

University of Florida
College of Public Health & Health Professions Syllabus
HSA 6196: Healthcare Data Analytics II (3 credit hours)
 Semester: Spring 2021
 Delivery Format: HyFlex
 Course Website available in Canvas

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Preferred Course Communications: Message in Canvas

Course meeting times and location:
 Monday, Periods 4 - 6, 10:40 – 1:40, Room HPNP 1102

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

This course is designed to instruct students on the following:

COURSE OBJECTIVES	Competencies addressed
Demonstrate an understanding of the language of management science, operations management, and systems analysis.	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.	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.	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.	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.	Propose, develop, and implement strategic approaches based statistical, quantitative evaluation of clinical, financial and organizational performance (HOP-1).

Instructional Methods

- Lecture
- In-class case studies and related questions/activities, with additional work out of class, as necessary
- In-class analytics exercises, with additional work out of class, as necessary
- Student team run review sessions of analytics exercises
- In-class discussions

Disclaimer: ***This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.***

DESCRIPTION OF COURSE CONTENT

Course Materials and Technology

Required Materials:

- *Healthcare Operations Management, 3rd Edition*. Daniel B. McLaughlin & John R. Olson; Health Administration Press, 2017.
- Course reading distributed by instructor
- A computer with Excel capabilities (version 2010 or later)
- Either a laptop with access to Canvas or tablet/smartphone device with the Canvas App
- Register for a CATME student account, a system for teamwork support tools (<http://info.catme.org/>).

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>

Topical Outline/Course Schedule (*Red = Student Team Run Presentation) (**Green = See Canvas posting for case study reading and related questions/activities)

Date	Topic	Reading	Assignment(s)
Jan. 11 th	Welcome and introduction to the class		
Jan. 18 th	MLK DAY HOLIDAY – NO CLASS		

Date	Module & Topic	Reading	Assignment(s)
Jan. 25 th	1: Introduction to Healthcare Operations	Ch. 1, 2, 3**	**Ch. 3 Case Study Questions (due Feb. 1 st)
Feb. 1 st	2: Strategy and the Balanced Scorecard	Ch. 4	Ch. 4 Exercises p. 94 (due Feb. 8 th)
Feb. 8 th	*Ch. 4 Exercises Review Primary: Team 1, Secondary: Team 10 3: Project Management	Ch. 5**	**Ch. 5 Case Study Questions, Ch. 5 Exercises p. 129 (due Feb. 15 th)
Feb. 15 th	*Ch. 5 Exercises Review Primary: Team 2, Secondary: Team 9 4: Tools for Problem Solving and Decision Making	Ch. 6**	**Ch. 6 Case Study Questions, Ch. 6 Exercises p. 164 (due Feb. 22 nd)
Feb. 22 nd	*Ch. 6 Exercises Review Primary: Team 3, Secondary: Team 8 5: Statistical Thinking & Statistical Problem Solving	Ch. 7	Ch. 7 Exercises p. 199 (due Mar. 1 st)
Mar. 1 st	*Ch. 7 Exercises Review Primary: Team 4, Secondary: Team 7 6: Quality Management: Focus on Six Sigma	Ch. 9**	**Ch. 9 Case Study Questions, Ch. 9 Exercises p. 250 (due Mar. 8 th)
Mar. 8 th	*Ch. 9 Exercises Review Primary: Team 5, Secondary: Team 6 7: The Lean Enterprise	Ch. 10**	**Ch. 10 Case Study Questions, Ch. 10 Exercises p. 277 (due Mar. 15 th)
Mar. 15 th	*Ch. 10 Exercises Review Primary: Team 6, Secondary: Team 5 8: Process Improvement and Patient Flow	Ch. 11**	**Ch. 11 Case Study Questions, Ch. 11 Exercises p. 319 (due Mar. 29 th)
Mar. 22 nd	NO CLASS		
Mar. 29 th	*Ch. 11 Exercises Review Primary: Team 7, Secondary: Team 4 9: Scheduling and Capacity Management	Ch. 12**	**Ch. 12 Case Study Questions, Ch. 12 Exercises p. 341 (due Apr. 5 th)
Apr. 5 th	*Ch. 12 Exercises Review Primary: Team 8, Secondary: Team 3 10: Supply Chain Management	Ch. 13	Ch. 13 Exercises p. 366 (due Apr. 12 th)
Apr. 12 th	*Ch. 13 Exercises Review Primary: Team 9, Secondary: Team 2 11: Improving Financial Performance with Operations Management	Ch. 14	Ch. 14 Exercises p. 387 (due Apr. 19 th)
Apr. 19 th	*Ch. 14 Exercises Review Primary: Team 10, Secondary: Team 1 12: In-class working session for case study report	Ch. 15**	Case Study Report & CATME Peer Evaluation (due Apr. 26 th)
Apr. 26 th	FINAL EXAMS WEEK	Ch. 15**	Case Study Report & CATME Peer Evaluation (due Apr. 26 th)

ACADEMIC REQUIREMENTS AND GRADING

Student Team Case Study Questions (25%)

Students will be assigned to teams to complete case study readings and affiliated questions from the relevant chapter of the McLaughlin and Olson textbook. See Canvas postings for case study materials. All assignments will be submitted electronically to the Assignment link in Canvas by 10:40 AM on the date they are due.

Textbook Exercises (30%)

Students will complete exercises from the relevant chapter of the McLaughlin and Olson textbook. All assignments will be submitted electronically to the Assignment link in Canvas by 10:40 AM on the date they are due.

Student Team Run Review Session (10%)

Students will be assigned to teams to review the completed exercises for the relevant chapter of the McLaughlin and Olson textbook, including the solutions and steps for obtaining the solutions. Please refer to the course schedule above for your team's review session schedule. The primary team will be scheduled to present. The secondary team will be equally prepared to present the material and will do so in the event that the primary team is unavailable.

Please note, any student who has an unexcused absence on the date of his/her team's review session will receive 0% credit for the team's review session grade. Any student who has an excused absence on his/her team's review session date is eligible for up to 60% partial credit of the team's review session grade; however, this is conditional upon other team member feedback regarding acceptable contributions to the review session presentation materials and other necessary preparations prior to the excused absence. Further, up to 100% of the remaining 40% credit of the student's team review session grade will be available upon submission of a make-up assignment. Any student who has an excused absence and desires this make-up assignment will submit a paper encompassing a literature critique of a peer reviewed manuscript selected by the student and approved by the professor. Papers should be at least 5 pages in length, double-spaced, 12 point font, 1 inch margins. Additional specifics of the paper requirements will be made available on an as needed basis. Make-up assignments will be due by email submission to the professor and TA within two (2) weeks of the excused absence by 10:40 AM.

Student Team Case Study Report (25%)

Students will be assigned to teams to develop a case study report. See p. 409 of the McLaughlin and Olson textbook for relevant information. Specific requirements will be reviewed in class and posted to the Assignment link in Canvas. All report materials will be due by electronic submission to the Assignment link in Canvas by 10:40 AM on April 26th.

Peer Evaluation (5%)

Each team member will anonymously submit a standardized evaluation of their peers' contributions to their team's work during the semester (i.e., Student Team Case Study Questions, Student Team Run Review Session, and Student Team Case Study Report). Peer evaluations will be submitted using the CATME system for teamwork support tools (<http://info.catme.org/>) by 11:59 PM on Monday, April 26th. Please do not complete your fellow team members' CATME evaluations until after your team has submitted the final report. Students who do not participate in the CATME peer review process will receive 0% credit toward the peer evaluation portion of their final grade in the course.

Each team member will submit an objective rating for all members of the group, including their own self-ratings, for the domains of contributing to the team's work (0, 1, 2, 3, or 4 points), interacting with teammates (0, 1, 2, 3, or 4 points), keeping the team on track (0, 1, 2, 3, or 4 points), expecting quality work (0, 1, 2, 3, or 4 points), and having related knowledge, skills and abilities (0, 1, 2, 3, or 4 points). An average is taken across all raters for each domain, and these average ratings are then summed to the total peer evaluation score (ranging 0 to 20 points). Of note, students who emerge as high performing leaders for their fellow team members according to their CATME peer evaluation ratings will be eligible for a maximum of four (4) extra credit points on their individual grade for the team case study report. Students who meet the criteria for being considered a high performer are those whose average ratings are better than 2.8/4 for each domain and whose ratings are more than half a point higher than the overall average for the team as a whole. Such students have clearly made exceptional contributions to the team's work.

Class Attendance and Participation (5%)

Attendance will be taken during each class session, and this will be reflected in each student's final grade. Excused absences must be consistent with university policies in the Graduate Catalog (<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>) and require appropriate documentation. Additional information can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> For an absence to be considered excused based on these reasons, the TA or Course Instructor must be given notification prior to the start time of class via email or Canvas message. The time stamp of the email will be used to determine if notification was prior to the start of the class. Students who do not attend class without an approved excused absence will not receive any attendance and participation credit for that day. Students are expected to arrive to class

on time and stay until class is dismissed. Two (2) late arrivals to class will be considered the equivalent of one, unexcused class absence. Students will be allowed one (1) unexcused absence from class without affecting their attendance and participation grade. Students are expected to read the assigned text and case study prior to the class meeting date, complete all out of class assignments, be an active member of their team, and to actively participate in class discussions.

Grading

Requirement	Due date/time	% of final grade
Student Team Case Study Questions	See course schedule, 10:40 AM	25%
Textbook Exercises	See course schedule, 10:40 AM	30%
Student Team Run Review Session	See course schedule, 10:40 AM	10%
Student Team Case Study Report	April 26 th , 10:40 AM	25%
Peer Evaluation	April 26 th , 11:59 PM	5%
Attendance and Participation	Each class session, 10:40 AM	5%

The total number of points earned will be transformed to letter grades as follows. Please note that there will be no rounding up for grade increments:

Points earned	95 or more	90 - 94.99	87- 89.99	83 - 86.99	80 - 82.99	77 - 79.99	73 - 76.99	70 - 72.99	67 - 69.99	63 - 66.99	60 - 62.99	Below 60
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

The letter grade to grade point conversion table is listed below. Letter grade to grade point conversions are fixed by UF and cannot be changed.

Letter Grade	A	A-	B+	B	B-	C+	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	1.67	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> Please be aware that a C- is not an acceptable grade for graduate students. The GPA for graduate students must be 3.0 based on 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if based on credits in courses numbered 5000 or higher that have been earned with a B+ or higher. In addition, the Bachelor of Health Science and Bachelor of Public Health Programs do not use C- grades.

Policy Related to Late and Make up Work

Students are expected to complete all assignments by the appropriate date/time. Students are allowed to make-up work ONLY as the result of illness or other unanticipated circumstances warranting a medical excuse and resulting in the student missing a deadline, consistent with College policy. Late assignments not resulting from one of these circumstances and not pre-arranged and approved by the student's professor will not be accepted and will not receive credit for the assignment. The professor reserves the right to determine appropriate make-up options for each student.

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 to request a make-up.

Policy Related to Required Class Attendance and Participation

Students are expected to read the assigned text and case study prior to the class meeting date, complete all out of class assignments, be an active member of their team, and to actively participate in class discussions. Excused absences must be consistent with university policies in the Graduate Catalog (<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>) and require appropriate documentation. Additional information can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx> For an absence to be considered

excused based on these reasons, the TA or Course Instructor must be given notification prior to the start time of class via email or Canvas message. The time stamp of the email will be used to determine if notification was prior to the start of the class. Students who do not attend class without an approved excused absence will not receive any attendance and participation credit for that day. Students are expected to arrive to class on time and stay until class is dismissed. Two (2) late arrivals to class will be considered the equivalent of one, unexcused class absence. Students will be allowed one (1) unexcused absence from class without affecting their attendance and participation grade.

Policy Related to Guests Attending Class:

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: <http://facstaff.phphp.ufl.edu/services/resourceguide/getstarted.htm>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Expectations Regarding Course Behavior

Students are expected to:

- Attend all classes
- Arrive on time and stay until class is dismissed
- Complete reading and homework assignments prior to class
- Participate in class discussions
- Be an active member of your team
- Exhibit professional behavior
- Limit use of electronic devices strictly to activities in support of the learning environment.

Communication Guidelines

Students will be expected to communicate via the Canvas messaging system.

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 professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

On Campus Face-to-Face

We will have face-to-face instructional sessions to accomplish the student learning objectives of this course. In response to COVID-19, the following policies and requirements are in place to maintain your learning environment and to enhance the safety of our in-classroom interactions.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>), please use the UF Health screening system (<https://coronavirus.uflhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/>) and follow the instructions on whether you are able to attend class.
 - Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work (<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>).

Online Synchronous Sessions:

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

SUPPORT SERVICES

Accommodations for Students with Disabilities

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs within the first week of class. 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.

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
