University Of West Florida  
School of Allied Health and Life Sciences  
PHC 6196: Computer Applications in Public Health  

COURSE SYLLABUS  
Summer 2013

CREDITS: 3

COURSE INSTRUCTOR: Joy P. Nanda, D.Sc., M.S., M.H.S., M.B.A.

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School of Allied Health and Life Sciences, University of West Florida

I. COURSE OVERVIEW: This course is an overview of standard computer software packages and fundamentals of data collection, data management, statistical analysis, interpretation and reporting. This course also covers standard epidemiological and statistical analysis procedures in the health sciences. Students are introduced to common software applications used in the analysis of public health data. The course is hands-on which allows students to use of the computer to generate meaningful information about relationships between a set of independent variables and specified health outcomes for public health programs and policy purposes. Upon completion of this course, a student will have acquired the skills necessary to serve as a liaison to public health officials, physicians, administrators, and other health care professionals in the use of current and emerging computer applications in public health, including health services research and epidemiology. Student evaluation include showing proficiency in database knowledge, management analysis and applying to writing scientific reports utilizing epidemiological principles.

II. COURSE DESCRIPTION: This course provides an overview of computer applications in public health and introduces modern software systems for analyzing health-related data. Fundamentals of data collection, data management, statistical analysis, interpretation, and reporting results are covered. Technology-based implications for legal and ethical issues are also addressed (including documentation, security, and regulatory requirements). A working knowledge of how to use personal computers, including knowledge of word-processing, spreadsheet packages and Internet searching is required. Some knowledge and experience in managing and analyzing epidemiological data is emphasized. As part of the course requirement, students have to demonstrate their competence with protection of human subjects in research.

III. COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES: Upon completion of this course students will be able to:

1. Create electronic forms using MS-Excel/SPSS.  
2. Create databases using the Statistical Software for the Social Sciences (SPSS) packages.  
3. Perform raw data entry using SPSS.
4. Recode data variables in SPSS.
5. Transfer data from Microsoft Excel format to SPSS.
6. Analyze data using SPSS.
7. Describe how the public health information infrastructure is used to collect, process, maintain, and disseminate data.
8. Describe how societal, organizational, and individual factors influence and are influenced by public health communications.
9. Discuss the influences of social, organizational and individual factors on the use of information technology by end users.
10. Collaborate with communication and informatics specialists in the process of design, implementation, and evaluation of public health programs.
11. Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health activities.
12. Use information technology to access, evaluate, and interpret public health data.
13. Use informatics methods and resources as strategic tools to promote public health.
14. Use informatics and communication methods to advocate for community public health programs and policies.
15. Apply legal and ethical principles to the use of information technology and resources in public health settings.

This course meets the following programmatic goals for the School of Allied Health and Life Sciences.

<table>
<thead>
<tr>
<th>Content/ Critical Thinking</th>
<th>Project Management /Integrity</th>
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<tr>
<td>• Apply techniques central to analysis of problems in public health.</td>
<td>• Design and execute a project that incorporates a reasonable time line to address a problem in public health.</td>
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<td>• Apply scientific method to solve problems in public health.</td>
<td>• Work effectively with others on public health projects.</td>
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<td>• Select and conduct appropriate statistical analyses.</td>
<td>• Draw and defend conclusions related to the results of the study.</td>
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<tr>
<td>• Analyze public health data.</td>
<td>• Critically apply ethical/legal safeguards in handling, analysis and reporting of public health data.</td>
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<td>• Adhere to appropriate ethical/legal practices in research and professional activities.</td>
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**Communication**

• Employ public health terminology accurately.
• Use language in written form effectively and professionally.
• Communicate public health information in oral form employing appropriate technology.

**IV. TEXT-BOOK**

No text book is required for this introductory course.
REQUIRED MATERIALS:  
1). SPSS will be available through the University’s eDesktop virtual machine. However, due to slow server for distance learning statistical tools, students are strongly encouraged to purchase the latest version of SPSS (Premium package) for smooth and efficient completion of assignment. Discounted latest student version of IBM-SPSS are available at http://studentdiscounts.com/ and can be purchased at much lower price with licenses for up to 2 computers and a 12 month period. Validation of student status is required before purchase.

2). All assignments must be typed in Microsoft word and submitted to the dropbox as labelled. If a student does not have MS word, the software can be accessed through the University's eDesktop virtual machine.

3). Other notes will be provided periodically, as appropriate.

SPECIAL TECHNOLOGY UTILIZED BY STUDENTS: (beyond baseline requirements of e-mail and word processing). Software required in the course is available through the University e-Desktop virtual machine system. The latest versions of SPSS will be available. Also available is Microsoft Excel. Students can Access the tutorial through:  
http://onlinecampus.uwf.edu/services/edesktop.cfm

Students are encouraged to complete this course utilizing the equivalent of a cable-speed modem. Completing the course modules via a telephone dial-up connection will require significant download times for larger audio-visual content.

REFERENCES/BIBLIOGRAPHY (optional):


V. GRADING/EVALUATION:

Fulfillment of the programmatic goals described above will be assessed as follows:

- 05% NIH certification of successful completion of Human Subject Research (available at http://phrp.nihtraining.com/users/login.php)
- 50% Four Individual Assignments (10+10+10+20)
- 05% Group Project Concept Paper/Proposal/Outline
- 30% Group Project Final Report
- 10% Participation (individual and group discussion forums, conference call queries and participation, lockers, e-mails, and other communication channels)

Per UWF, the following grading scale will be used to determine final letter grade:

- A = 95 - 100
- A- = 91 - 94
- B+ = 87 - 90
- B = 84 - 86
- C+ = 75 - 79
- C = 70 - 74
- B- = 80 - 83
- F = < 70

Instructions and guidelines for group project concept paper and final report will be posted separately.

Group participation is mandatory. Therefore individual submission of final report and/or minimal/non-contribution by one or more individuals toward
the completion of the final report, as reported and documented by one or more members of a particular group, and following validation by the instructor, carries a loss of 50% of the group project weight during grading.

Due to the distance learning nature of this course, all requirements must be completed within the time scheduled, unless prior arrangements are made with the instructor. Participation in online forum discussions will be graded using this Discussion Forum Grading Rubric. Your final grade will be determined by the points you accumulate within each category which will then be weighted based upon the percentages indicated above and summed to determine your final grade. Online facilities will be provided so students can monitor their own progress.

VI. Communication with instructor for queries on assignments and group project

A conference call number is provided below to respond to queries from and provide feedback to students on this course related issues. I have provided a free conference call number (760-984-1000, participant access code 740357#) for students’ course related queries and feedback, routinely throughout the length of the course. The length of each conference call will be 60 minutes.

The steps below must be taken for conference call participating and being graded as part of the course participation.

1. On the day of posting of an assignment, students e-mail me their queries by 11.59pm (Central Time) at jnanda@uwf.edu.
2. On the day after posting of queries for that assignment, I will group/categorize related queries in advance, and provide feedback/responses as priority for students who participate during the conference call. Next, I will respond to additional related queries during the conference call, if time permits, on other course related issues as well as queries from students who did not submit their timely queries.
3. The format for advance query on the e-mail is:
   a. Full name (First, Last)
   b. Query(ies) related to Assignment (1-4), Group project, other issues related to this course
   c. Your query should be in one or two sentences
4. At the conference call, please state your full name to enable me to match your submitted query and complete the “participation” grid/checklist.

A minimum of 3 conference call participation complete with the above 4 guidelines, have to be documented for grading purposes. Dates and times for posting queries and participating in conference calls can be found in the course schedule.

VII. EXPECTATIONS FOR ACADEMIC CONDUCT/PLAGIARISM POLICY:

- Academic Conduct Policy [Web]
- Plagiarism Policy [PDF]
- Student Handbook [PDF]

It is the philosophy of The University of West Florida that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form.
persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

In addition, any behavior that interferes with the conduct of a class is classified as disruptive behavior and will not be tolerated. Although not exhaustive, examples of disruptive behavior would include: inappropriate or threatening online postings or e-mails, etc.

**VIII. QUALITY ASSURANCE:**

This course is reviewed during the semester and in an ongoing basis for quality by assessment personnel within the School of Allied Health and Life Sciences (SAHLS) to meet national standards established by the Southern Association of Colleges and Schools, the Council on Education for Public Health, and/or to address quality enhancement initiatives of SAHLS. Student feedback is also vital to this process. When reviewing our programs, our accrediting partners expect to see 100% participation in the State-of-Florida mandated SUSSAI (State University System Student Assessment of Instruction) evaluations. Thus, at the end of the semester, we need to hear from the folks that enjoyed the class and from the folks that have suggestions for improvement (ok, and from the folks that want to fill out the survey as quickly as possible with no comments to share!). BUT, we do need to hear from each and every student in this class, and we value your input.

When SUSSAI evaluations are ready for you to complete, you will see a News posting in the course. Please take a few minutes to complete this anonymous, brief web-based evaluation of this course. Need help? Contact Connie Works at (850) 474-3080 or cworks@uwf.edu for assistance!

Please be assured that all evaluations that are completed online are of a confidential matter. Your name, student number, and e-mail address will not be revealed to your instructor, department, or college. Only one evaluation per course per student can be submitted. Please do not delay completing the evaluation when the time approaches. **Due to the significance of your feedback and for future course improvements, a 100% participation in this process is strongly encouraged before the week of the finals and before posting of the final course grade. The SUSSAI office routinely reports course evaluation participation rates during the week of the finals.**

**IX. ONLINE TEST TAKING GUIDELINES:**

Please do not begin any timed, online exam in the course that may overlap with the eLearning maintenance window. The eLearning maintenance window runs 3:00-6:00 am CST (Central Standard Time) each day. If you initiate an exam that overlaps with this time and experience any technical errors, your recorded score is likely to be close to 0 for such an attempt. There are no exceptions to this policy.

If you experience any other technical problems or errors during any timed exam that does not overlap with the eLearning maintenance window, you are required to notify
the Helpdesk immediately at helpdesk@uwf.edu or (850) 474-2075. Failure to contact the HelpDesk to report the problem will result in a grade of 0 automatically being assigned. If you are unable to get immediate assistance from the HelpDesk during the exam, but have documented the problem in an email or voice mail, you may attempt to restart the exam using the same browser, or attempt to re-enter the exam with another browser. If you are still unable to restart the exam and continue with saving, please note that for your final submitted score to be recorded, you MUST still prove that you documented the original technical problem with the HelpDesk via helpdesk@uwf.edu or (850) 474-2075. Failure to do so will result in an automatic grade of 0 being assigned.

X. ASSISTANCE:

Students with special needs who require specific examination-related or other course-related accommodations should contact Disabled Student Services (DSS), dss@uwf.edu, (850) 474-2387. DSS will provide the student with a letter for the instructor that will specify any recommended accommodations.

Every effort will be made to accommodate the special needs of disabled students. Please inform the instructor privately during the first week of class to indicate your particular needs. All such accommodations are officially arranged through the Office for Disabled Student Services and a letter from this office must accompany your request.