



HITT – 1255– 001IN
Healthcare Statistics
(Spring 2024)
Internet

Instructor Information: Kay Carrier, MHA, RHIA, kfrieze@com.edu, 409-933-8414(office) 409-789-5113(cell)

Student hours and location: Monday 1 to 3; Tuesday 9 to 11; Wednesdays 1 to 3; Thursday 9 to 12 & Friday by appointment.

STEAM building, 225.45

Required Textbook/Materials:

Calculating and Reporting Healthcare Statistics, 6th edition – Author; Susan White, PhD, RHIA, CHDA; AHIMA; ISBN# 978-1-58426-683-9; AHIMA # -AB120718

Health Information Management Case Studies 2nd edition; Author Dianna Foley;

Course Description: Principles of healthcare statistics with emphasis in hospital statistics. Skill development in computation and calculation of health data.

Course Pre & Corequisites: Prerequisite MATH 1342 – Elementary Statistics

Notice to Students Regarding Licensing

Effective September 1, 2017, HB 1508 amends the Texas Occupations Code Section 53 that requires education providers to notify potential or enrolled students that a criminal history may make them ineligible for an occupational license upon program completion. The following website provides links to information about the licensing process and requirements (www.ahima.org). Should you wish to request a review of the impact of criminal history on your potential (RHIT) prior to or during your quest for a degree, you can visit this link and request a “criminal history evaluation”: (www.ahima.org)

This information is being provided to all persons who apply or enroll in the program, with notice of the requirements as described above regardless of whether the person has been convicted of a criminal offense. Additionally, HB 1508 authorizes licensing agencies to require reimbursements when a student fails to receive the required notice.

Determination of Course Grade/Detailed Grading Formula:

Chapter Reviews (25% of final grade)

Chapter Reviews consist of matching, multiple choice questions as well as calculation problems. The number of questions varies from chapter to chapter. **Chapter 11 quiz and Chapter 11 exercises address the following Core Objective: Visual Communication.**

Midterm (30% of final grade)

The midterm consists of multiple choice and calculation problems pertaining to chapters 1-7.

Final (30% of final grade)

The final consists of multiple choice and calculation problems pertaining to chapters 1 -13. Each question or calculation is worth 1 point. **Final address the following Core Objective: Empirical and Quantitative Skills and critical thinking skills**

Attendance/class participation/discussions (15% of final grade)

Grading Formula:

Your semester grade will be comprised of the following components and graded per the following grading scale: Furthermore, **to pass this class, you must obtain 75 (C) or better.**

Quizzes	25%
Mid-Term	30%
Final	30%
Discussions/Case Studies	15%

Your semester grade will be comprised of the following components and graded per the following grading scale: Furthermore, **in order to pass this class, you must obtain “C” 75 or better.**

Grading Scale:

90 - 100	A
80 - 89	B
75 – 79	C
70 – 74	D
69 – Below	F

Late Work, Make-Up, and Extra-Credit Policy:

Make-Up Policy:

As a student you are required to complete all lessons, assignments and test as part of each course within the program. **Work submitted after deadline is not accepted.** A zero will be placed in the grade book for late assignments unless specific arrangements have been made. The percentage of each activity will weight in the final grade, regardless of if the student participates in the activity or test.

Attendance Policy: Must log onto blackboard at least three (3) times a week.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. (Faculty may add additional statement requiring monitoring and communication expectations via Blackboard or other LMS)

Student Learner Outcomes:

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
1. Students will be able to prepare statistical reports to support healthcare information and department operations and services.	Empirical and Quantitative Skills Critical Thinking	Final
2. Students will be able to demonstrate knowledge of analyzing healthcare statistics, vital statistics, descriptive statistics, data validity, and reliability	Critical Thinking	Final
3. Students will be able to demonstrate knowledge of assessing methods of collecting healthcare data.	Critical Thinking	Discussion Chapter 12
4. Students will be able to demonstrate knowledge of utilizing appropriate methods of display.	Communication Skills; Visual	Chapter 11 quiz and exercises

Academic Dishonesty: Any incident of academic policy will be dealt with in accordance with college policy and the Student Handbook (pg. 19). Academic dishonesty – such as cheating on exams is an extremely serious offense and will result in a **grade of zero** on that exam and the student will be referred to the Office of Student Conduct for the appropriate discipline action. <https://www.com.edu/student-services/student-handbook>.

Use of Artificial Intelligence (AI): Any assignment containing material generated by Artificial Intelligence (AI) will receive a **grade of zero** and the student will be referred to the Office of Student Conduct for appropriate disciplinary action.

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact the Dean of Instruction, Dr. Rebecca Montz, at 409-933-8948/rmontz@com.edu

Course outline:

Course outline – Tentative Date	Class #	Topics Covered/Assigned Reading	Assignments	Lab Activities
1/16 – 1/21	1	No Class on 1/18 MLK Day. Class will begin on the 19th. Welcome, Review Syllabus and Chapter 1 Introduction to Health Statistics Define Stats Need to Study Stats Differentiate between descriptive and inferential stats Stats in healthcare originate Users of healthcare statistics	Chapter 1 Matching and Review Due 1/21 . Located under the learning Module.	Welcome Discussion due 1/18
1/22 – 1/28	2	Chapter 2 Mathematics Review Explain fractions, quotient, decimal, ration, proportion, rate and percentage Difference between numerator and denominator	Chapter 2 Matching & Review Due 1/28 . Located under the learning Module.	Discussion 2: Compare and contrast descriptive and inferential statistics Due 1/25

		<p>How to round whole numbers and decimals</p> <p>How to average a group of numbers</p>		
1/29 – 2/4	3	<p>Chapter 3 Patient Census Data</p> <p>Define, differentiate and apply the terms inpatient census, daily inpt. Census, inpt service day, total inpt service days and admissions and discharge (A&D)</p> <p>Differentiate between an interhospital (interfacility) transfer and an intrahospital transfer</p> <p>Compute daily census and inpt service days using the admission and discharge data provided</p>	<p>Chapter 3 Matching & Review Due 2/4. Located under the learning Module.</p>	<p>Discussion 3 Locate Texas’s department of health on the Internet and see what types of statistics are available. How can you use the information as a consumer and as a provider of health care. On Blackboard, please post your initial post by Thursday 2/1 and at least one response to a classmate by Saturday 2/3.</p>
2/5 – 2/11	4	<p>Chapter 4 Percentage of Occupancy</p> <p>Define and differentiate among the terms inpatient bed count, bed complement, total bed count days, newborn bassinet count, bed count days, newborn count days</p> <p>Identify the beds that are included in a bed count</p> <p>Compute the bed occupancy percentage for any period given the data representing bed count and inpt service days (adult and children)</p> <p>Compute bassinet occupancy percentage</p> <p>Compute the percentage of occupancy for a period when there has been a change in the</p>	<p>Chapter Matching & Review 4 & 5 Due 2/11 Located under the learning Module.</p>	<p>Discussion Chapter 4 - Conduct an internet search for reasons why some facilities would use the bed turnover rate rather than the percentage of occupancy. On Blackboard, please post your initial post by Thursday 2/8 and at least one response to a classmate by Saturday 2/10.</p> <p>Review information at www.ahcpr.gov/data/hcup/ for information about LOS. Type “hospital LOS” in their search field. Read one of the articles. On Blackboard, please post a summary of</p>

		<p>number of beds during that period</p> <p>Calculate the bed turnover rate Chapter 5</p> <p>Length of stay (LOS)</p> <p>Define LOS and discharge days</p> <p>Compute LOS for one pt. based on data provided Compute total LOS for a group Compute average LOS using the formulas provided Compute the average LOS for newborns Describe a leave of absence day and identify when it is used in calculations</p>		<p>the article by Thursday 2/18 and at least one response to a classmate</p>
2/12 – 2/18	5	<p>Chapter 6 Death (Mortality) Rates</p> <p>Define and calculate the death rates: gross, net, postoperative, anesthesia, maternal, newborn and fetal</p> <p>Calculate the case fatality rate</p> <p>Differentiate between operation and procedure</p> <p>Define Cancer mortality rates</p>	<p>Chapter 6 Matching & Review Due 2/18. Located under the learning Module.</p>	
2/19 – 2/25	6	<p>Chapter 7 Hospital Autopsies and Autopsy Rates</p> <p>Define the terms autopsy, hospital inpt autopsy, hospital autopsy and autopsy rate</p> <p>Define a coroner's case and determine when a coroner's case would be included in a hospital's autopsy rate Compute the following autopsy rates: gross, net, adjusted hospital, newborn and fetal</p>	<p>Chapter 7 Matching & Review Due 2/25 . Located under the learning Module.</p>	<p>Brainstorm session: Why the autopsy rate is decreasing? On Blackboard, please post your initial post by Thursday 2/22 and at least one response to a classmate by Saturday 2/24.</p>

2/26 – 3/3	7			I will hold a Teams meeting to assist anyone with questions or clarification of any formulas. TBA
3/5 – 3/10	8	Will open on 3/5 and close at midnight on 3/10		Due 3/10
3/11 – 3/17	9	SPRING BREAK – College is closed		
3/18– 3/25	10	<p>Chapter 8 Morbidity and Other Miscellaneous Rates</p> <p>Discuss and calculate infection rate</p> <p>Define and calculate the postop infection rate</p> <p>Distinguish between a surgical procedure and a surgical operation</p> <p>When provided with the appropriate data, compute the following rates: C-section, consultation and other rates</p>	<p>Chapter 8 Matching & Review Due 3/25 Located in the learning module.</p>	<p>Complete Case Study 3.29 post your answers in the assignment tab by 3/25</p>

3/26 – 4/1	11	<p>Chapter 9 Stats Computed within the HIM Dept.</p> <p>Describe the uses of stats computed within the HIM dept in terms of unit cost, productivity, and staffing levels</p> <p>Recognize how statistics are used in the creation of the HIM dept budget</p> <p>Verify computerized statistical report for accuracy</p> <p>Recalculate statistics for greater specificity Generate computerized statistical reports</p>	Chapter 9 Matching & Review Due 4/1 Located in the learning module.	Discussion how HIM dept statistics would be used in management. On Blackboard, please post your initial post by Thursday 3/30 and at least one response to a classmate by Saturday 3/31
4/2 – 4/8	12	<p>Review Chapter 9 Test Chapter 10 Descriptive Stats in Healthcare</p> <p>Define descriptive stats</p> <p>Define the terms rank, quartile, decile and percentile</p> <p>Explain how and why percentile are used</p> <p>Compute the percentile from an ungrouped distribution</p> <p>Define and compute the mean, median and mode</p> <p>Define and differentiate among range, variance, and standard deviation</p> <p>Calculate range, variance, and standard deviation</p> <p>Define and compute correlation</p>	Chapter 10 Matching & Review Due 4/8 Located in the learning module	Review available statistics at the CDC and Prevention site. There are numerous articles that use descriptive stats. Choose an article and report findings to class through the discussion thread by Thursday 4/5 and respond to another classmate's article by Saturday 4/7.

4/9 – 4/15	13	<p>Chapter 11 Presentation of Data</p> <p>Discuss categorical data: nominal, ordinal, interval and ratio</p> <p>Differentiate between discrete data and continuous data</p> <p>Describe and differentiate between tables and graphs</p> <p>Create tables and graphs to depict statistical info</p> <p>Understand the basic elements in preparing a report</p>	<p>Chapter 11 Matching & Review Due 4/15 Located in the learning module</p>	<p>Complete the exercises to apply graphical tools to present data. Exercises 11.3 questions # 3&4; Exercise 11/4. Please post them in the assignment tab Due 4/15</p>
4/16 – 4/22	14	<p>Chapter 12</p> <p>Basic Research Principles Discuss IRB and understand its role in research.</p>	<p>Chapter 12 Matching & Review Due 4/22 Located in the Learning module</p>	<p>Complete Case Study book 3.8 and 3.10 Post your answers in the assignment tab Due: 4/22</p> <p>Research the “Tuskegee Study” and please discuss how this relates to the IRB. Post on Discussion Board. Due 4/22.</p>
4/23 – 4/29	15	<p>Chapter 13 Inferential Statistics in Health Care</p> <p>Define Inferential stats</p> <p>Interpret the standard error of the mean and confidence intervals</p> <p>Identify and describe the null hypothesis</p> <p>Understand the importance of r test</p> <p>Interpret ANOVA</p> <p>Understand the significance of chi square</p>	<p>Chapter 13 Matching & Review Due 4/29 Located in the Learning Module.</p>	<p>Complete case study 3.29 Post your answers in the assignment tab by 4/29.</p> <p>Go to Compare hospitals at https://www.medicare.gov/hospitalcompare/search.html? Choose 3 hospitals to compare, go to patient experience tab and at the bottom asks would you recommend this hospital. Analyze the information and determine what management could do</p>

		Read Appendix A: An Introduction to Data Analytics		<p>with this type of information. Write a 1-1/2 report on what you found. On Blackboard, please post your paper by Thursday 4/27 and at least one response to a classmate by Saturday 4/29.</p> <p>Complete EHRgo Data Analytics I, II and III: the following are the links to the assignments. Due 5/1 https://web21.ehrgo.com/rd/?courseActivityId=13690; https://web21.ehrgo.com/rd/?courseActivityId=13692; https://web21.ehrgo.com/rd/?courseActivityId=13694. Please post your answers in the assignment tab</p>
4/30 – 5/6	16	Final will open 5/5 and will close 5/10 .		
5/7 – 5/11	17	Final will open 5/3 and will close 5/10.		

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook. <https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.* https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: **ADA Statement:** Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is February 28. The last date to withdraw from the 16-week session is April 22. The last date to withdraw for the 2nd 8-week session is May 1.

F_N Grading: The F_N grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F_N grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the F_N grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F_N grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you

will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

Success Tips for Students

Three Prior to Me: The HIM faculty encourages students to problem-solve, work as a team as well as utilize available resources. In order to develop these skills, we will employ the “**Three Prior to Me**” process. This means that before you contact the instructor with a course-related question, you must have attempted to find the information in three other places. For instance, if you are unsure about the meaning of a term used in the course, you would attempt to locate this information in three places prior to asking the instructor. Hence, you might do a Google search for the term, ask a classmate, and refer to your text book. Instructors **will** question you regarding what research methods you utilized to locate information on your own. This process is not meant to be a barrier to you, but instead to provide the following benefits:

-preparation for the workforce

-increased research skills

-instructors will have more time to provide feedback and interact with students

If you have a question that **ONLY** the instructor would know the answer to (grade-related, assessments, etc.), then of course you would go to the instructor directly. This process will require practice and patience from the student as well as the instructor

Professionalism: Success in one’s career is almost as dependent on professional behavior as on one’s academic knowledge and abilities. Therefore, students are expected to exhibit professional behavior online as well as all activities with this course. Professional behavior includes:

- **Attendance** – Students are expected to log into blackboard at least twice a week
- **Dependable** – The student meets assignment deadlines and follows through to completion of responsibilities.

Effective interpersonal and team skills – The student relates well to people, shows respect to others, deals tactfully and effectively with others, influences as opposed to directs, provides constructive criticism without altering others, negotiates or mediates when appropriate, exhibits openness to new ideas, and demonstrates a positive attitude.

• **Effective communication skills** – The student listens, speaks using correct grammar and without excess fillers, e.g. um, you know, like

• **Ethical conduct** – The student maintains honesty, integrity, and confidentiality of patient provider, fellow student and college information.

AHIMA Domains and Sub-domains specify the HIM body of knowledge and practice that is taught within this course.

Domain 1: Data Structure, Content and Information Governance

1.6 (DM Only) Evaluate data dictionaries and data sets for compliance with governance standards

Domain III: Informatics, Analytics, and Data Use

III.3. Calculate statistics for health care operations.

III.4. Report health care data through graphical representations.

III.5. Describe research methodologies used in health care.