University of Florida College of Public Health & Health Professions Syllabus Course Number: HSA 6196: Healthcare Data Analytics II

Spring: 2015
Delivery Format: On-Campus

Instructor Name: Lonn McDowell, MHA, FACHE, FACMPE

Room Number: HPNP G316

Time: Mondays 11:45am-1:40pm, Wednesdays 1:55pm-2:45pm

Phone Number: 352-594-5134

Email Address: lonn.mcdowell@surgery.ufl.edu

Office Hours: By appointment, please contact instructor

Preferred Course Communications: Email

Prerequisites: Completion of HSA 6395-Healthcare Data Analytics I

PURPOSE AND OUTCOME

Course Overview

On a day to day basis, health care managers are charged with improving costs and financial outcomes while simultaneously improving clinical and service quality. Health care organizations are being "squeezed" by declining reimbursements, while at the same time they are struggling to recruit and retain staff during a significant clinical workforce shortage. To effectively "do more with less," managers are turning to operations management in an effort to decrease costs while enhancing quality. Supply chain initiatives, quality improvement projects, and organizational restructurings are commonplace in today's healthcare environment.

Relation to Program Outcomes

HSA 6196 is designed to arm you with the practical and analytical tools required to make effective tactical and operational decisions in a health care environment. The course examines operations decisions through a combination of lectures, in-class problems, homework, and readings. Specific topics to be covered include process flow, simulation, decision-making, quality improvement, forecasting, capacity management, project management, and inventory management. A specific emphasis will be placed on learning and using new tools and technologies to solve analytic problems and then articulate solutions to those problems in managerially- understandable and actionable terms.

Course Objectives and/or Goals

COURSE OBJECTIVES	ASSESSMENT (number of exam problems/questions)	MHA Program Competency
Demonstrate an understanding of the language of management science, operations management, and systems analysis.	8	Perform environmental scans and needs assessment in support to program and organizational development (HEC-1).
Describe the services sector in general, and service management processes in particular, from strategic and operational perspectives.	5	Incorporate evidence – based approaches and external assessments in the design and implementation of programs that improve population health, and organizational, financial and clinical performance (HOP-2).
Demonstrate an understanding of the contexts in which operations management can be applied to improve quality and reduce costs in the service sector.	7	Implement project management techniques and systems thinking to plan and manage initiatives involving significant resources, scope and impact (BAT-1).
Apply various analytical tools and techniques to various health care problems related to quality, patient and employee satisfaction, and inventory management; and interpret the results within the context of the problem.	11	Evaluate clinical and organizational performance using statistical and operations management techniques and procedures (BAT-3).
Demonstrate the ability to merge both quantitative and qualitative information in decision-making.	6	Propose, develop, and implement strategic approaches based statistical, quantitative evaluation of clinical, financial and organizational performance (HOP-1).

Instructional Methods

Classroom sessions will be a mix of traditional lecturing and practice problems. For many of the practice problems, you will find it useful to have your laptop with you in class. Lecture notes will be posted to Canvas prior to each class session.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule

Topical Outline/Course Schedule											
Date	Time	Topic	Readings								
1/7/2015	0:50	Course Introduction	n/a								
1/12/2015	1:55	Operations Management	Krajewski Ch 1								
1/14/2015	0:50	Operations Management	Krajewski Supp A								
1/19/2015	1:55	MLK Holiday	n/a								
1/21/2015	0:50	Statistics Review	Posted in Canvas								
1/26/2015	1:55	Project Management	Krajewski Ch 2 & 15								
1/28/2015	0:50	Project Management	Krajewski Ch 2 & 15								
2/2/2015	1:55	Process Flow	Krajewski Ch 3 & 4								
2/4/2015	0:50	Process Flow	Krajewski Ch 3 & 4								
2/9/2015	1:55	Quality Imp. (G210)	Krajewski Ch 5								
2/11/2015	0:50	Quality Imp. (Guest Speaker)	Krajewski Ch 5								
2/16/2015	1:55	Decision Making	Krajewski Ch 1 & Supp A								
2/18/2015	0:50	Decision Making	Krajewski Ch 1 & Supp A								
2/23/2015	1:55	Simulation	Krajewski Ch 6								
2/25/2015	0:50	Simulation (HW #1 Due) (GP #1 Due)	Krajewski Ch 6								
3/2/2015	1:55	Spring Break	n/a								
3/4/2015	0:50	Spring Break	n/a								
3/9/2015	1:55	Forecasting (G210)	Krajewski Ch 14								
3/11/2015	0:50	Exam Review	n/a								
3/16/2015	1:55	Exam 1	n/a								
3/18/2015	0:50	Forecasting (Guest Speaker) (North Tower 6184)	Krajewski Ch 14								
3/23/2015	1:55	Lean Concepts (G210)	Krajewski Ch 8								
3/25/2015	0:50	Lean Concepts	Krajewski Ch 8								
3/30/2015	1:55	Capacity	Krajewski Ch 6 & Supp B								
4/1/2015	0:50	Capacity (Guest Speaker)	Krajewski Ch 6 & Supp B								
4/6/2015	1:55	Constraint Management	Krajewski Ch 7								
4/8/2015	0:50	Supply Chain	Krajewski Ch 9 & 10								
4/13/2015	1:55	Supply Chain (HW #2 Due) (GP #2 Due)	Krajewski Ch 9 & 10								
4/15/2015	0:50	Six Sigma	n/a								
4/20/2015	1:55	Six Sigma	n/a								
4/22/2015	0:50	Exam Review	n/a								
4/27/2015	1:55	Exam 2	n/a								
4/29/2015	0:50	No Class	n/a								

NOTE: Schedule can change at the discretion of Lead Instructor

Course Materials and Technology

Krajewski L, Ritzman L, and Malhotra, M. *Operations Management: Processes and Value Chains*, 10th ed., 2013, Pearson/Prentice Hall, Upper Saddle River, New Jersey. ISBN-978-0-13-280739-5

REQUIRED SUPPLEMENTAL MATERIAL:

Supplemental readings will be posted on the course's Canvas web site https://lss.at.ufl.edu/

For issues with technical difficulties for E-learning please contact the UF Help Desk at:

- <u>Learning-support@ufl.edu</u>
- (352) 392-HELP select option 2
- https://lss.at.ufl.edu/help.shtml

ACADEMIC REQUIREMENTS AND GRADING

Assignments

Policies Related to Homework:

Homework must be completed individually.

One of the best ways to learn the quantitative tools, concepts, interpretations and analyses discussed in this course is through practice. Each homework as signment will contain problems that are based on material drawn from the text book, lectures, supplemental readings, and other sources. For each assignment, you must turn in the following:

- 1. An electronic copy of your homework sheet (with answers) uploaded to the appropriate folder on the e-learning website Assignment section. You need to show any calculations by hand, or with Excel. If you cannot type your calculations/work into a Word document, you may printout your homework, complete it by hand, scan your work and upload it as a pdf document.
- 2. An electronic copy of any Excel spreadsheets, that you created, uploaded to the appropriate folder on the e-learning website Assignment section. You may choose to copy and paste spreadsheet outcomes and formulae into the electronic word document per the directions below, if you do not want to submit more than one document for final grading.

Instructions for submitting Excel screen shots with your assignments

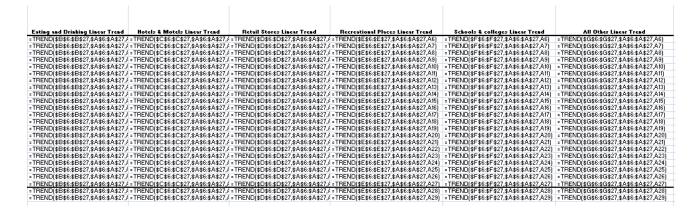
If you choose not to submit your original spreadsheets, that you create for an assignment, you must turn in screen shots of your spreadsheets and the underlying formulae pasted into your homework sheet (see below for instructions on each of these).

The "prnt scrn" key on your keyboard will copy everything shown on the screen to your clipboard. You can then paste the screen into Paint or some other photo editor and crop everything except the picture of the spreadsheet.

1. Submit screen shots of your spreadsheet models, for example:

4	Α	В	С	D	Е	F	G	Н		J	K	L	M	N
4														
5	Year	Eating & drinking places ²	Hotels & motels ²	Retail stores, direct selling ³	Recreational places ⁴	Schools & colleges ⁵	All other ⁶	Total ⁷	Eating and Drinking Linear Trend	Hotels & Motels Linear Trend	Retail Stores Linear Trend	Recreati onal Places Linear Trend	Schools & colleges Linear Trend	All Other Linear Trend
6	1	75,883	5,906	8,158	3,040	11,115	16,194	120,296	71125	6406	9200	2108	9447	16335
7	2	83,358	6,639	8,830	2,979	11,357	17,751	130,914	81102	6951	9581	2580	10290	17213
8	3	90,390	6,888	9,256	2,887	11,692	18,663	139,776	91078	7497	9962	3053	11133	18091
9	4	98,710	7,660	9,827	3,271	12,338	19,077	150,883	101055	8042	10342	3525	11976	18969
10	5	105,836	8,409	10,315	3,489	12,950	20,047	161,046	111031	8587	10723	3998	12819	19847
11	6	111,760	9,168	10,499	3,737	13,534	20,133	168,831	121008	9132	11104	4470	13662	20725
12	7	121,699	9,665	11,116	4,059	14,401	20,755	181,695	130984	9677	11485	4943	14505	21603
13	8	146,194	11,117	12,063	4,331	14,300	21,122	209,127	140961	10223	11866	5415	15348	22481
14	9	160,855	11,905	13,211	5,144	14,929	22,887	228,930	150938	10768	12247	5887	16191	23360
15	10	171,157	12,179	14,440	6,151	15,728	24,581	244,236	160914	11313	12628	6360	17034	24238
16	11	183,484	12,508	16,053	7,316	16,767	26,198	262,326	170891	11858	13008	6832	17877	25116
17	12	188,228	12,460	16,750	8,079	17,959	27,108	270,584	180867	12404	13389	7305	18720	25994
18	13	183,014	13,204	13,588	8,602	18,983	27,946	265,338	190844	12949	13770	7777	19563	26872
19	14	195,835	13,362	13,777	9,275	19,844	28,031	280,124	200820	13494	14151	8249	20406	27750
20	15	205,768	13,880	14,210	9,791	21,086	28,208	292,943	210797	14039	14532	8722	21249	28628
21	16	214,274	14,195	14,333	10,574	22,093	28,597	304,066	220774	14584	14913	9194	22092	29506
22	17	221,735	14,504	14,475	11,354	22,993	28,981	314,043	230750	15130	15294	9667	22935	30384
23	18	235,597	15,469	14,407	8,290	24,071	30,926	328,760	240727	15675	15674	10139	23778	31262
24	19	248,716	15,800	15,198	9,750	25,141	31,926	346,530	250703	16220	16055	10612	24621	32140
25 26	20	260,495	16,623	16,397	10,400	26,256	33,560	363,730	260680	16765	16436	11084	25464	33018
	21	275,695	17,440	16,591	11,177	27,016	34,508	382,427	270656	17310	16817	11556	26306	33896
27	22	290,655	17,899	16,881	11,809	28,012	35,004	400,259	280633	17856	17198	12029	27149	34774
28	23								290610	18401	17579	12501	27992	35652
29	24								300586	18946	17960	12974	28835	36530

2. Submit screen shots of the formulae within your spreadsheets. To show all of your formulas on the screen (using a PC), hold the 'Control' key and press the grave accent key (`). (This is also the tilde key (~). After showing the formulas, you may also need to adjust the column widths so you can see more of the formulas. You can then use the 'prnt scrn' to copy/paste as before. For example:



Late/Make-up Homework will not be accepted.

Plagiarism/Copying: Your assignment submissions will be compared by the grader and

electronically for evidence of copying. If found, both students will receive a zero on the assignment and be subject to departmental and university procedures on academic honesty violations.

Lecture Format:

Classroom sessions will be a mix of traditional lecturing and practice problems. For many of the practice problems, you will find it useful to have your laptop with you in class. Lecture notes will be posted to prior to each class session.

Policy Related to Required Class Attendance

Attendance is mandatory. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis. It is your responsibility to inform the instructor about upcoming absences. Excessive absences may result in a lowering of your grade at the instructor's discretion.

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: http://www.registrar.ufl.edu/catalogarchive/01-02-catalog/academic_regulations/academic_regulations_013_.htm

Grading

Grades for this course will be determined according to student performance on the four requirements as shown in the table below. The same evaluation procedure will be applied to ALL students.

Requirement	% of final grad (must sum to 100%)
Homework	20%
Group Projects	20%
Exam 1	30%
Exam 2	30%

Point system used (i.e., how do course points translate into letter grades).

Points earned	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	Below 60
Letter Grade	А	A-	B+	В	B-	C+	С	C-	D+	D	D-	E

Please be aware that a C- is not an acceptable grade for graduate students. A grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A.

Letter Grade	Α	Α-	B+	В	B-	C+	С	C-	D+	D	D-	E	WF	I	NG	S-U
Grade	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0
Points																

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.aspxx

Exam Policy

There will be two exams. Each exam will consist of a take home portion and in class portion. The take home portion will be time limited and will be subject to the University of Florida Honor Code.

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

Communication Guidelines

Directions – Proper directions will be communicated to you in class, through the homework assignments and in this syllabus. If you do not understand the expectation, ASK the instructor before you turn in the assignment. It is too late to seek clarification after grades have been assigned.

Professionalism –Please be punctual! No phone calls, text messages, e-mails, tweets, or any other new electronic communication method that may be invented between now and the end of the semester. **Laptops may be used in class for course-related work. Otherwise your computer should remain closed during class times.**

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 optional in UF Template

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu so make sure you include a statement regarding the value and expectation for student participation in course evaluations. We suggest you include a comment regarding how you will use the evaluations (e.g. to make specific improvements to the course and teaching style, assignments, etc.). It is also important to make some statement regarding the direct influence they have on faculty tenure and promotion, so your input is valuable. 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 to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health optional in UF Template

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that arise in the course of pursuing higher education or 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

BUT – 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.