

# BUSINESS AND PUBLIC SERVICES TECHNOLOGIES DIVISION

## 8-WEEK COURSE SYLLABUS

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COURSE: BAS 220: Applied Analytical Programming

SECTIONS: 0002

SEMESTER: Spring 2019

INSTRUCTOR: Gerald A. Belton

OFFICE LOCATION: N/A

TELEPHONE: 919-925-3010

E-MAIL: [gabelton@waketech.edu](mailto:gabelton@waketech.edu)

OFFICE HOURS: By appointment, via Google Hangouts

CLASS DAYS/TIMES/LOCATION: Section 0002 – Online

### REQUIRED TEXT/SUPPLIES

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#### TEXTBOOK(S)

Weekly readings as assigned.

#### SUPPLIES/SOFTWARE

At minimum, students should have access to MS Office 2010, high speed broadband internet and access to a Windows PC. Students are required to download and install SAS Software. SAS University Edition is available for free from SAS Institute.

[http://www.sas.com/en\\_us/offers/14q1/122603-sas-for-academia/overview.html](http://www.sas.com/en_us/offers/14q1/122603-sas-for-academia/overview.html)

### COURSE ENTRY QUIZ (HYBRID AND ONLINE CLASSES)

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The BAS220.0002 section is an online course. In order to remain enrolled in this course, each student is required to open and complete the Course Entry Quiz on Blackboard. The course entry quiz is accessible from the menu on the left by 11:59 PM on the deadline date.

COURSE BEGINS	COURSE ENDS	DEADLINE FOR COURSE ENTRY QUIZ
3/11/2019	5/8/2018	3/15/2018

**Students who do not complete the Course Entry Quiz by the deadline will be dropped from the course with no tuition refund.**

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#### COURSE USAGE OF BLACKBOARD

Copies of the course syllabus and major assignments may be found on Blackboard and the department website. You are responsible for regularly checking the online resources, which are accessed through <http://dist-ed.waketech.edu> (opens in a new window) and <http://businessanalytics.waketech.edu> (opens in a new window).

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#### COURSE DESCRIPTION

This course covers applications of statistical software for data management and reporting. Topics include data management, data preprocessing, and modeling, including linear and logistic analysis using programming tools. Upon completion, students should be able to process data and generate reports that support business decision-making.

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#### STUDENT LEARNING OUTCOMES

Students will:

- Process data utilizing appropriate pre-processing practices.
- Apply linear and logistic regression using programming tools.
- Generate reports that support business decision-making.

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#### PREREQUISITE(S):

BAS 150

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#### COREQUISITE(S):

None

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#### CREDIT HOURS:

Three (3) Credit Hours

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#### ASSIGNMENTS AND GRADING POLICY

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Grades for this course will be a weighted average of the following:

Projects: 30%

Assignments: 30 %

Discussion Board: 10%

Final Exam: 30%

\*Subject to adjustment.

A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 59 or less

Every effort will be made to return student work with feedback within one week of submission (7 days).

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#### FINAL EXAM DATE/TIME/LOCATION:

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To Be Determined

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#### COLLEGE POLICIES AND CAMPUS RESOURCES

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##### EMAIL POLICY

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Wake Tech requires that every student use the provided my.waketech.edu e-mail account for all school related correspondence. Your instructors will not respond to e-mail from any other source. Do not forward my.waketech.edu e-mail to other accounts. Replies sent from most forwarded e-mail will not appear to come from your my.waketech.edu account and will not be acknowledged by your instructor. This is a strictly enforced school policy. Please review e-mail information carefully. If you have questions or concerns regarding your Wake Tech e-mail, contact Distance Education Support for guidance.

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##### CODE OF CONDUCT

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It is the student's responsibility to abide by [Wake Tech's Student Code of Conduct \(opens in a new window\)](#)  
<http://handbook.waketech.edu/files/studentrights.pdf>

[Free Adobe Acrobat PDF reader download opens in a new window](http://get.adobe.com/reader/?promoid=BUIGO)

<http://get.adobe.com/reader/?promoid=BUIGO>. Violation of the Student Code of Conduct will result in disciplinary action.

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## ACADEMIC INTEGRITY POLICY

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In addition to the Academic Integrity Policy outline in the The Code of Conduct, students enrolled in BAS courses will abide by the following:

### A. EXPECTATIONS

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Wake Technical Community College expects the highest personal integrity in all academic work and behavior. Effective education depends on an atmosphere that is conducive to learning, and creating such an atmosphere is the responsibility of both students and instructors. This atmosphere is based on a foundation of mutual commitment to honesty, trust, fairness, respect, and individual responsibility. Since this atmosphere requires students and instructors to maintain the highest integrity in all their academic endeavors, students may be asked to sign a statement of academic integrity upon entering a class at Wake Tech. Cheating and plagiarism, as defined below, are forms of academic dishonesty that violate the integrity of any academic process.

### B. VIOLATIONS OF THE ACADEMIC INTEGRITY POLICY

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#### CHEATING

Cheating is (a) receiving, giving, or helping another student receive or give any information during a quiz, test, examination, or individual graded or non-graded assignment; (b) using unauthorized materials or equipment during a quiz, test, or examination, e.g., notes or books; (c) communicating the subject matter or contents of a quiz, test, or examination to another student unless specifically authorized by the instructor to share it; (d) taking a quiz, test, or examination for another student; (e) obtaining quiz, test, or examination questions beforehand; (f) tampering with the grading of a quiz, test, or examination; or (g) working with others in completing take-home quizzes, tests, examinations, or individual graded or non-graded assignments unless the instructor specifically authorizes collaborative work.

#### PLAGIARISM

Plagiarism is stealing or passing off as one's own ideas or words of another person. When students present the words or ideas of another person in a written assignment, they must document their source(s) as described in the MLA Handbook or as directed by the instructor of the course. Plagiarism also includes (a) having another person write a paper and submitting it as one's own; (b) copying all or part of a paper from

another student or another source, such as the Internet; or (c) allowing another person to copy one's work. See Appendices A and B for more examples of cheating and plagiarism.

## PRINCIPLES FOR COMPUTER USE AND NETWORK SYSTEMS

The use of computers and network systems in no way exempts students from the normal requirements of ethical behavior in the Wake Technical Community College community. Use of a computer and network system that is shared by many users imposes certain additional obligations. In particular, data, software and computer capacity have value and must be treated accordingly.

Although some rules are built into computer and network systems, such restrictions cannot limit completely what students can do. In any event students are responsible for their actions whether or not rules are built in, and whether or not they can circumvent them.

## STANDARDS OF BEHAVIOR INCLUDE:

- Respect for the privacy of other users' information, even when that information is not securely protected. Students should in no way attempt to log in to software and web applications using another person's username and password, with or without that person's permission.
- Respect for the ownership of proprietary software. For example, unauthorized copies of such software for one's own use, even when that software is not protected against copying is inappropriate.
- Respect for the finite capacity of the system and limitation of use so as not to interfere unreasonably with the activity of other users.
- Respect for the procedures established to manage the use of the system.

## C. ACADEMIC PENALTIES

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The following academic penalties will be imposed by the instructor.

### FIRST OFFENSE:

Instructors suspecting an academic integrity violation will initiate a discussion with the student to further evaluate the potential occurrence(s) and clarify the academic integrity policy with said student. Students are strongly encouraged to keep all copies of work, including drafts, in their original format in order to preserve the originality of the documents, such as electronic time stamps. If the instructor determines that no violation took place, the student will be thoroughly debriefed and the matter will be closed with no further action necessary. Should a breach in academic conduct be

evident, the instructor will enact formal procedures. The following penalties for a first offense will be enacted:

- The loss of a grade on that assignment or test.
- If the offence is deemed severe, loss of credit in that class with the grade of "F" for the course and a loss of rights to attend remaining class sections. In addition, the Dean of Students shall be given written notice of any academic penalty.
- Student will receive written notification and may be requested to meet with the instructor.

#### SECOND OFFENSE:

A second offense may occur in one of two ways:

- Within the same course after receiving written notification from the instructor of that course.
- If evidence presents itself that an academic integrity violation occurred in another course and the student received written notification regarding academic integrity policies, that behavior will be considered a second violation.
- The following policies for a second offense will be enacted:
- The loss of credit in that class with a grade of "F" for the course and a loss of rights to attend remaining class sections.
- The Dean of Students shall be given written notice of any academic penalty.

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#### RESOURCES

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The following resources provide clarity regarding what is and is not cheating or behavior indicative of plagiarism.

- [Writing Resources: Using Sources](http://www.hamilton.edu/writing/writing-resources/using-sources) (<http://www.hamilton.edu/writing/writing-resources/using-sources>, Writing Center, Hamilton College)  
Succinct instructions on how to use sources correctly and effectively.
- [Sources and Citation at Dartmouth College](http://www.dartmouth.edu/~writing/sources/) (<http://www.dartmouth.edu/~writing/sources/>, Institute for Writing and Rhetoric)  
"Defines plagiarism as intellectual theft of words, ideas, "images, maps, charts, tables, data sets, musical compositions, movies, new-media compositions, computer source code, song lyrics...a solution to a problem." A student must get advance approval from all teachers involved before submitting prior work.
- [Academic Integrity: Collaboration](http://web.mit.edu/academicintegrity/collaboration.html) (<http://web.mit.edu/academicintegrity/collaboration.html>, MIT)

Explains that accepted levels of collaboration can vary greatly 'from class to class, even within the same department..."

- [What Constitutes Plagiarism](#)  
(<http://isites.harvard.edu/icb/icb.do?keyword=k70847&pageid=icb.page342054>, Harvard College Writing Program)  
Clear explanations and examples of verbatim and mosaic plagiarism, inadequate paraphrasing, uncited work and how to revise them acceptably.
- Avoiding Plagiarism: [What Do I Need to Cite?](#)  
(<http://www.youtube.com/watch?v=atTRlg6iaGo>, Kevin deLaplante, Chair of the Dept. of Philosophy and Religious Studies, Iowa State)  
Distinguishes between citing words and ideas.
- [Plagiarism Policy](#) (<http://wp.rutgers.edu/courses/plagiarism>, Rutgers Writing Program)  
Provides subtle examples to test a student's understanding of plagiarism, followed by an analysis of the principles involved including intellectual boundaries, public and private intellectual property, voice, and Western rhetorical traditions.
- [Plagiarism: A Students Guide to Recognizing it and Avoiding it](#)  
([http://ww2.valdosta.edu/~cbarnbau/personal/teaching\\_MISC/plagiarism.htm](http://ww2.valdosta.edu/~cbarnbau/personal/teaching_MISC/plagiarism.htm), Dept. of Physics and Astronomy, Valdosta State University)  
Examples of five types of plagiarism (copy & paste, word switch, style, metaphor and idea) are defined with examples, then corrected.
- [Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices](#) by Miguel Roig (<http://www.cse.msu.edu/~alexliu/plagiarism.pdf>, Office of Research Integrity, St. Johns University)  
Science writing: preventive writing strategies with paraphrasing exercises.
- [What is Plagiarism](#)  
(<http://gervaseprograms.georgetown.edu/honor/system/53377.html>, Georgetown University, Gervase Program "promoting and encouraging intellectual life on campus")  
Uses informal language and humor to identify situations in which work is not acknowledged.
- [Cheating and how to avoid it](#)  
(<http://www.rschooltoday.com/school305/FCK/File/cheat77.pdf>, Mankato Area Public Schools, Media and Technology Policies and Guidelines)  
Practical definitions of various kinds of cheating, why not to, the likelihood that you will be caught and what will happen. Lists strategies for avoiding cheating and outlines when attribution is needed (from Purdue's OWL website).

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## ATTENDANCE POLICY

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It is the student's responsibility to abide by the [Wake Tech Attendance Policy \(opens in a new window\)](#)

<http://catalog.waketech.edu/pdfs/WakeTechCatalog.pdf> (p. 39).

Wake Technical Community College has an attendance requirement of 90%. The policy states "Students are expected to be in attendance at least 90% of all scheduled class hours. If the student misses more than 10% of the scheduled classes, it is the instructor's option to withdraw the student from the class OR drop the student one grade level (for example, an average of an "A" would become a "B").

#### Hybrid Class Attendance Requirements:

Weekly attendance is defined as: participation in at least two of three tasks which includes (1) Seated class attendance (2) Discussion Board and (3) Weekly Assignment/Test.

Please note that Classes will begin promptly according to schedule. All students are expected to be present at that time. If a student is not present within five minutes of class-start, he or she will be marked tardy. Tardies will be counted against your attendance record; every two tardies will be marked as an absence. Tardies may be excused at the discretion of the instructor if they are for a justifiable reason. Please be considerate of others by arriving on time to class as you would to a job.

#### Online Class Attendance Requirements:

Weekly attendance is defined as: participation in at least two of three tasks which includes (1) Reviewing Online Lecture (2) Discussion Board and (3) Weekly Assignment/Test

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#### LATE ASSIGNMENT SUBMISSION POLICY

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Assignment deadlines are clearly spelled out on the course syllabus, and most provide a full week or more to complete. Those submitted late will only be accepted within the first 24-hour period (including weekends) that elapses between the time the assignment is due and the time the work is received by the instructor, and will receive a 10% late penalty, unless the student has a justifiable reason.

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#### DISABILITY SUPPORT SERVICES

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Disability Support Services is available for students who require academic accommodations due to any physical, psychological, or learning disability. To determine eligibility, contact the office at 124 Holding Hall or call 866-5670 (TDD 779-0668). [Disability Support Services web page \(opens in a new window\)](#)  
<http://disabilityservices.waketech.edu/>

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#### STUDENT CONCERNS

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For a student complaint or grievance, BPST Division instructors follow the guidelines in the Wake Tech Student Handbook.

- The first step for resolving the situation is generally for the student to communicate concerns or complaints with the instructor, outside of class time.
- As a follow-up step, the student may contact the Department Head or Associate Department Head, if applicable.
- If the matter remains unresolved, the student should contact the Dean of the Business and Public Services Technologies Division. Students need to be prepared to explain the particular area of disagreement with the decision of the instructor and Department Head/Director to the BPST Dean.

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## CORE VALUES

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*In keeping with the college's mission statement, this course will promote Wake Tech's core institutional values.*

### RESPONSIBILITY

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Instructor and students will foster an environment that actively promotes taking responsibility for one's actions and obligations.

### CRITICAL THINKING

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Instructor and students will strive actively to improve the critical thinking skills of analysis, synthesis, and evaluation-both in academics and in everyday actions.

### COMMUNICATION

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Instructor and students will strive actively to ensure clear understanding in both written and oral communications.

### COLLABORATION

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Instructor and students will strive to develop collaborative skills required in achieving team goals.

## 8-WEEK COURSE SCHEDULE

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COURSE: BAS 220, Applied Analytical Programming

**SECTION: 0002**

SEMESTER: Spring 2019

Week	Dates	Topics	Assignments	Due Dates
1	3/11/19- 3/17/19	Variable Types, Coding with Variable Types	Discussion Board <b>Course Entry Quiz</b> Assignment	<b>3/15/19</b> 3/15/19
2	3/18/19- 3/24/19	Measuring Center, Shape and Outlier Identification	Discussion Board Assignment	3/24/19
3	3/25/19- 3/31/19	Correlation and Single Linear Regression	Discussion Board Assignment	3/31/19
4	4/1/19- 4/7/19	Multiple Linear Regression: Intro, Model Estimation	Discussion Board Assignment	4/7/19
5	4/8/19- 4/14/19	Multiple Regression: Goodness of Fit, Forecasting	Discussion Board <b>Project #1</b>	4/14/19
6	4/15/19- 4/21/19	Introduction to Probabilities, Odds and Odds Ratios <b>And</b> Logistic Regression	Discussion Board Assignment	4/21/19
7	4/22/19- 4/28/19	Logistic Regression: Goodness of Fit, Forecasting	Discussion Board <b>Project #2</b>	4/28/19
8	4/29/19- 5/5/19	Course Review, Final Exam	Final Exam	5/5/19