COURSE NUMBER AND TITLE

HITT 1255 – Health Care Statistics

COURSE (CATALOG) DESCRIPTION


<table>
<thead>
<tr>
<th>INSTRUCTOR:</th>
<th>Beyda M. Ramirez, BAAS, RHIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFICE:</td>
<td>L-109</td>
</tr>
<tr>
<td>OFFICE HOURS:</td>
<td>TBA</td>
</tr>
<tr>
<td>CONTACT INFORMATION</td>
<td>(TELEPHONE AND EMAIL):</td>
</tr>
<tr>
<td></td>
<td>(956) 364-4795</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:beyda.ramirez@harlingen.tstc.edu">beyda.ramirez@harlingen.tstc.edu</a></td>
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</tbody>
</table>

MAJOR COURSE REQUIREMENTS

This course has been divided into the following 8 units:

A. Introduction to Health Statistics/Mathematics Review
B. Patient Census Data
C. Length of Stay
D. Bed Occupancy Ratio
E. Death (Mortality) Rates/Morbidity and Other Miscellaneous Rates
F. Hospital Autopsies and Autopsy Rates
G. Basic Research Principles

In each unit, the student will be given a lecture/demonstration and then be expected to perform the assignments for each unit. Each assignment(s) will be demonstrated and explained so that the student can then attempt it. After each unit, there will be a knowledge and/or performance exam. Each exam is based on the information discussed during the lecture, the reading assignments and/or the lab assignments given.

LEARNING OUTCOMES

A. Introduction to Health Statistics/Mathematics Review
   1. Define statistics.
   2. Appreciate the need to study health care statistics.
   3. Define descriptive statistics.
   5. Differentiate between descriptive and inferential statistics.
7. Identify the users of healthcare statistics.
8. Explain fraction, quotient, decimal, ratio, proportion, rate, and percentage.
9. Understand the difference between a numerator and denominator.
10. Understand how to round whole numbers and decimals.
11. Convert fractions and decimals to percentages.
12. Understand how to average a group of numbers.
13. Define and compute the mean, median, and mode.

B. Patient Census Data
1. Define, differentiate, and apply the terms inpatient census, daily inpatient census, inpatient service day, total inpatient service days, and admission and discharge (A&D).
2. Differentiate between an interhospital (interfacility) transfer and an intrahospital transfer.
3. Compute daily census and inpatient service days using the admission and discharge data provided.
4. Compute census and inpatient service days with data given for births and transfers.
5. Compute the average daily inpatient census for a patient care unit given inpatient service days for any such unit.

C. Length of Stay
1. Define the terms length of stay and discharge days.
2. Compute the length of stay for one patient based on data provided.
3. Calculate the total length of stay for a group of discharged patients.
4. Compute average length of stay.
5. Compute the average length of stay for newborns.
6. Describe a leave of absence day and identify when it is used in calculations.

D. Percentage of Occupancy
1. Define and differentiate among the terms inpatient bed count, bed complement, total bed count days, newborn bassinet count, bed count days, newborn bassinet count days.
2. Identify the beds that are included in a bed count.
3. Compute the bed occupancy percentage for any period given the data representing bed count and inpatient service days (adults and children).
4. Compute the bassinet occupancy percentage for any period given bassinet count and newborn inpatient service days (newborn).
5. Compute the percentage of occupancy for a period when there has been a change in the number of beds during that period.
6. Calculate the direct and indirect bed turnover rate.
E. Death (Mortality) Rates/Morbidity and Other Miscellaneous Rates
1. Define and calculate the following death rates: gross, net, postoperative, anesthesia, maternal, newborn, and fetal.
2. Calculate the case fatality rate.
3. Differentiate between operation and procedure.
5. Define nosocomial infection.
6. Discuss and calculate infection rate.
7. Define and calculate the postoperative infection rate.
8. Distinguish between a surgical procedure and a surgical operation.
9. Define complication and calculate complication rate.
10. When provided with appropriate data, compute the following rates: C-section, consultation, and other rates.

F. Hospital Autopsies and Autopsy Rates
1. Define the terms autopsy, hospital inpatient autopsy, hospital autopsy, and autopsy rate.
2. Define and differentiate between a coroner and medical examiner.
3. Define a coroner’s case and determine when it would be included in a hospital’s autopsy rate.
4. Compute the following autopsy rates: gross, net, adjusted hospital, newborn, and fetal.

G. Basic Research Principles
1. Explain the different types of research.
2. Describe the difference between quantitative and qualitative research.
3. Differentiate among research designs: exploratory, historical, descriptive, causal, correlational, evaluation, and experimental.
4. Describe the steps in the research process.
5. Explain exploratory and conclusive research design methods.
6. Describe the various data-collection techniques.
7. Differentiate among the following types of samples: probability and nonprobability, simple random, stratified, cluster, judgment, quota, and convenience.
8. Define Institutional Review Board (IRB) and understand its role in research.
9. Define hypothesis.
10. Define reliability and validity.
11. Differentiate between primary and secondary research.
12. Describe the Institutional Review Board in healthcare facilities conducting research.
13. Understand the various data interpretation issues and the importance of verification of data.

CAHIIM COURSE COMPETENCIES

**Health Data Structure, Content, and Standards**
- Data versus information (Analyzing, 4)

**Healthcare Statistics and Research**
- Vital statistics (Evaluating, 5)
- Healthcare statistics (Evaluating, 5)
- Descriptive statistics (such as means, frequencies, ranges, percentiles, standard deviations) (Understanding, 2)
- Statistical applications with health care data (Applying, 3)
- Data selection, interpretation, and presentation (Evaluating, 5)
- Knowledge-based research techniques (such as library, MEDLINE, web-based) (Evaluating, 5)

MAJOR COURSE LECTURE, TOPICS DESCRIPTION/REQUIRED/RECOMMENDED READINGS/ELECTRONIC RESOURCES TO VIEW

Tentative Schedule (Subject to change by your instructor)

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic/Lecture/Event</th>
<th>Required/Recommended Readings/Electronic Resources to View</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>Chapter 3 – Patient Census Data Quiz Exercise</td>
<td>Chapter 3 – pages 23-42</td>
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<tr>
<td>4</td>
<td>Chapter 3 – Patient Census Data Exercise</td>
<td>Chapter 3 – pages 23-42</td>
</tr>
<tr>
<td>5</td>
<td>Chapter 3 – Patient Census Data Test</td>
<td>Chapter 3 – pages 23-42</td>
</tr>
<tr>
<td>Week</td>
<td>Topic/Lecture/Event</td>
<td>Required/Recommended Readings/Electronic Resources to View</td>
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<tr>
<td>6</td>
<td>Chapter 5 – Length of Stay Quiz Exercise</td>
<td>Chapter 5 – pages 57-70</td>
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<tr>
<td>7</td>
<td>Chapter 5 – Length of Stay Test</td>
<td>Chapter 5 – pages 57-70</td>
</tr>
<tr>
<td>8</td>
<td>Chapter 4 – Percentage of Occupancy Quiz Exercise</td>
<td>Chapter 4 – pages 43-56</td>
</tr>
<tr>
<td>9</td>
<td>Chapter 4 – Percentage of Occupancy Test</td>
<td>Chapter 4 – pages 43-56</td>
</tr>
<tr>
<td>10</td>
<td>Chapter 6 – Death (Mortality) Rates Quiz Exercise</td>
<td>Chapter 6 – pages 71-94</td>
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<tr>
<td>11</td>
<td>Chapter 8 – Morbidity and Other Miscellaneous Rates Quiz Exercise Test</td>
<td>Chapter 8 – pages 115-135</td>
</tr>
<tr>
<td>12</td>
<td>Chapter 7 – Hospital Autopsies and Autopsy Rates Quiz Exercise</td>
<td>Chapter 7 – pages 95-113</td>
</tr>
<tr>
<td>13</td>
<td>Chapter 7 – Hospital Autopsies and Autopsy Rates Quiz Exercise Test</td>
<td>Chapter 7 – pages 95-113</td>
</tr>
<tr>
<td>14</td>
<td>Chapter 12 – Basic Research Principles Test</td>
<td>Chapter 12 – pages 227-248</td>
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<tr>
<td>15</td>
<td>Final Exam</td>
<td>Cumulative over coursework</td>
</tr>
</tbody>
</table>
ASSESSMENT MEASURES

The daily/weekly quizzes and tests will be on paper or on Moodle and will consist of some/all of the following:

• Dictation
• Spelling
• Multiple choice
• True/False
• Fill in the blank

REQUIRED TEXT AND MATERIALS

Calculating and Reporting Healthcare Statistics, Fourth Edition
Author: Loretta A. Horton, MEd, RHIA, FAHIMA

3-ring binder
Small hand held calculator
Highlighter
Pen/pencil

GRADING CRITERIA

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Unit tests</td>
<td>30%</td>
</tr>
<tr>
<td>Quizzes/labs</td>
<td>25%</td>
</tr>
<tr>
<td>Exercises/assignments</td>
<td>25%</td>
</tr>
<tr>
<td>Final exam</td>
<td>20%</td>
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GRADING SCALE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>93 – 100</td>
</tr>
<tr>
<td>B</td>
<td>86 – 92</td>
</tr>
<tr>
<td>C</td>
<td>78 – 85</td>
</tr>
<tr>
<td>D*</td>
<td>70 – 77</td>
</tr>
<tr>
<td>F*</td>
<td>0 – 69</td>
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</tbody>
</table>

*Below required performance and will not be counted for graduation requirements.

DEPARTMENT PARTICIPATION POLICY (revised 8-6-13)

Class participation in this course is mandatory and is a part of the Grading Policy. Students must maintain all daily assignments, class discussions, unit tests, lecture and laboratory quizzes, class projects, and all other assignments at the passage rates located in the GRADING CRITERIA AND SCALE for each activity or face a grade of “F” at the end of the term. Excused absences will not count against the student.

In order for an absence to be excused, the student must:

A. Notify the instructor of the absence BEFORE the class period.
B. Notice may be given by calling/emailing the instructor. THIS NUMBER HAS A 24-HOUR VOICE MAIL, SO CALLS MAY BE RECEIVED AT ANY TIME OF THE DAY OR NIGHT.
C. If a student notifies an instructor before class, this **DOES NOT** mean the absence will be excused. The course instructor determines whether an absence is excused or unexcused.

Students will be referred to their Department chair for advisement if they are unsatisfactorily participating in class.

**A student is considered unsatisfactorily participating in class when:**
The student fails to participate in the class by not completing daily assignments, tests, quizzes, class projects, participating in class discussions, handing in work promptly, and completing any other assignments required by your instructor at the passage rates indicated in the **GRADING CRITERIA AND SCALE.**

**Class participation will be recorded in the following manner:**
A. Class participation begins at the time class is scheduled to begin, the **FIRST DAY OF CLASS**.
B. A daily quiz will be given at the time class is scheduled to begin. This will count as a grade. If the student is tardy, or absent and unexcused, he/she will receive a 0 for the quiz grade.
C. The student will be counted absent from class if the student arrives 15 minutes, or more late for class, leaves the class for an extended period of time, leaves the classroom to answer the cell phone (without prior permission from the instructor) or exits the classroom without notifying the instructor. **THIS MEANS ALL WORK FOR THAT DAY WILL BE A “0” AS THE STUDENT WILL BE ABSENT.**
D. Students arriving late to class must **SIGN IN** upon arrival.

If a student fails to adhere to the class participation policy, it will be **STUDENT’S RESPONSIBILITY to “W” (withdraw) from the course.** This withdrawal process will no longer be initiated by the instructor. Students wishing to withdraw must file a **SCHEDULE CHANGE FORM** with the Admissions Office.

Students must remain in constant contact with their instructor to understand what their class participation status is at any time during the term.

**MAKEUP WORK:**
A. If an absence is excused, all missed work **MUST** be turned in the next day class is attended.
B. If an absence is unexcused, a grade of 0 will be given for all missed work.
C. Tests will be made up for **EXCUSED ABSENCES** only. The makeup test **MUST** be given during the next class period; **NO EXCEPTIONS.**
D. If a student is not excused, the student will receive a 0 for all missed work but must complete all missed work.
E. In order to complete the class, students must complete all work and assignments. All missed work **MUST** be turned in the next day class is attended.
F. *Late work will NOT be accepted* for a grade.

G. Daily quizzes will not count against students with excused absences.

H. Students with unexcused absences will receive a 0 for the daily quiz.

I. For each excused absence, the student must give a satisfactory written explanation from an appropriate authority to the instructor upon return to class.

J. Projects that have deadlines must be turned in by the designated time. **NO LATE PROJECTS WILL BE ACCEPTED FOR A GRADE.**

**CLASS RULES:**

A. All cell phones must be on vibrate during class. Cell phones should remain on for emergency notifications and shall be placed on the upper top corner of the desk facing down. Ringing or usage of cell phones during class may result in a deduction of points for the student.

C. No use of personal electronic devices is allowed in the classroom (e.g. cell phones, IPADS, IPODs, etc.). Use of these items can result in a deduction of points for the student.

**CLASS DISRUPTIONS:**

As stated in the Student Handbook & Planner under Student Rights & Responsibilities, students have the right to pursue an education without disruption or interference and to expect enforcement of norms for acceptable classroom behavior that prevents disruption of the teaching/learning process. Students may not disrupt class or any other college process by any means whatsoever (including sideline conversations, comments, arguments, noise of any kind or other activity which would hinder access to or utilization of academic information). Students disrupting class will be asked to leave the classroom for the day and will be counted as absent.

**SCHOLASTIC HONESTY:**

As stated in the Student Handbook & Planner under Student Rights & Responsibilities, any student found guilty of scholastic dishonesty is subject to disciplinary action.

Scholastic dishonesty includes, but is not limited to, cheating, plagiarism and collusion on academic work. Examples of cheating include copying another student’s test answers or other academic work; use of materials during a test without prior authorization from an instructor; unauthorized collaboration between students on a test or in the preparation of academic work, or knowingly using, buying, selling, stealing, or transporting contents of a test without an instructor’s permission. Plagiarism involves using another person’s work or ideas without acknowledging the other person’s contribution to the student’s work offered for a grade or credit. Collusion refers to unauthorized collaboration with another person while preparing any work offered for a grade or credit. Please see the Student Handbook & Planner under Student Rights & Responsibilities for more information.
OPEN LABS:
The only open labs will be assigned by the Department Chair at the beginning of the semester.
Instructors who will be holding open labs will have the lab hours on the schedules posted outside their door.

TARDINESS:
A. If a student is tardy to class and a daily quiz is being given, the student will not be allowed to take the quiz and will receive a 0 for the quiz grade.
B. If a student is tardy to class on the day a test is given, the student will take the test with 10 points deducted and must complete the test within the allotted time set for the rest of the class. If multiple tests are given that day, the student will receive 10 points off each test and must complete each test within the allotted time set.

ACCOMMODATION STATEMENT:
If you have a documented disability which will make it difficult for you to carry out class work as outlined and/or if you need special accommodations due to a disability, please contact (956) 364-4520 or visit the Support Services Office in the Consolidated Student Services Center (formerly building “M”) as soon as possible to make appropriate arrangements.

COURSE EVALUATIONS:
Every course and course instructor MAY be evaluated with an evaluation given to the class prior to the final exam. These evaluations are COMPLETELY ANONYMOUS with the results going to the Department Chair and Administration. All comments, good or bad, concerning the course itself or the course instructor are strongly encouraged.

STUDENT ASSISTANCE:
The Supplemental Instruction & Tutoring Program at TSTC offers free tutoring and academic support services to help you achieve your academic and career goals. You can access the most up-to-date Supplemental Instruction & Tutoring Schedule, as well as MyTSTC Video Tutor Library, by using your smart phone to scan over the QR code below or visiting our webpage at: http://www.tstc.edu/harlingenoss/situtoringprogram

For more information, please contact the Office of Student Success at 956.364.4163 or the Supplemental Instruction & Tutoring Program at 956.364.4170.

COPYRIGHT STATEMENT:
The materials used in the course (textbooks, handouts, media files (podcast, MP3, Videos, RSS (Feeds), and all instructional resources on the colleges Learning Management System (Moodle)) are intended for use only by students registered and enrolled in this course and are only to be used for instructional use, activities associated with, and for the duration of the course. All materials generated for this course, which includes but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and any additional materials.
These materials may not be retained in another medium or disseminated further. They are provided in compliance with the provisions of the Teach Act. These materials may not be reproduced, displayed, modified or distributed without the express prior written permission of the copyright holder or TSTC. For further information contact your instructor.

COMMUNICATING WITH YOUR INSTRUCTOR (MYMAIL E-MAIL SYSTEM):
All official college E-mail to students is sent through MyMail, the official student e-mail system at TSTC Harlingen. When communicating with instructors and/or employees of the college, you are required to use your TSTC MyMail student e-mail address. If you choose to forward your e-mail to another account, please be advised that you must respond from the MyMail account.

TSTC Harlingen faculty, staff, and students are asked to report all threats, perceived or real, immediately to College Police located in the Auxiliary Building. If the threat is imminent, the College Police emergency phone line at 364-4234 or 9-911 should be called. College Police will then coordinate the proper response in accordance with State and federal laws and TSTC System/College rules and regulations.

MOODLE:
This course may be delivered and taught as a “hybrid” course which is a blend of face-to-face (F2F) and time out of class (TOC) online instruction. Due to the online component of hybrid classes, all students enrolled in a hybrid course must have the following:

- Access to a computer that connects to the Internet (preferably a Pentium 4). If the student does not have access at home, access is provided through the TSTC library, the city library and/or the RAHC library, which has extended hours;
- Recommended browser (Mozilla Firefox);
- Active TSTC account;
- Basic e-mail, web skills and computer skills.

Students are required to access their “Moodle” account daily for course updates, announcements, assignments, etc.

BUDDY SYSTEM:
Students are encouraged to establish a “buddy” in each course. Students choose their own “buddy” and exchange contact information with them. Because students are responsible for completion of all work and meeting all deadlines, this “buddy” will be the contact person for gaining information on any work, assignments, and/or lectures missed during absences.

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NOTE: Any changes to this syllabus will be provided in writing to the student and updated on all posted locations (HB 2504, course Moodle sites, building offices, etc.).