Syllabus for HND 645 (Fall 2014)

Large Data Analyses

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- Faculty Name: Shurpin, Kathleen
- Faculty Name: Faculty, Frances

Section: 59  Credits: 03
Diadactic hrs: 0  Clinical hrs: 0
Pre-requisites: Biostatistics (HND 635) ; Epidemiology (HND 640)
Co-requisites:

Discussion Board: Yes

Required Text(s):
Recommended Text(s):

Purpose:
The purpose of this course is to provide students with the knowledge and skills necessary for large data set analyses and its application to population health using large datasets for information.

This course provides an overview of the major public access large scale healthcare data sets available on federal, state, and local levels. This course facilitates students development in the application of analytical methods used to answer research questions. A major focus of the course will be the query and access of large data sets including:
1) variable identifications and definitions,
2) record layouts,
3) data set sizes and analysis restrictions,
4) coding methods,
5) data manipulation using R , Statistical Package for the Social Science (SPSS), Statistical Analysis System (SA );
6) and developing a working knowledge of statistical programs.

Prerequisites: Biostatistics (HND 635) ; Epidemiology (HND 640)
Methods of Evaluation MAKE MORE GENERAL DO NOT NEED SUCH DETAIL HERE

Student Evaluation: Paper using three databases to explore the same concept such as smoking cessation. (Includes discussion of the three databases, the specific items related to how data about the concept is collected, and how those items differ between databases.) (30%). Length: 5-7 pages.
DUE:

Paper using large database to illuminate your nursing research question. (45%). Take a national database (you can use one described in assignment #1). Use that database to describe your target population, clinical issue, and study concept. Describe the limitations of the database and how you would use additional resources to address those limitations. Length: 8-10 pages. DUE:

Seminar presentation – sharing information about the database and the information that it yields. (25%). Use PowerPoint slides. Focus on the specific items that you are drawing from the database for your research. TOTAL: 10 minutes each – points will be deducted if you run over and you will not be allowed to finish so please use your time wisely. DUE:

Grading method:

<table>
<thead>
<tr>
<th>Curriculum Objectives for DNP Students</th>
<th>Course Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon completion of this program the student will be able to:</td>
<td>Upon completion of this course the student will be able to:</td>
</tr>
<tr>
<td>1. Analyze scientific data related to healthcare models and strategies that affect population health.</td>
<td>1.1 Analyze large health-related data sets for implications in population health management.</td>
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<tr>
<td>2. Integrate knowledge from nursing and other sciences as the foundation for the highest level of advanced nursing practice.</td>
<td>2.1 Analyze a health-related data set to answer a specific research question or inform Evidence Based Practice (EBP) or quality project.</td>
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<tr>
<td>3. Synthesize relevant findings from evidence for practice to improve healthcare outcomes.</td>
<td>3.1 Evaluate the health status of a community using health-related databases.</td>
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<td>4. Employ leadership skills for interprofessional collaboration that improve patient and population health outcomes.</td>
<td>4.1 Integrate data-informed knowledge into nurse-led inter-professional quality initiatives.</td>
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<td>5. Utilize information systems technology to evaluate outcomes of care, care systems, and quality management.</td>
<td>5.1 Use statistical programs (R, SPSS, SAS) to access health-related data sets for description of multiple variables</td>
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<td>5.2 Use statistical programs to analyze data sets to identify variables</td>
<td>6.1 Identify the best sources of data for a particular research, EBP, or quality project.</td>
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<td>6. Evaluate methods that improve complex healthcare delivery systems to maintain accountability for quality healthcare.</td>
<td>7.1 Analyze health-related data sets for implications in health policy.</td>
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<td>7. Initiate the development, implementation, and analysis of healthcare policies that promote ethical and social responsibility.</td>
<td>7.2 Maintain ethical standards when reporting and accessing data</td>
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<td>8. Evaluate cultural competence to improve patient and population outcomes.</td>
<td>8.1 Utilize data set analysis to stratify cultural influences on population outcomes.</td>
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<tr>
<td>9. Evaluate clinical competence and</td>
<td>9.1 Integrate findings into population based</td>
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organizational skills appropriate to area of specialization through life-long learning and reflection.

clinical practice

9.2 Disseminate information from data base analysis

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**HIPAA - Health Insurance Portability and Accountability Act**

All Health Sciences students are required to respect the confidential nature of all information that they have access to including the personal health information of patients. The Health Insurance Portability and Accountability Act (HIPAA) of 1996 provides significant new privacy protections for the health information of patients and research participants. Students in the Health Sciences programs are required to comply with the training requirements related to privacy and security provisions of HIPAA and to abide by the University’s policies and procedures related to HIPAA.

**Americans with Disabilities Act Statement**

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, 128 ECC Building (631) 632-6748. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following web site: [http://www.ehs.sunysb.edu](http://www.ehs.sunysb.edu) and search Fire Safety and Evacuation and Disabilities.

**Academic Integrity**

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report and suspected instances of academic dishonesty to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at [http://www.stonybrook.edu/uaa/academicjudiciary/](http://www.stonybrook.edu/uaa/academicjudiciary/)

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Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.