

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: HIM 2214

COURSE TITLE: Health Data Management

PREREQUISITE(S): HIM 1110, MAT 1033 or MAC 1105

COREQUISITE(S): None

CREDIT HOURS: 3

CONTACT HOURS/WEEK: 3

CONTACT HOUR BREAKDOWN:

Lecture/Discussion:	
Laboratory:	
Other <u>Lecture/lab</u> :	3

FACULTY WORKLOAD POINTS: 3

STANDARDIZED CLASS SIZE ALLOCATION: 24

CATALOG COURSE DESCRIPTION:

This course provides students with a working knowledge regarding the use of acceptable terminology, definitions, and formulas necessary to compute standard health care statistics as well as generate reports and display data. Other topics include vital statistics, registries, and introduction to the research process. Hands experience with statistical software.

SUGGESTED TEXT(S) and RESOURCES: Abdelhak, et al. Health Information: Management of a Strategic Resources, text and workbook. Philadelphia, PA: W.B. Saunders, current edition.

Koch, Gerda. Basic Allied Health Statistics and Analysis. Albany, NY: Delmar, current edition.

AHIMA, Glossary of Health Care Terms. Chicago, IL: AHIMA, current edition.

Battery Operated, Non-Printing, Non-Programmable Calculator

IMPLEMENTATION DATE: Fall 2002

REVIEW DATE: Fall Term, 2002 (20031)
Fall Term, 2008 (20091) - Outline Review Process 2007

COURSE TOPICS (continued)	CONTACT HOURS <u>PER TOPIC</u>
I. Introduction to the Research Process	4
A. Overview of Research and Epidemiology	
B. Role of the HIM Professional (RHIT & RHIA)	
C. Steps in the Research Process	
1. Identification of Research Topic	
2. Review of Literature	
3. Isolation of the Research Problem	
4. Estimate of Success Potential	
5. Review of Literature - In-Depth	
6. Selection of Research Design	
7. Statement of the Research Hypothesis	
8. Selection of Data Gathering Methods, Techniques, and Instruments	
9. Development of Data Gathering Tools	
10. Design of Data Analysis Plan	
11. Conduct Pilot Study	
12. Implement Data Gathering and Analysis Plans	
13. Prepare Research Report	
14. Disseminate Findings	
D. Use of Computers in Research	
II. Reporting Statistical Data	4
A. Brief Introduction and Overview of the Course	
B. Introduction to Health Care Statistics	
1. Statistics and Data	
2. Role of the HIM Professional	
C. Statistical Data Terms and Definitions	
1. Population vs. Sample	
2. Constant vs. Variable	
3. Nominal vs. Ordinal Data	
4. Qualitative vs. Quantitative Variables	
5. Discrete vs. Continuous Data	
6. Ungrouped vs. Grouped Data	
7. Descriptive vs. Inferential Statistics	
8. Mortality vs. Morbidity	
9. Reliability and Validity	
10. Demographic Variables	
11. Vital Statistics	
D. Computerized Data	
1. Use	
2. Accuracy	
E. Patient Data Collection	
1. Types of Data Collected	

COURSE TOPICS (continued)	<u>CONTACT HOURS PER TOPIC</u>
F. Abbreviations	
1. Patient Care	
2. Statistical	
3. Clinical Units (Common Designations)	
4. Non-Official Abbreviations	
G. Uses of Data	
H. Mathematical Review	
1. Fractions	
2. Decimals	
3. Percentages	
4. Rates	
5. Ratio/Proportions	
6. Averaging	
7. Rounding Data	
8. Conversion to Another Form	
9. Computing with a Percentage	
III. Health Care Overview and Statistical Data Collection	4
A. Health Care Overview	
1. Health Care Facilities/Health Care	
a. Hospital (Acute Care) (Short Term Care)	
b. Long Term Care Facility (LTC), Extended Care Facility (ECF), Nursing Home (NH)	
c. Specialized Facilities	
d. Outpatient (OP) Care	
2. Payers (Payment Providers)	
a. Insurance Carriers	
b. PPO: Preferred Provider Organization	
c. HMO: Health Maintenance Organization	
d. Self-Pay	
3. Bed/Bassinets Classification	
4. Medical Care/Medical Staff/Medical Service Units	
a. Medical Care Unit	
b. Medical Staff/Service Unit	
c. Basic Service Classifications	
d. Expanded Medical Care Staff/Service Units	
e. Assigning Service Classification	
5. Transfers	
a. Intrahospital Transfers	
b. Discharge Transfer	
c. Additional Discharge Options	
B. Statistical Data	
1. Data Collection	
a. When Data Collection Takes Place	
b. Recording Data	
c. Amount of Data Collection	

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
<ul style="list-style-type: none"> 2. Sources of Statistical Data <ul style="list-style-type: none"> a. Medical Record b. Abstracts c. Ancillary/Additional Reports d. Admission, Transfer, Census and Discharge Lists d. Incident Reports 3. Requestors of Data <ul style="list-style-type: none"> a. Administration and Governing Board b. Medical Staff c. Outside Agencies d. Other Organizations 4. Vital Statistics <ul style="list-style-type: none"> a. Birth Certificate b. Death Certificate c. Fetal Death Certificate 	
IV. Health Care Statistics	13
<ul style="list-style-type: none"> A. Census Collection and Terms <ul style="list-style-type: none"> 1. Census 2. Inpatient Census 3. Hospital Patients <ul style="list-style-type: none"> a. Inpatients b. Outpatients 4. Hospital Departments 5. Hospital Units and Services 6. Census Taking 7. Admitted and Discharged the Same Day (A&D) 8. Census/Inpatient Census 9. Daily Inpatient Census (DIPC) 10. Inpatient Service Day (IPSD) 11. Total Inpatient Service Days 12. Deaths/Discharges 13. Census Calculation Tips 14. Beds/Bassinets 15. Average (Daily) Census B. Percentage of Occupancy <ul style="list-style-type: none"> 1. Bed/Bassinets Count Terms 2. Rate Formula 3. Beds 4. Bed/Bassinets Count Day Terms 5. Occupancy Ratio/Percentage <ul style="list-style-type: none"> a. Adults and Children (A&C) b. Newborn (NB) 6. Occupancy Percentage for a Period <ul style="list-style-type: none"> a. Bed (A&C) b. Newborn (NB) c. Clinical Unit 	

COURSE TOPICS

CONTACT HOURS
PER TOPIC

7. Change in Bed Count During a Period
- C. Mortality (Death) Rates
 1. Terms
 - a. Mortality
 - b. Discharge
 - c. Death
 - 1) Inpatient Death
 - 2) Newborn Death
 - 3) Outpatient Death
 - 4) Hospital Fetal Death
(Abortion/Stillborn Infants)
 - d. Net vs. Gross
 2. Death Rates
 - a. Gross Death Rate
 - b. Net Death Rate or Institutional Death Rate
 - c. Newborn Death Rate
(Infant Death Rate or Infant Morality Rate)
 - d. Surgical Death Rates
 - 1) Postoperative Death Rate
 - 2) Anesthesia Death Rate
 3. Obstetrical: Terms/Classification/Death Rates
 - a. Terms
 - 1) Deliver/Delivered
 - 2) Undelivered
 - 3) Puerperium
 - 4) Infant/Infant Death
 - 5) Maternal Death/Obstetrical Death
 - 6) Abortion
 - 7) Stillborn
 - 8) Hospital Fetal Death
 - 9) Partum
 - 10) Neonate/Neonatal
 - 11) Perinatal Period/Perinatal Death
 - 12) Postnatal/Post Neonatal
 - 13) Pregnancy Termination
 - 14) Induced Termination of Pregnancy
 - b. Classifications
 - 1) Newborn Birth Data Classification
 - 2) Neonatal Periods
 - 3) Fetal Death Classification
 - c. Death Rates
 - 1) Maternal
 - 2) Fetal Death Rate (Stillborn Rate)
 - 3) Vital Statistics Rates
 - a) Maternal Mortality Rate
 - b) Infant Mortality Rate

COURSE TOPICS

CONTACT HOURS
PER TOPIC

- c) Neonatal Mortality Rate
 - d) Perinatal Mortality Rate
 - e) Post Neonatal Mortality Rate
 - f) Fetal Death Rate
 - g) Induced Termination of Pregnancy Rates
- D. Autopsy Rates
1. Terms
 - a. Autopsy
 - b. Hospital Autopsy
 - c. Coroner
 - d. Medical Examiner
 2. Coroner's Cases
 3. Additional Autopsy Information
 - a. Who Performs an Autopsy
 - b. Where the Autopsy is Performed
 4. Deaths Autopsied
 - a. Inpatients
 - b. Outpatients
 - c. Fetal Deaths
 - d. Coroner's Cases
 5. Report Requirements
 6. Consent
 7. Combining A&C and NB
- E. Autopsy Rates
1. Gross Autopsy Rate
 2. Net Autopsy Rate
 3. Hospital Autopsy Rate (Adjusted)
 4. Newborn Autopsy Rate
 5. Fetal Autopsy Rate
- F. Length of Stay/Discharge Days
1. Terms
 - a. Length of Stay (LOS) (for one inpatient)
 - b. Total Length of Stay (for all inpatients)
 - c. Discharge Days (DD)
 - d. Average Length of Stay (ALOS)
 2. Calculating Length of Stay
 3. Total Length of Stay
 4. Average Length of Stay (ALOS)
 5. Day on Leave of Absence
- G. Miscellaneous Rates
1. Cesarean Section Rate
 2. Consultation Rate
 3. Morbidity Rate
 - a. Prevalence
 - b. Incidence
 - c. Complications and Complication Rates

COURSE TOPICS	<u>CONTACT HOURS PER TOPIC</u>
<ul style="list-style-type: none"> d. Case Fatality Rate 4. Infection Rates <ul style="list-style-type: none"> a. Hospital Infection (Nosocomial) Rate b. Postoperative Infection Rate 5. Bed Turnover Rate <ul style="list-style-type: none"> a. Bassinet Turnover Rate b. Usefulness of Turnover Rate 	
V. Organizing and Displaying the Data using software application	12
<ul style="list-style-type: none"> A. Frequency Distribution <ul style="list-style-type: none"> 1. Introduction <ul style="list-style-type: none"> a. Ungrouped Frequency Distribution b. Grouped Frequency Distribution c. Purpose of a Grouped Frequency Distribution 2. Terms Related to a Frequency Distribution <ul style="list-style-type: none"> a. Range b. Class c. Frequency d. Cumulative Frequency 3. Creating a Frequency Distribution B. Measures of Central Tendency <ul style="list-style-type: none"> 1. Mean <ul style="list-style-type: none"> a. Arithmetic Mean b. Weighted Mean c. Mean Computed from Grouped Data 2. Median 3. Mode 4. Curves of a Frequency Distribution <ul style="list-style-type: none"> a. Bilaterally Symmetrical Curves b. Skewed Curves c. Other Curves 5. Ranks/Quartiles/Deciles/Centiles/Percentiles <ul style="list-style-type: none"> a. Terms b. Percentages/Percentiles C. Data Presentation <ul style="list-style-type: none"> 1. Tables <ul style="list-style-type: none"> a. Basic Table Format b. Table Elements c. Designing a Table 2. Plotting a Frequency Distribution <ul style="list-style-type: none"> a. Axes b. Vertical Scale c. Scale Proportion 3. Graphic Presentation <ul style="list-style-type: none"> a. General Rules b. Types of Graphs 	

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
<ul style="list-style-type: none"> 1) Statistical Graphs (Continuous Data) 2) Construction of a Histogram 3) Summary for Constructing a Histogram 4) Variations in Histogram Construction c. Frequency Polygon <ul style="list-style-type: none"> 1) Advantage of Frequency Polygon 2) When to Use 3) Construction of a Frequency Polygon d. Histogram and Frequency Polygon- additional information e. Graphic Other Data <ul style="list-style-type: none"> 1) Bar Graph 2) Line Graph 3) Pie Graph/Pie Chart 4) Pictograph/Pictogram f. Comparison Graph <ul style="list-style-type: none"> 1) Bar Graphs 2) Line graphs D. Data Presentation via Computer Technology <ul style="list-style-type: none"> 1. Use of Spreadsheet and Presentation Software <ul style="list-style-type: none"> a. Standard software packages b. Specialized Software Packages: SPSS 2. Tables <ul style="list-style-type: none"> a. Setting up Tables b. Table Header c. Category and Series Labels d. Table Contents e. Data Alignment 3. Charts <ul style="list-style-type: none"> a. Bar Chart b. Additional Bar Charts c. Guidelines for Constructing a Bar Chart d. Pie Chart e. Line Chart 4. Line Graphs (Statistical Line Graphs) <ul style="list-style-type: none"> a. Histogram b. Frequency Polygon 	
VI. Registries	8
<ul style="list-style-type: none"> A. History and Development of Cancer Registries <ul style="list-style-type: none"> 1. Hospital Cancer Registries 2. Population-Based Registries B. Hospital Cancer Registry Model <ul style="list-style-type: none"> 1. Database Development and Management <ul style="list-style-type: none"> a. Reference Date b. Case Eligibility 	

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
<ul style="list-style-type: none"> c. Patient Eligibility d. Patient Index e. Casefinding f. Accession Register g. Abstracting h. Coding i. Staging j. Primary Site File k. Quality Control 	
<ul style="list-style-type: none"> 2. Patient Follow-Up <ul style="list-style-type: none"> a. Follow-Up File b. Follow-Up Forms and Letters 	
3. Space, Equipment, and Supplies	
4. Automation	
5. Confidentiality and Release of Information	
6. Policies and Procedures	
<ul style="list-style-type: none"> 7. Use of Cancer Registry Data <ul style="list-style-type: none"> a. Annual Report b. Quality Outcome and Improvement c. Administrative Reports d. Cancer Conferences e. Marketing f. Request Log or File 	
8. Staffing	
<ul style="list-style-type: none"> C. Approved Cancer Program <ul style="list-style-type: none"> 1. Cancer Committee 2. Cancer Conferences (Tumor Boards) 3. Documentation 	
D. NCRA: National Cancer Registrars Association, Inc.	
<ul style="list-style-type: none"> E. Other Registries <ul style="list-style-type: none"> 1. AIDS Registries <ul style="list-style-type: none"> a. Database Management <ul style="list-style-type: none"> 1) Case Eligibility 2) Casefinding 3) Abstracting 4) Coding 5) Staging b. Automation c. Use of AIDS Registry Data 2. Birth Defects Registries <ul style="list-style-type: none"> a. Database Management <ul style="list-style-type: none"> 1) Case Eligibility 2) Classification and Coding 3) Abstracting 4) Quality Control b. Use of Birth Defects Registry Data 	

COURSE TOPICS

CONTACT HOURS
PER TOPIC

3. Diabetes Registries
 - a. Database Management
 - 1) Case Eligibility
 - 2) Casefinding
 - 3) Abstracting
 - 4) Coding
 - b. Automation
 - c. Follow-Up
 - d. Uses of Diabetes Registry Data
4. Implant Registries
5. Organ Transplant Registries
 - a. Database Management
 - b. Quality Assurance
 - c. Training
6. Trauma Registries
 - a. Database Management
 - 1) Case Eligibility
 - 2) Casefinding
 - 3) Abstracting
 - 4) Coding
 - 5) Injury Scales
 - b. Automation
 - c. Quality Control

PROGRAM TITLE: Health Information Management

COURSE TITLE: Health Data Management

AS HIM CIP NUMBER: 0317.050600

LIST PERFORMANCE STANDARD ADDRESSED:

03.0 APPLY BASIC SCIENCE SKILLS -- The student will be able to:

- 03.01 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solutions of such questions.
- 03.02 Organize and communicate the results obtained by observation and experimentation.
- 03.03 Evaluate and draw conclusions.

12.0 DESCRIBE MANAGEMENT FUNCTIONS OF HEALTH INFORMATION SERVICES--The student will be able to:

- 12.01 Assist in preparing reports which reflect the status of a health information service.
- 12.05 Retrieve information and prepare reports for the administrative and professional staff.

18.0 COLLECT, COMPUTE, ANALYZE AND PRESENT HEALTH CARE STATISTICS--The student will be able to:

- 18.01 Abstract data from health records.
- 18.02 Identify trends in data processing of health information.
- 18.03 Calculate and present health care statistical information.



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

<i>Section 1</i>	
COURSE PREFIX AND NUMBER: <u>HIM 2214</u>	SEMESTER CREDIT HOURS: <u>3</u>
COURSE TITLE: <u>Health Data Management</u>	

Section 2

TYPE OF COURSE: (Click on the box to check all that apply)

<input type="checkbox"/> AA Elective	<input checked="" type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input type="checkbox"/> AS Professional Elective	<input checked="" type="checkbox"/> AAS Required Professional Course	<input type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other _____	<input type="checkbox"/> PSAV	<input type="checkbox"/> Apprenticeship
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

Section 3 (If applicable)

INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:

<input type="checkbox"/> Communications	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

Section 4

INTELLECTUAL COMPETENCIES:

<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input type="checkbox"/> Quantitative Skills	<input checked="" type="checkbox"/> Scientific Method of Inquiry
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Information Literacy	<input checked="" type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively

<i>Section 5</i>		
	LEARNING OUTCOMES	METHOD OF ASSESSMENT
•	1. Determine the difference between population and sample data.	Demonstrate critical thinking skills by solving problems on tests, class assignments, and projects.
•	2. Construct frequency distributions and graphical presentations.	Properly use calculators and demonstrate minimal competency in the use of statistical software.
•	3. Use various statistical methods to analyze sets of data.	Completed projects demonstrate students' ability to reason logically and analytically concerning real-world situations.
•	4. Use probability rules to solve basic probability problems	Students illustrate competence in forming conclusions from mathematical models through tests, class assignments, projects, and classroom presentations.
•	5. Understand and distinguish between discrete and continuous probability distributions.	Students demonstrate an understanding of the application of mathematical principles to other disciplines through real-world applications on tests and class assignments.
•	6. Construct confidence intervals from sample data.	Students demonstrate an understanding of the application of mathematical principles to other disciplines through real-world applications on tests and class assignments.
•	7. Test hypotheses for means, proportions, the difference between two means, and the difference between two proportions.	Students demonstrate an understanding of the application of mathematical principles to other disciplines through real-world applications on tests and class assignments.

Section 6

Name of Person Completing This Form: Eudelia S. Thomas Date: 11/14/2007