

Supplement: Wager, Lee, Glaser. Health Care Information Systems. 3rd edition. (2013) John Wiley and Sons.
ISBN: 9781118173534, Available as free e-book from UF Library (you must be logged on to UF VPN if off campus) http://www.books24x7.com/marc.asp?bookid=58155

Online Resources: Carnegie Mellon University Open Learning Initiative
https://oli.cmu.edu/

Additional Materials:
Selected supplemental websites and articles will be posted on Canvas. You are responsible for all supplemental readings. Supplemental material will be discussed in class and included on tests.
PowerPoint presentations will be posted on the course website however will not always be available before class. Material provided in the PowerPoint presentations is intended to supplement the course material and information discussed in class.

Weekly Schedule of Topics Week 1
Topics & Assignments
Course Introduction & Syllabus Review
Informatics, Disciplinary Science, and the Foundation of Knowledge
Readings
Chapter 1- Mastrian & McGonigle
Data, Information, Knowledge, Wisdom (DIKW): A Semiotic Theoretical and Empirical Exploration of the Hierarchy and its Quality Dimension by Sasa Baskarada, Andy Koronios
Week 2
Topics & Assignments
Introduction to Information, Information Science, and Information Systems
DS1 Assignment
Readings
Chapter 2- Mastrian & McGonigle
Week 3
Topics & Assignments
Computer Science and the Foundation of
Knowledge Model
Readings
Chapter 3- Mastrian & McGonigle
Week 4
Topics & Assignments
Introduction to Cognitive Science, Informatics and Artificial Intelligence
Readings
Chapter 4- Mastrian & McGonigle
Week 5
Topics & Assignments
Ethical and Legal Aspects of Health Informatics

DS2 Assignment

Readings

Chapters 5- Mastrian & McGonigle

Meslin, E. M., Alpert, S. A., Carroll, A. E., Odell, J. D., Tierney, W. M., & Schwartz, P. H. (2013). Giving patients granular control of personal health information: Using an ethics "Points to Consider" to inform informatics system designers. International Journal of Medical Informatics, 82(12), 1136–1143. https://doi.org/10.1016/j.ijmedinf.2013.08.010

Week 6

Topics & Assignments

Test 1

Systems Development Life

Cycle: Informatics and Organizational Decision Making

Readings

Chapter 6- Mastrian & McGonigle

Chapter 7- Wager

Week 7

Topics & Assignments

Administrative Information Systems

Readings

Chapters 7- Mastrian & McGonigle

Week 8

Topics & Assignments

The Human–Technology Interface

Readings

Chapter 8- Mastrian & McGonigle

Week 9

Topics & Assignments

NO CLASS – UF Spring Break

Week 10

Topics & Assignments

Electronic Security

Infographic assignment

Readings

Chapter 9- Mastrian & McGonigle

Week 11

Topics & Assignments

The Electronic Health Record

DS3 Assignment

Readings

Chapter 11- Mastrian & McGonigle

Jensen, P. B., Jensen, L. J., & Brunak, S. (2012). Mining electronic health records: towards better research applications and clinical care. Nature Reviews Genetics, 13(6), 395–405. https://doi.org/10.1038/nrg3208

Week 12

Topics & Assignments

Test 2

Patient Engagement and Connected Health

Readings

Chapter 13- Mastrian & McGonigle

Eyler, A. A. (2011). Consumer health informatics: improving patient engagement. Translational Behavioral Medicine, 1(1), 10–10. https://doi.org/10.1007/s13142-010-0003-1

F. J. G., Sheps, S., Ho, K., Novak-Lauscher, H., & Eysenbach, G. (2014). Social Media: A Review and Tutorial of Applications in Medicine and Health Care. Journal of Medical Internet Research, 16(2), e13. https://doi.org/10.2196/jmir.2912

Week 13

Topics & Assignments

Using Informatics to Promote Community/Population Health

Readings

Chapter 14- Mastrian & McGonigle

Dowding, D., Arcia, A., Bjarnadottir, R. I., Iribarren, S., & Yoon, S. (2016). Integrating a Proposed Population Health Model with Nursing Informatics Research. Studies in Health Technology and Informatics, 225, 732–734.

Week 14

Topics & Assignments

Data Mining as a Research Tool

Reflective writing

Managing and using EMR data for research

DS4 Assignment

Readings

Chapter 16- Mastrian & McGonigle

Holzinger, A., & Jurisica, I. (2014). Knowledge Discovery and Data Mining in Biomedical Informatics: The Future Is in Integrative, Interactive Machine Learning Solutions. In Interactive Knowledge Discovery and Data Mining in Biomedical Informatics (pp. 1–18). Springer, Berlin, Heidelberg. Retrieved from http://link.springer.com/chapter/10.1007/978-3-662-43968-5_1

Murdoch, T. B., & Detsky, A. S. (2013). The Inevitable Application of Big Data to Health Care. JAMA, 309(13), 1351–1352. https://doi.org/10.1001/jama.2013.393

Week 15

Topics & Assignments

Finding, Understanding, and Applying Research Evidence in Practice

Readings

Chapter 17- Mastrian & McGonigle

Pantelopoulos, A., & Bourbakis, N. G. (2010). A survey on wearable sensor-based systems for health monitoring and prognosis. IEEE Transactions on Systems, Man, and Cybernetics, Part C (Applications and Reviews), 40(1), 1–12.

Week 16

Topics & Assignments

Test 3

Readings

Supplemental Readings

Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication. Journal of Medical Internet Research, 15(4), e85. https://doi.org/10.2196/jmir.1933

Links and Policies Learning-support@ufl.edu

https://lss.at.ufl.edu/help.shtml

https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/

http://gradschool.ufl.edu/students/introduction.html

https://evaluations.ufl.edu.

https://evaluations.ufl.edu/results/

http://www.dso.ufl.edu

http://www.counseling.ufl.edu.

http://www.umatter.ufl.edu/

https://shcc.ufl.edu/

http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx

www.multicultural.ufl.edu

Grading Scheme Requirements Due %

Tests 1-3 Times and dates posted in Canvas 30%

Presentations: Topic, Videos, P3s, Papers Times and dates posted in Canvas 30%

Projects: In-class, Short Papers, Infographics, Discussion Boards Times and dates posted in Canvas 20%
Quizzes Random In-class and some dates posted in Canvas 15%
Attendance Random class dates 5

Attendance
The instructor will give 7 random in-class "attendance check" assignments in Canvas throughout the semester. This will be done at the beginning of the class period and will have some formative questions from the previous lecture that lets the instructor identify student learning needs and areas that need clarification. The formative questions are not graded and each short attendance check assignment is worth 20 points. The students need to only be present for 5 checks to receive full credit (100 points). If a student is present for fewer than 5 attendance checks their attendance is graded proportionally (e.g., 4 x 20 = 80 points) and no extra credit will be given for additional attendance checks.

Instructor(s) Frederick Kates

University of Florida
College of Public Health & Health Professions Syllabus
HSA4930 Health Informatics & Emerging Healthcare Technologies
(3 credit hours)
Spring: 2018
Delivery Format: In-class
E-Learning in Canvas

Instructor Name: Frederick R. Kates, PhD, MBA
Room Number: 3115
Phone Number: 352-273-6060
Email Address: kates.rick@phhp.ufl.edu
Office Hours:

Teaching Assistant:
Room Number:
Email Address:
Office Hours:

Preferred course communications: Canvas email
Course meeting times and location: TBA

Prerequisites
Upper division standing

PURPOSE AND OUTCOME

Course Overview
This course provides a fundamental understanding health informatics, healthcare information systems and emerging healthcare technologies, starting with the core informatics competencies and the foundation of knowledge model. Key topics will include: cognitive science, legal and ethical aspects, HIPAA privacy and security regulations, systems development life cycle, electronic security, electronic health records, patient engagement, community health, telehealth, data mining, IT certifications, evidence-based practice and translational research. The course will also provide an in-depth look at current technologies to include wearable sensor-based systems for health monitoring and prognosis and the use of mobile health (mHealth) applications in the medical and healthcare sectors to gain an understanding of their emerging role in health informatics.

Relation to Program Outcomes
The course objectives, assignments, and activates are designed to contribute towards mastery of key competencies in the Health Sciences and Public Health bachelor degree curriculums.

Course Objectives
- Apply core health informatics principles to examine emerging health care technologies and their role in acquisition, transmission, processing, storage, and retrieval of medical and healthcare sector information.
- Apply the systems development life cycle (SDLC) process to a case scenario to fit with the strategic alignment of an organization.
- Identify and discuss the key elements of the HIPAA Security Rule in relation to current HIPAA violations.
- Identify barriers- legal, ethical, and regulatory issues associated with technology-based connection and engagement strategies.
- Define the roles of federal, state, and local public health agencies in the development of public health informatics.
- Evaluate evidence-based practice and translational research related to health Informatics and emerging healthcare technologies.

Course Objectives/Competences Matrix

Course Objectives	Health Sciences Learning Outcomes and Public Health Bachelor Degree Domains	Assessment
Apply core health informatics principles to examine emerging healthcare technologies and their role in acquisition, transmission, processing, storage, and retrieval of medical and healthcare sector information.	The fundamental concepts and features of project implementation, including planning, assessment and evaluation (D10.5)	Presentation
Apply the systems development life cycle (SDLC) process to a case scenario to fit with the strategic alignment of an organization.	The fundamental concepts and features of project implementation, including planning, assessment and evaluation (D10.5)	Presentation
Identify and discuss the key elements of the HIPAA Security Rule in relation to current HIPAA violations.	Apply knowledge and application of core bioethical principles to contemporary health issues (SLO 4) Basic concepts of legal, ethical, economic and regulatory dimensions of healthcare and public health policy and the roles, influences and responsibilities of the different agencies and branches of government (D10.7)	Project
Identify barriers and legal, ethical, and regulatory issues associated with technology-based connection and engagement strategies.	Apply knowledge and application of core bioethical principles to contemporary health issues (SLO 4) Basic concepts of legal, ethical, economic and regulatory dimensions of healthcare and public health policy and the roles, influences and responsibilities of the different agencies and branches of government (D10.7)	Test
Define the roles of federal, state, and local public health agencies in the development of public health informatics.	Describe key elements of the U.S. healthcare system. (SLO 1) The fundamental characteristics and organizational structures of the US health system as well as the differences between systems in other countries (D10.6)	Test
Evaluate evidence-based practice and translational research related to health Informatics and emerging healthcare technologies.	Develop and apply critical analysis skills to contemporary health issues (SLO 6) The basic concepts, methods and tools of public health data collection, use and analysis and why evidence-based approaches are an essential part of public health practice (D10.2) Basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology (D10.8)	Test

Instructional Methods
The course is housed in UF e-Learning in Canvas. This course is blended taught through a discussion and lecture format with online "Blended Learning" assignments. Your participation in the class is vital to its success. Be prepared and ready to participate in each class, if voluntary participation lags students will be called on randomly.

Blended Learning
Throughout the semester several Blended Learning assignments will be uploaded in Canvas.

What is blended learning and why is it important?
A Blended Learning class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that, as the instructor, I would have traditionally presented during a live class lecture is instead provided online before the live class takes place. This lets me focus my face-to-face teaching on course activities designed to help you strengthen higher order thinking skills such as critical thinking, problem solving, and collaboration. Competency in these skills is critical for today's health professional.

What is expected of you?
You are expected to actively engage in the course throughout the semester. You must come to class prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live class sessions. If you are not prepared for the face-to-face sessions, you may struggle to keep pace with the activities occurring in the live sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live class. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule
All reading assignments including supplemental readings should be read prior to class to facilitate your learning and class discussions. If you miss class, it is your responsibility to obtain notes, handouts, and summary of the lesson/class activities from the missed class. The syllabus and course schedule is subject to revision. Confirm deadlines in class and always check Canvas for updates.

Week	Date	Topics & Assignments	Readings
1	**January**	Course Introduction & Syllabus Review (online) Informatics, Disciplinary Science, and the Foundation of Knowledge	Chapter 1- Mastrian & McGonigle Data, Information, Knowledge, Wisdom (DIKW): A Semiotic Theoretical and Empirical Exploration of the Hierarchy and its Quality Dimension by Sasa Baskarada, Andy Koronios
2	**January**	Introduction to Information, Information Science, and Information Systems DB1 Assignment	Chapter 2- Mastrian & McGonigle
3	**January**	Computer Science and the Foundation of Knowledge Model	Chapter 3- Mastrian & McGonigle
4	**January**	Introduction to Cognitive Science, Informatics and Artificial Intelligence	Chapter 4- Mastrian & McGonigle Jha, S., & Topol, E. J. (2016). Adapting to Artificial Intelligence: Radiologists and Pathologists as Information Specialists. JAMA, 316(22), 2353–2354. https://doi.org/10.1001/jama.2016.17438

			Zang, Y., Zhang, F., Di, C., & Zhu, D. (2015). Advances of flexible pressure sensors toward artificial intelligence and health care applications. Materials Horizons, 2(2), 140–156.
5	February	Ethical and Legal Aspects of Health Informatics	Chapters 5- Mastrian & McGonigle
		DB2 Assignment HIPAA Project	Meslin, E. M., Alpert, S. A., Carroll, A. E., Odell, J. D., Tierney, W. M., & Schwartz, P. H. (2013). Giving patients granular control of personal health information: Using an ethics "Points to Consider" to inform informatics system designers. *International Journal of Medical Informatics*, *82*(12), 1136–1143. https://doi.org/10.1016/j.ijmedinf.2013.08.010
		Social media risks (e.g., patient privacy breaches, inaccurate information, and legal issues)	(M) Grajalas, F. J. G., Sheps, S., Ho, K., Novak-Lauscher, H., & Eysenbach, G. (2014). Social Media: A Review and Tutorial of Applications in Medicine and Health Care. *Journal of Medical Internet Research*, 16(2), e13. https://doi.org/10.2196/jmir.2912
		Utilizing social media in a safe and ethical manner	(M) McKee, R. (2013). Ethical issues in using social media for health and health care research. Health Policy, 110(2–3), 298–301. https://doi.org/10.1016/j.healthpol.2013.02.006
6	February	Test 1 Systems Development Life Cycle: Informatics and Organizational Decision Making New Technology Assignment	Chapter 6- Mastrian & McGonigle Chapter 7- Wager
7	February	Administrative Information Systems	Chapters 7- Mastrian & McGonigle LaVenture, M., Brand, B., Ross, D. A., & Baker, E. L. (2014). Building an informatics-savvy health department: part I, vision and core strategies. Journal of Public Health Management and Practice, 20(6), 667–669.
8	February	The Human–Technology Interface	Chapter 8- Mastrian & McGonigle (W) Madden, S. (2013, June 15). With wearable tech like Google Glass, human behavior is now a design problem. https://gigaom.com/2013/06/15/with-wearable-tech-like-google-glass-human-behavior-is-now-a-design-problem/
9	March	**NO CLASS – UF Spring Break**	
10	March	Electronic Security Infographic assignment	Chapter 9- Mastrian & McGonigle

11	**March**	The Electronic Health Record DB3 Assignment	Chapter 11- Mastrian & McGonigle Jensen, P. B., Jensen, L. J., & Brunak, S. (2012). Mining electronic health records: towards better research applications and clinical care. *Nature Reviews Genetics*, 13(6), 395–405. https://doi.org/10.1038/nrg3208
12	**March**	Test 2 Patient Engagement and Connected Health	Chapter 13- Mastrian & McGonigle Eyler, A. A. (2011). Consumer health informatics: improving patient engagement. *Translational Behavioral Medicine*, 1(1), 10–10. https://doi.org/10.1007/s13142-010-0003-1
13	**April**	Using Informatics to Promote Community/Population Health Role of social media in the medical and health care sectors	Chapter 14- Mastrian & McGonigle Dowding, D., Arcia, A., Bjarnadottir, R. I., Iribarren, S., & Yoon, S. (2016). Integrating a Proposed Population Health Model with Nursing Informatics Research. *Studies in Health Technology and Informatics*, 225, 732–734. Aziz, H. A. (2017). A review of the role of public health informatics in healthcare. Journal of Taibah University Medical Sciences, 12(1), 78–81. https://doi.org/10.1016/j.jtumed.2016.08.011
14	**April**	Data Mining as a Research Tool Reflective writing Managing and using EMR data for research DB4 Assignment	Chapter 16- Mastrian & McGonigle Holzinger, A., & Jurisica, I. (2014). Knowledge Discovery and Data Mining in Biomedical Informatics: The Future Is in Integrative, Interactive Machine Learning Solutions. In *Interactive Knowledge Discovery and Data Mining in Biomedical Informatics* (pp. 1–18). Springer, Berlin, Heidelberg. Retrieved from http://link.springer.com/chapter/10.1007/978-3-662-43968-5_1 Murdoch, T. B., & Detsky, A. S. (2013). The Inevitable Application of Big Data to Health Care. *JAMA*, 309(13), 1351–1352. https://doi.org/10.1001/jama.2013.393
15	**April**	Finding, Understanding, and Applying Research Evidence in Practice Integrating wearable devices into health applications. Synergies between social media and evidence-based practice	Chapter 17- Mastrian & McGonigle (W) Pantelopoulos, A., & Bourbakis, N. G. (2010). A survey on wearable sensor-based systems for health monitoring and prognosis. IEEE Transactions on Systems, Man, and Cybernetics, Part C (Applications and Reviews), 40(1), 1–12.

				(W) Ossig, C., Antonini, A., Buhmann, C., Classen, J., Csoti, I., Falkenburger, B., … Storch, A. (2016). Wearable sensor-based objective assessment of motor symptoms in Parkinson's disease. *Journal of Neural Transmission*, *123*(1), 57–64. https://doi.org/10.1007/s00702-015-1439-8
16	**April**	Test 3		Supplemental Readings (M) Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A New Dimension of Health Care: Systematic Review of the Uses, Benefits, and Limitations of Social Media for Health Communication. Journal of Medical Internet Research, 15(4), e85. https://doi.org/10.2196/jmir.1933

W- Example of wearable sensor-based systems for health monitoring and prognosis
M- Example of (mHealth) applications used in the medical and healthcare sectors

Caveat: The above schedule and procedures in this course are subject to change in the event of extenuating circumstances. Any changes will be announced in class, and the student is personally responsible for obtaining updated information regarding those changes.

Course Materials and Technology

Textbooks:

Required: Mastrian & McGonigle, *Informatics for Health Professionals*. (2017) Jones & Bartlett Learning. ISBN-13: 978-1284102635, ISBN-10: 1284102637

Supplement: Wager, Lee, Glaser. *Health Care Information Systems.* 3rd edition. (2013) John Wiley and Sons. ISBN: 9781118173534, Available as free e-book from UF Library (you must be logged on to UF VPN if off campus) http://www.books24x7.com/marc.asp?bookid=58155

Online Resources: Carnegie Mellon University Open Learning Initiative https://oli.cmu.edu/

Additional Materials:
Selected supplemental websites and articles will be posted on Canvas. Supplemental material will be discussed in class and included on tests. PowerPoint presentations will be posted on the course website, however will not always be available before class. Material provided in the PowerPoint presentations is intended to supplement the course material and information discussed in class.

For technical support for this class, please contact the UF Help Desk at:
- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- https://lss.at.ufl.edu/help.shtml

ACADEMIC REQUIREMENTS AND GRADING
Assignments

Tests
Tests are largely multiple choice and 1-3 short answer questions. The tested material includes the PowerPoints, lectures, class discussions, team presentations, assigned readings in the textbook and supplemental readings. The tests focus on the information presented since the previous test and are not cumulative. However, many of the concepts learned in the beginning of class are built upon and repeated or applied in subsequent tests.

Presentations Guidelines
Create and give a presentation (PowerPoint, iMovie, Moviemaker, etc.) which addresses your assigned topics. Reference the material from the course and current supporting articles. Areas to consider:
- Current I.T. issues that healthcare leaders need to know.
- Best practices that can be emulated by other organizations.
- Relevant laws and regulations to be considered.
- Challenges and complexities of informatics issues.

The presentation should be formatted as follows:
- Title slide (names, date, and topics)
- Learning objectives
- Presentation outline
- Presentation slides/images with APA in-text citations
- Current events, peer-review articles, relevant case studies, and/or relevance to healthcare
- Conclusion
- Two discussion questions
- APA Reference Slide(s)

Day of the presentation please provide:

A printed hard copies of the presentation (6 slide handout or equivalent) to the TA and the professor at the beginning of class. The presentations should add depth to course with pertinent information on future developments that will benefit your classmates. The current articles you choose should provide your audience new knowledge about the potential populations that different organizations may serve in the rapidly evolving healthcare landscape. External links for specific information (e.g., APA instructions, Power of 3 instructions, video tutorials) and rubrics will be loaded in Canvas for each assignment.

Papers
The assignments are based on materials in the modules of the course. An outline of what is required in the papers is listed below. Consider the following questions when writing your reflective paper:
- What was your prior knowledge of the subject matter contained in the section of the course?
- After exploring the materials in this section, what is your current thinking on the subjects presented?
- How will this information affect your discipline?

Length: 800 words minimum; 1000 words maximum; 12 pt. font (Arial, Times New Roman); double Spaced and APA format.

Process: Paper will be submitted in Canvas in the Assignment and will be checked through Turnitin.

Instructions:

Answer the questions listed in the overview using your own experiences and specific examples from the videos and readings presented in this section. You do not need to provide summaries, but you should include details from the course materials that give evidence to:
- your thorough review of the materials
- your ability to analyze the materials and make inferences
- your ability to synthesize the course content

A rubric will be provided for the assignment in Canvas.

Discussion boards
Discussion boards will have topics relevant to that module's readings, lectures or additional resources. Each topic will be one continuous thread. Students will need to provide a substantive response to the questions posed. Your post should reference concepts brought up in lectures, readings, visual materials, and other required course content. External links for specific information (e.g., substantive responses, academic tone) and rubrics will be loaded in Canvas for each assignment.

Infographics
Infographic assignments start with identifying an article(s) in PubMed or another healthcare related database that covers the assigned topic. Next, read and review the *Infographic Seminar Handout*, paying particular attention to Infographic Design: Nine Strategies which you can apply to your infographic. Then use an infographic software program (e.g., PiktoChart, Vizualize.me, Venngage) to visual represent the information and data you find on your topic. External links for specific information (e.g., handout, software links) and rubrics will be loaded in Canvas for each assignment.

Quizzes
There will be sixteen quizzes in this course, both random in class and outside of class posted in Canvas. Having quizzes regularly encourages studying the material on a regular basis and paying attention to the material covered in class. The quizzes allow the instructor to modify and adjust instruction and the immediate feedback helps students to monitor their understanding. Having more quizzes can reduce test anxiety that doing poorly on a single quiz will have a negative effect on a student's grade, also the lowest four quizzes will be dropped. Quizzes will consist of true/false, multiple choice, or short answer questions probing the content of that week's lecture and/or readings. Periodically, there will be opportunities to earn extra points on the quizzes through short answer questions asking how the students added value to the week's lecture (e.g., shared a related article, shared a related work experience, etc.). The first quiz will be on the specifics of the syllabus. Disallowed aids include but are not limited to class notes, books, online resources, or other people. Students may not discuss any aspect of a quiz with classmates or others until after the quiz due date/time has passed. Potential schedule conflicts preventing a student from completing a quiz by the due date should be reported to the TA as soon as possible before the quiz becomes available on the course website. Any technical issues should be initially reported via email to the TA prior to the quiz end date/time. Make-up quizzes due to technical difficulties will not be considered otherwise.

Attendance
The instructor will give 7 random in-class "attendance check" assignments in Canvas throughout the semester. This will be done at the beginning of the class period and will have some formative questions from the previous lecture that lets the instructor identify student learning needs and areas that need clarification. The formative questions are not graded and each short attendance check assignment is worth 20 points. The students need to only be present for 5 checks to receive full credit (100 points). If a student is present for fewer than 5 attendance checks their attendance is graded proportionally (e.g., 4 x 20 = 80 points) and no extra credit will be given for additional attendance checks.

Grading:

Requirement	Due	%	Competencies
Tests 1-3	Times and dates posted in Canvas	30	SLO 1, SLO 4, SLO 6 D10.2, D10.6, D10.7, D10.8
Presentations: Topic, Videos, P3s, Papers	Times and dates posted in Canvas	30	SLO 4 D10.5, D10.7
Projects: In-class, Short Papers, Infographics, Discussion Boards	Times and dates posted in Canvas	20	SLO 6, SLO7 D10.3, D10.8
Quizzes	Random in-class and dates posted in Canvas	15	SLO 1, SLO 4, SLO 6, SLO 7 D10.2, D10.6, D10.7, D10.8
Attendance	Random class dates	5	

Point system used (i.e., how do course points translate into letter grades). The cutoff point for an A is 93.00 not 95.00. Since 7 points is a generous spread for an A there will be no rounding up for other grade increments, for example a 92.99 is an A-.

Points earned	93-100	90-92.99	87-89.99	83-86.99	80-82.99	77-79.99	70-76.99	67-69.99	63-66.99	60-62.99	Below 60
Letter Grade	A	A-	B+	B	B-	C+	C	D+	D	D-	E

Letter Grade	A	A-	B+	B	B-	C+	C	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:
http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Exam Policy

Policy Related to Make-up Exams or Other Work
Please note: Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Late Submissions
Late submissions are not encouraged but will be accepted for up to 7 days, but with the following policies and penalty schedule:

Graders will not contact you about missing or incomplete assignments. It is your responsibility to check that the correct assignment has been submitted to Canvas on time.

It may be possible to avoid a late penalty if you contact the instructor at least 24 hours in advance. You should email both the instructor and your teaching assistant, and explain what issue (e.g., bereavement, illness) necessitates lateness. In some cases, documentation may be requested. If a lateness allowance is agreed to, this applies to a single assignment only. It does not allow you to delay future assignments.

If your assignment is late, you will lose 10% each day. Thus, if an assignment is worth 30 points, you will lose 3 points for each late day. "Late" begins one minute after the due time (e.g., an assignment due at 8:34 am is considered late at 8:35 am). Penalties are as follows:

1 minute to 24 hours late	10% of maximum deducted from achieved grade
1 day + 1 minute late to 48 hours late	20% of maximum deducted from achieved grade
2 days + 1 minute late to 72 hours late	30% of maximum deducted from achieved grade
3 days + 1 minute late to 96 hours late	40% of maximum deducted from achieved grade
4 days + 1 minute late to 120 hours late	50% of maximum deducted from achieved grade
5 days + 1 minute late to 144 hours late	60% of maximum deducted from achieved grade
6 days + 1 minute late to 168 hours late	70% of maximum deducted from achieved grade
7 days + 1 minute late or longer	100% of maximum deducted from achieved grade

Policy Related to Required Class Attendance
Class attendance is a critical component of the learning process. Students are expected to be present for all classes, since much of the material will be covered only once in class. Please note all faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

Electronic Device Policy
Use of electronic devices (laptops, tablets, and cell phones) is not permitted during guest lectures and presentations. The necessity of classroom interaction in this course negates the usefulness of electronic devices as a note-taking device. The use of your electronic device during class can also prove distracting to your classmates, so please refrain from using your electronic device during class.

When use of electronic devices is permitted please adhere to the following-
- Charge your device fully before coming to class.
- Set your laptop volume control to mute or off before coming to class.
- Remember to always keep your laptop closed during presentations and other specific in-class activities.
- Do not engage in unauthorized communication or entertainment (web surfing, instant messaging, chat room chatting, DVD viewing, music playing, game playing, etc.) during class unless it is part of the lesson.

Attendance:
Students are expected to arrive for class on time, be prepared and ready to participate in class discussions.

Make-up Work
Students are responsible for obtaining notes, handouts, and summary of the lesson/class activities from there team members if a class is missed. The syllabus and course schedule is subject to revision so remember to always check Canvas for updates if you missed class.

Academic Integrity
Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

"**We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity**."

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

"On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:
https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/
http://gradschool.ufl.edu/students/introduction.html

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

Online Faculty Course Evaluation Process
Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

SUPPORT SERVICES

Accommodations for Students with Disabilities
If you require classroom accommodation because of a disability, you must register with the Dean of Students Office http://www.dso.ufl.edu within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health
Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: http://www.counseling.ufl.edu. On line and in person assistance is available.
- You Matter We Care website: http://www.umatter.ufl.edu/. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: https://shcc.ufl.edu/
- Crisis intervention is always available 24/7 from:
  Alachua County Crisis Center
  (352) 264-6789
  http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

College of Public Health and Health Professions Inclusive Learning Environment:

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu

From: Kates,Frederick
Sent: Thursday, April 27, 2017 4:51 PM
To: Vogtle,Candice; Estrada,Daniel J
Subject: FW: BME Consultation for HSA4930 a New Course Under Consideration
Attachments: HSA4930_HealthInformatics__Syllabus_v7_2017.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Candice,

Below is the consult from the BME chair. I am excited about the possibility of having some BME students in the course.

Attached is the updated syllabus.

I am not in the office Friday.

Thanks,
Rick

From: Rinaldi,Carlos
Sent: Saturday, April 22, 2017 8:15 AM
To: Kates,Frederick <kates.rick@phhp.ufl.edu>
Cc: Allen,Kyle <kyle.allen@bme.ufl.edu>; Theus, Kristin <undergrad@bme.ufl.edu>
Subject: Re: BME Consultation for HSA4930 a New Course Under Consideration

Dear Rick,

Our faculty who teach related courses have looked at the syllabus and found that there is minimal overlap with our current courses. Let me know if you need anything else in order to continue the process of getting it approved.

I think the course may be of interest to our students as an elective. Would there be a problem with some BME students taking this course in the future?

Best,

Carlos

Carlos Rinaldi, Ph.D.
Charles A. Stokes Term Professor
Senior Associate Chair
J. Crayton Pruitt Family Department of Biomedical Engineering and Department of Chemical Engineering
Herbert Wertheim College of Engineering
University of Florida, Gainesville
Office JG44, Biomedical Sciences Building

PO Box 116131
Gainesville, FL 32611-6131
Office: 352-294-5588
Fax: 352-273-9221
E-Mail: carlos.rinaldi@bme.ufl.edu
Group Website: http://www.bme.ufl.edu/labs/rinaldi/

On Apr 21, 2017, at 3:46 PM, Stabler, Cherie <CStabler@bme.ufl.edu> wrote:

Rick,

Thanks for reaching out. I am the chair of the graduate program, so I am unable to comment on this. I am forwarding your request to the undergraduate coordinators and Associate Chair for feedback.

Thanks!
Cherie

Cherie Stabler, PhD | Associate Professor and Associate Chair of Graduate Program
University of Florida **|** J. Crayton Pruitt Family Department of Biomedical Engineering
Herbert Wertheim College of Engineering
UF Diabetes Institute, College of Medicine
1275 Center Dr, JG385 **|** Gainesville, FL 32611-6131
☎352.273.9327 ✉cstabler@bme.ufl.edu
http://www.bme.ufl.edu/labs/stabler/

From: Kates,Frederick
Sent: Friday, April 21, 2017 3:30 PM
To: Stabler, Cherie <CStabler@bme.ufl.edu>
Cc: BME-Grad-Mail <grad@bme.ufl.edu>
Subject: BME Consultation for HSA4930 a New Course Under Consideration

Dear Dr. Stabler,

I am developing a new course for the Health Services Research, Management and Policy Department at the undergraduate level which aims to provide a fundamental understanding of health informatics, healthcare information systems and emerging healthcare technologies. Upon review at the University's Curriculum Committee, an issue was raised that the course may overlap with the BME degree, and that I am required to consult with your program in order to get approval for the course. I have attached the draft syllabus of the course for your review.

Could you please confirm whether or not there is overlap with the BME curriculum?

Thank you for your time and attention to this matter.

Sincerely,
<image001.jpg>
_____<image003.png>_____
Rick Kates, PhD, MBA
Clinical Assistant Professor
Health Services Research, Management and Policy
College of Public Health & Health Professions
1225 Center Drive, Room 3115
PO Box 100195
Gainesville, Fl. 32610-0195
352-273-6060
352-273-6075 (fax)

<HSA4930_HealthInformatics__Syllabus_v7_2017.pdf>