

## **Syllabus**

**Course Number: HIM 460**

**Course Title: Health Statistics and Research Methods**

### **Course Description:**

An applied course in basic health statistics and research methods intended to introduce common applications in the health care setting: emphasis is on the ability to analyze and interpret clinical and other health data for use in research, health care decision-making, and policy development as well as the ability to locate, read, and use published research relevant to identified subjects; topics include commonly used health statistics, the process of research, epidemiology, outcomes research, case mix, registries, Institutional Review Board, and ethics in research.

### **Prerequisite Courses:**

MT 274 or equivalent introductory statistics course.

### **Course Outcomes:**

Upon completion of this course, learners should be able to:

- Locate relevant published research in topics of interest.
- Discuss the growing importance of statistical and research methods in the health care setting.
- Identify common data sources internal and external to the health care organization.
- Apply basic statistical formulas related to administrative and health care data
- Evaluate the reliability and validity of health related statistical information and make recommendations for appropriate use.
- Compare and contrast among the three types of data analytics.
- Determine how data analytics is used in making healthcare decisions.
- Differentiate between tables and the following graphs: bar graphs, pie charts, line graphs, histograms, frequency polygons, pictograms, and scatter diagrams and choose the appropriate graph to use.
- Create tables and graphs to display statistical information.
- Describe basic research methods and techniques as they relate to performing research, quality improvement activities and outcome evaluation.
- Explore various applications and skills related to the collection, analysis, interpretation and presentation of statistical data and information.
- Understand the guidelines to the protection of human research subjects.
- Describe the process of evaluation by the Institutional Review Board.
- Discuss ethical concerns in research.

- Present an analysis of a research study

**Required Texts:**

Calculating and Reporting Healthcare Statistics by Loretta A. Horton 5<sup>th</sup> Edition Revised Reprint, AHIMA Press. AB120717, ISBN: 978-1-58426-595-5

**Pre-Assignment:**

**Online Format:** Sign on to D2L (Home Page) and become familiar with the course navigation of the Web Curriculum.

**Pre-Assignment Due Dates:**

**Online Format:** The instructor will specify the due date for this assignment.

**Course Assignments and Activities:**

	Topics	Readings	Activities Assignments and Associated Points
1	Introduction to Health Statistics & Patient Census	<b>Text</b> Chapters 1, 2 & 3 Appendix A & B Instructor Lecture	Problem Set 1 (70) Discussion: Health Care Statistics (25) Discussion: Introductions
2	Percentage of Occupancy & Length of Stay	<b>Text</b> Chapters 4 & 5 Appendix A & B Instructor Lecture	Problem Set 2 (70) Discussion: Length of Stay (25)
3	Mortality, Autopsy, Morbidity and Other Miscellaneous Rates	<b>Text</b> Chapters 6, 7, & 8 Appendix A & B Instructor Lecture	Problem Set 3 (70)
4	Descriptive Statistics and Presentation of Data	<b>Text</b> Chapters 10 & 11 Appendix A & B Instructor Lecture	Problem Set 4 (70)
5	Management Statistics and Data Analytics	<b>Text</b> Chapters 9 & 14 Appendix A & B Instructor Lecture	Problem Set 5 (70) Discussion: Data Sets (25)
6	Research Principles	<b>Text</b> Chapter 12 Additional Resources	Research Article Selection (25) Discussion: Current Research (25)

7	Research Analysis	<b>Text</b> Chapter 12 Additional Resources	Work on Research Article Analysis due in Week 8 Discussion (25)
8	Statistics & Research Review	<b>Text</b> Chapters 12 Review all Chapters for Final Exam	Research Article Analysis (100) Final Exam (100)
		<b>Total Points</b>	<b>700</b>

### Course Policies and Procedures:

Health Information Management Domains:

#### Domain III. Informatics, Analytics and Data Use

Subdomain III.D. Health Care Statistics

1. Interpret inferential statistics. (5)
2. Analyze statistical data for decision making. (4)

Subdomain III.E. Research Methods

1. Apply principles of research and clinical literature evaluation to improve outcomes. (3)
2. Plan adherence to Institutional Review Board (IRB) processes and policies. (3)

### CC&IS Grading Scale

Letter Grade	Percentage	Grade Point
A	93 to 100	4.00
A-	90 to less than 93	3.67
B+	87 to less than 90	3.33
B	83 to less than 87	3.00
B-	80 to less than 83	2.67
C+	77 to less than 80	2.33
C	73 to less than 77	2.00
C-	70 to less than 73	1.67
D+	67 to less than 70	1.33
D	63 to less than 67	1.00
D-	60 to less than 63	.67
F	Less than 60	0

Additional information about grading can be found in the latest edition of the University Catalog, available at <http://www.regis.edu/Academics/Course%20Catalog.aspx>.

## CC&IS Policies and Procedures

Each of the following CC&IS Policies & Procedures is incorporated here by reference. Students are expected to review this information each term, and agree to the policies and procedures as identified here and specified in the latest edition of the University Catalog, available at <http://www.regis.edu/Academics/Course%20Catalog.aspx> or at the link provided.

- The CC&IS Academic Integrity Policy.
- The Student Honor Code and Student Standards of Conduct.
- Incomplete Grade Policy, Pass / No Pass Grades, Grade Reports.
- The Information Privacy policy and FERPA. For more information regarding FERPA, visit the [U.S. Department of Education](http://www.ed.gov).
- The HIPAA policies for protected health information. The complete Regis University HIPAA Privacy & Security policy can be found here: <http://www.regis.edu/About-Regis-University/University-Offices-and-Services/Auxiliary-Business/HIPAA.aspx>.
- The Human Subjects Institutional Review Board (IRB) procedures. More information about the IRB and its processes can be found here: <http://regis.edu/Academics/Academic-Grants/Proposals/Regis-Information/IRB.aspx>.

The CC&IS Policies & Procedures Syllabus Addendum summarizes additional important policies including, Diversity, Equal Access, Disability Services, and Attendance & Participation that apply to every course offered by the College of Computer & Information Sciences at Regis University. A copy of the CC&IS Policies & Procedures Syllabus Addendum can be found here: <https://in2.regis.edu/sites/ccis/policies/Repository/CCIS%20Syllabus%20Addendum.docx>.

