



BROWARD COMMUNITY COLLEGE COURSE OUTLINE

LAST REVIEW: 2008-2009
(i.e. 2003-2004)

NEXT REVIEW: 2013-2014
(i.e. 2008-2009)

STATUS: A
(A, I, D)

COURSE TITLE: Health Statistics

COMMON COURSE NUMBER: HIM 2214

CREDIT HOURS: 2

CONTACT HOUR BREAKDOWN
(per 16 week term)

CLOCK HOURS:
(Voc. Course ONLY)

Lecture: 32 Lab:

Clinic: Other:

PREREQUISITE(S): HIM 1110, MAT 0024

COREQUISITE(S):

PRE/COREQUISITE(S):

COURSE DESCRIPTION *(750 characters, maximum):*

This course covers the collection, compilation, analysis, verification and display of healthcare statistics. Topics include: the uses for statistics, basic statistical principles, commonly computed rates, vital health statistics, uniform reporting requirements, data display and the role of the HIM department.

UNIT TITLES

1. Reporting Statistical Data
2. Mathematical Review
3. Health Care Overview and Statistical Data Collection
4. Census
5. Percentage of Occupancy
6. Morality Rates
7. Autopsy Rates
8. Length of Stay/Discharge Days
9. Miscellaneous Rates
10. Frequency Distribution
11. Measures of Central Tendency
12. Data Presentation
13. Research Methodology



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ASSESSMENT:

Please provide a brief description (250 characters maximum) that details how students will be assessed on the course outcomes.

1. Announced and unannounced quizzes and Unit examinations;
2. Cumulative/comprehensive final examination;
3. Assessment of reading and online assignments via submission of homework projects;
4. Participation in Discussion Forums on the E-learning site
5. Completion of projects – individual or group as assigned

**** Complete the following only if course is seeking general education status ****

GENERAL EDUCATION Competencies and Skills *:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Speak and listen effectively	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. Demonstrate and apply literacy in its various forms: (highlight in green ALL that apply) (1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental)	
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	
13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	

* General Education Competencies and Skills endorsed by '05-'06 General Education Task Force



Common Course Number: HIM 2214

UNITS

Unit 1 Reporting Statistical Data

General Outcome:

1.0 The student will be able to define statistical data elements.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Define terms

- Statistics, data, demography and demographic variable, vital statistics

2. Distinguish clearly between

- Population and sample
- Variable and constant
- Qualitative and quantitative data
- Ungrouped and grouped data
- Descriptive and inferential statistics
- Nominal and ordinal data
- Discrete and continuous data
- Morbidity and mortality

3. Describe various uses for data



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Unit 2 Mathematical Review

General Outcome:

2.0 The student will be able to calculate statistical problems utilizing basic math techniques.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Average a set of numbers
2. Round data to a specific number
3. Convert a number from one form to another form



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Unit 3 Health Care Overview and Statistical Data Collection

General Outcome:

3.0 The student will be able to distinguish levels of care and determine proper data collection methods based on care setting.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Defining healthcare settings
2. Distinguishing between:
 - Inpatient and Outpatient Care
 - Acute care and Long term Care
 - Bed statistics and Bassinet statistics
 - Intrahospital transfer and discharge transfer
 - Child and Adolescent for statistical purposes
 - Retrospective and Concurrent data collection methods
 - Emergency Room/Department and Trauma Center



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Unit 4 Census

General Outcome:

4.0 The student will be able to define and calculate different types of census rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Describe when a census is to be taken
2. Identify deaths that are excluded from inpatient statistics
3. Distinguish between:
 - Census, inpatient census and daily census
 - A&C vs. NB Census
 - Patients included in a bed count vs. bassinet count
4. Define:
 - IPSD
 - A&D
5. Period as used in statistics to represent a date or time range
4. Calculate:
 - Daily census
 - Period census
 - Average census



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Unit 5 Percentage of Occupancy

General Outcome:

5.0 The student will be able to define and calculate percentage of occupancy.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Define
 - Bed count and bed complement
 - Bassinet count
2. Explain rate formula
3. Compute bed occupancy percentage



Unit 6 Mortality Rates

General Outcome:

6.0 The student will be able to define and calculate mortality rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Distinguish between:
 - Net vs. Gross
 - Newborn death, infant death and fetal death
 - Direct and indirect maternal death
 - Abortion, stillbirth and fetal death
2. Explain what makes up “discharges”
3. Identify deaths that are excluded in gross and net death rates
4. Define the terms:
 - Mortality
 - Delivery/undelivered
 - Puerperium
 - Neonate/neonatal
 - Perinatal/postnatal
5. Calculate the following death rates:
 - Gross and Net
 - New born
 - Post operative
 - Anesthesia
 - Maternal
 - Fetal
6. Classify neonates by ACOG gestational ages
7. Classify fetal deaths by gram weight and gestational age



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Unit 7 Autopsy Rates

General Outcome:

7.0 The student will be able to define and calculate autopsy rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Distinguish between Net and Gross Autopsy
2. Distinguish between Hospital Autopsy and Coroner's cases (ME)
3. Describe when Coroner cases are included and excluded from Hospital Autopsy rates
4. Compute the following autopsy rates:
 - Gross
 - Net
 - Hospital
 - Newborn
 - Fetal



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Unit 8 Length of Stay/Discharge Days

General Outcome:

8.0 The student will be able to define and calculate length of stay and discharge day rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1. Define length of stay and discharge days
2. Identify the days counted and excluded in LOS determination
3. Calculate:
 - Individual LOS
 - Total LOS for a designated period
 - Average LOS



Unit 9 Miscellaneous Rates

General Outcome:

9.0 The student will be able to define and calculate different types of health care statistical rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

11. Calculate the following statistics
 - C-Section rate
 - Consultation rates
 - Morbidity rates
 - Prevalence
 - Incidence
 - Complication
 - Case fatality
 - Infection rates
 - Nosocomial Hospital Infection rates
 - Post operative Infection rates
 - Bed turnover rates



Unit 10 Frequency Distribution

General Outcome:

10.0 The student will be able to define and calculate frequency distributions.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

21. Distinguish clearly between:

- Ungrouped vs. grouped distribution
- Frequency vs. cumulative frequency
- Class limits vs. class boundaries vs. class size or width

31. Determine the following:

- Range
- Number of classes
- Frequency
- Cumulative frequency
- Class limits
- Class boundaries
- Class size/class width



Unit 12 Data Presentation

General Outcome:

12.0 The student will be able to prepare and present statistical data in a meaningful graphic presentation.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

1.0 Indicate the appropriate types of graphs that can be used for displaying quantitative and qualitative data

2.0 Construct the following:

- Histogram
- Frequency polygon
- Bar graph/Bar chart
- Line graph
- Pie graph
- Pictograph/Pictogram
- Comparison graph – both bar and line



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Unit 13

Research and Epidemiology

General Outcome:

13.0 The student will be able to define various methods of research and the steps involved in designing a research study or grant proposal.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:

- 1 Define the steps involved in designing a research study or a grant proposal.
- 2 Determine the most effective methods to use to test validity and reliability
- 3 Explain how did epidemiologic research study design can be used in health information management
- 4 Detect and describe the different types of biases that occur within research studies
- 5 Recognize outcome measures



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Unit 4 Census

General Outcome:

4.0 The student will be able to define and calculate different types of census rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:



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Unit 4 Census

General Outcome:

4.0 The student will be able to define and calculate different types of census rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to:



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Unit 4 Census

General Outcome:

4.0 The student will be able to define and calculate different types of census rates.

Specific Instructional Objectives:

Upon successful completion of this unit, the student will be able to: