**Fayetteville State University**

### College of Arts and Sciences

### Department of Mathematics and Computer Science

**MATH 127 – Quantitative Reasoning for Business**

**FALL \*\*\*\***

**“In case FSU must close for an emergency during the semester, instruction will continue using Canvas.”**

**I. LOCATOR INFORMATION:**

Instructor**: Asitha Kodippili** Office Location: **Science & Tech. 419** Office Phone: **910-672-1518** Email Address: **akodippili@uncfsu.edu**

Office Hours: **MWF**

Course # and Name: **MATH 127** Semester Credit Hours: **4**

Total Contact Hours for Class: **40**

Day and Time Class Meets: **TR** **9:30 – 10:45**

LAB Meets**:**  **R 12:00 – 1:50**

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| --- |
| **FSU Policy on Electronic Mail:** Fayetteville State University provides to each student, free of charge, an electronic mail account ([studentid@broncos.uncfsu.edu](mailto:studentid@broncos.uncfsu.edu)) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail. **Rules and regulations governing the use of FSU email may be found at**  <https://www.uncfsu.edu/faculty-and-staff/departments-and-offices/office-of-legal-affairs/policies-and-procedures>. |

**II. COURSE DESCRIPTION:** Math 126 is a basic quantitative reasoning course with emphasis on concepts and applications of mathematical and statistical methods. This activity based quantitative reasoning course introduces students to basic mathematics, probability and risk, summarizing and analyzing data, regression and correlation, geometric modeling and financial mathematics. Spreadsheet and course specific software will be used to deepen understanding of these concepts and increase student engagement with the course material.

**Prerequisites***: Math 121 or High School Algebra I, and II or equivalent, and satisfactory placement score (Accuplacer “Elementary Algebra” Test Score of at least 80).*

**TI-83, TI-83Plus, or TI-84 Calculator is required! The MyLabMath is also required.** For more information, please check the MyLabMath Module on your course Canvas site.

**III. DISABLED STUDENT SERVICES:** In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability, please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); Tel: 910-672-1203

**IV**. **TITLE IX – SEXUAL MISCONDUCT:** Fayetteville State University (University) is committed to fostering a safe campus environment where sexual misconduct — including sexual harassment, domestic and dating violence, sexual assault, and stalking - is unacceptable and is not tolerated. The University encourages students who may have experienced sexual misconduct to speak with someone at the University so that the University can provide the support that is needed and respond appropriately. The Sexual Misconduct policy can be found at the following link: http://www.uncfsu.edu/Documents/Policy/students/SexualMisconduct.pdf

**Consulting with a Health Care Professional** - A student who wishes to confidentially speak about an incident of sexual misconduct should contact either of the following individuals who are required to maintain confidentiality:

Dr. Latonya Graham Mrs. Vinette E. Gordon, Director

Center for Personal Development Student Health Services

Spaulding Building, Room 155 Spaulding Building

(910) 672-1222 (910) 672-2602

lmgraham@uncfsu.edu [vgordon@uncfsu.edu](mailto:vgordon@uncfsu.edu)

**Reporting an Incident of Sexual Misconduct** **-** The University encourages students to **report** incidents of sexual misconduct. A student who wishes to **report** sexual misconduct or has questions about University policies and procedures regarding sexual misconduct should contact the following individual:

Ms. Victoria Ratliff

Deputy Title IX Coordinator for Students

Spaulding Building, Room 155

(910) 672-2325

[vratliff@uncfsu.edu](mailto:vratliff@uncfsu.edu)

Unlike the Licensed Professional Counselor or the Director of Student Health Services, the Deputy Title IX Coordinator is legally obligated to investigate reports of sexual misconduct, and therefore cannot guarantee confidentiality, but a request for confidentiality will be considered and respected to the extent possible.

Students are also encouraged to report incidents of sexual misconduct to the University’s Police and Public Safety Department at (910) 672-1911.

**V. TEXTBOOK**: Raymond A. B., Michael R. Z., Karl E. B., Christopher J. S.: Finite

Mathematics for Business, Economics, Life Sciences, and Social Sciences, 14th Edition,

Published by Pearson Education 2019. ISBN-13: 9781323978153

**VI. STUDENT LEARNING OUTCOMES:**

Upon completion of this course, students will be able to:

* Solve linear equations.
* Graph lines, calculate rate of change, and perform break-even analysis problems.
* Use graphing calculator or Excel to perform simple linear regression.
* Graph elementary functions (square, cubic, absolute value, and piece-wise)
* Solve quadratic equations, graph quadratic functions, and solve real life problems modeled by quadratic functions.
* Use exponential function to model real life problems (depreciation, compound interest, etc.)
* Solve logarithmic equations, use logarithm to solve exponential equations.
* Calculate future and present value of an annuity, calculate periodic payment of an annuity
* Solve system linear equation in two variables by graphing as well as by substitution.
* Calculate probability and odd of simple event
* Calculate probability of union of two events
* Prepare tables and graphs of statistical data
* Calculate statistical measures of central tendency and variation of statistical data
* Use and apply the concept of probability in the context of risk and uncertainty
* Use graphing calculators and student learning software such as MyLabMath.

**FSU Core Student Learning Outcome:** *Reasoning Skills-Quantitative Reasoning*. Students will apply math to situations common in everyday living. They will calculate, interpret, and assess statistical data and concepts, percentages, proportions, rates of change, linear equations, probability and risk*.*

**VII. COURSE REQUIREMENTS & EVALATION CRITERIA.**

* 1. Grading Scale:

A 90-100%

B 80-89%

C 70-79%

D 60-69%

F Below 60%

* 1. Graded Assignments/Values:

Chapter Tests (4) – Drop Lowest Test Score 45

Homework (homework assignments on [MyLabMath](file:///C:\ybao\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\4VTO1XI2\www.MathXL.com) module in Canvas) 20

Class/Lab attendance/participation 10

**Core SLO Assessment Assignment on** [MyLabMath](file:///C:\ybao\AppData\Local\Microsoft\Windows\Temporary%20Internet%20Files\Content.Outlook\4VTO1XI2\www.MathXL.com) module in Canvas 05

Final Exam 20

* 1. Attendance Requirements – Students are expected to **enter the classroom on time** and remain until the class ends. **Three late arrivals and/or early departures will constitute an absence**. The class attendance policy given in the 2018-2019 FSU Catalogue will be strictly adhered to.

(http://acalog.uncfsu.edu/content.php?catoid=5&navoid=110#class-attendance)

It is the responsibility of the student to attend all class meetings, and obtain individual help from the instructor. Student who never attend class ("no-show") or student whose class absences make it impossible for them to earn a passing grade in the class will be assigned “FN” grade (http://acalog.uncfsu.edu/content.php?catoid=5&navoid=110#grades).

1. Since the lowest test will be dropped there will be **no** **makeup tests** unless under extenuating circumstances.
2. It is very important that students complete their MyLabMath homework assignments on time. Even though MyLabMath homework due dates are by textbook chapters, students should make an effort to complete homework assignments for a particular textbook section before the next class meeting.
3. Students are expected to enter the classroom on time and remain until the class ends. Late arrivals and early departures without appropriate excuses will not be tolerated.
4. Each student is encouraged to participate in class discussions for a clearer understanding and meet with the instructor when additional assistance is needed.
5. All class discussions should be done in a soberly, orderly, and respectful manner.
6. **Dishonesty on graded assignments will not be tolerated**. Students must neither give nor receive help on any work to be graded. The University policy on cheating will be applied to any violations. The **minimum** penalty will be a grade of **zero** on the assignment.
7. No usage of cellular and other electronic devices (except a calculator) is permitted during class!
8. Students using the lab computers during class for activities not directly related to the course (checking email, using social media, browsing internet, etc.) will be asked to leave the class session.
9. **Withdrawal from Class**: **FSU Class Withdrawal Policy**

(http://acalog.uncfsu.edu/content.php?catoid=5&navoid=110#withdrawal-from-the-university)  
Students may withdraw from individual classes until the deadline each semester, term, or session (see Academic Calendar for specific dates). Students who complete the class withdrawal process will receive a grade of W. Tuition and fees are not adjusted for withdrawing from individual classes. Students are required to earn at least 67% of their attempted hours each semester to maintain financial aid eligibility. Students who withdraw from more than 33% of their attempted hours in a semester will lose financial aid. Failure to attend class does not constitute official withdrawal from that class

**FSU Policy on Disruptive Behavior in the Classroom**

The *Code of the University of North Carolina* (of which FSU is a constituent institution) and the *FSU Code of Student Conduct* affirm that all students have the right to receive instruction without interference from other students who disrupt classes.

FSU Core Curriculum Learning Outcome under Ethics and Civic Engagement (6.03): All students will “prepare themselves for responsible citizenship by fulfilling roles and responsibilities associated with membership in various organizations.” Each classroom is a mini-community. Students learn and demonstrate responsible citizenship by abiding by the rules of classroom behavior and respecting the rights all members of the class.

The FSU Policy on Disruptive Behavior (see FSU website for complete policy) identifies the following behaviors as disruptive:

### Failure to respect the rights of other students to express their viewpoints by behaviors such as repeatedly interrupting others while they speak, using profanity and/or disrespectful names or labels for others, ridiculing others for their viewpoints, and other similar behaviors;

### Excessive talking to other students while the faculty member or other students are presenting information or expressing their viewpoints;

### Use of cell phones and other electronic devices;

### Overt inattentiveness (sleeping, reading newspapers);

### Eating in class (except as permitted by the faculty member);

### Threats or statements that jeopardize the safety of the student and others;

### Failure to follow reasonable requests of faculty members;

### Entering class late or leaving class early on regular basis;

### Others as specified by the instructor.

The instructor may take the following actions in response to disruptive behavior. Students should recognize that refusing to comply with reasonable requests from the faculty member is another incidence of disruptive behavior.

### Direct student to cease disruptive behavior;

### Direct student to change seating locations;

### Require student to have individual conference with faculty member. At this meeting the faculty member will explain the consequences of continued disruptive behavior;

### Dismiss the student from class for the remainder of the period. (Must be reported to the department chair.)

### Lower the student’s final exam by a maximum of one-letter grade;

### File a complaint with the Dean of Students for more severe disciplinary action.

### Students who believe the faculty member has unfairly applied the policy to them may make an appeal with the faculty member’s department chair.

**VII. ACADEMIC SUPPORT RESOURCES**

* + **Canvas System**

<https://uncfsu.instructure.com/>

All class documents (syllabus, instructors’ locator card etc.) and resources (slides, worksheets, etc.) will be posted on the Canvas system.

* **MyLabMath**

You can access it from your MyLabMath Module on Canvas

* **Math Support Center**

Information is available here

<http://www.uncfsu.edu/learning-center/mathematics-support-center>

**VIII. COURSE OUTLINE:**

**\* Homework:***Homework will be assigned on-line via* ***MyLabMath Module in Canvas****, please check the assignments and due dates in the module.*

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| Week | **Section / Topic** | **Assignment due** |
| 1 | Discussion about the syllabus  1.1 Linear Equations and Inequalities |  |
| 2 | 1.2 Graphs and Lines |  |
| 3 | 1.3 Linear Regression |  |
| 4 | TEST 1 – Review  TEST 1 |  |
| 5 | 2.1 Introduction to functions  2.2 Graphs of Elementary functions |  |
| 6 | 2.3 Graph of Quadratic Functions and its applications  Solving Quadratic Equations |  |
| 7 | 2.5 Exponential Functions  2.6 Logarithmic Functions  Applications: Doubling Time and Half-Life |  |
| 8 | TEST 2 – Review  TEST 2 |  |
|  | **Midterm brake – No Classes** |  |
| 10 | 4.1 System of Linear Equations in Two Variables | **Homework for unit 7** |
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| 11 | 3.1 Simple Interest  3.2 Compound and Continuous Compound Interest |  |
| 12 | 3.3 Future Value of an Annuity  3.4 Present Value of an Annuity |  |
| 13 | TEST 3 – Review  TEST 3 |  |
| 14 | 5.1 Sample Spaces, Events, and Probability  5.2 Union, intersection, and Complement of Events; Odds |  |
| 15 | 6.1 Graphing Data  6.2 Measure of Central Tendency |  |
| 16 | **Final Exam** |  |

**IX.TEACHING STRATERGIES:**

This course has both class and lab sessions. The class sessions will be focused around activity based learning. There will be lectures, discussions, and corporative learning. The lab sessions are for interactive problem solving using online course specific software.

**X. BIBLIOGRAPHY:**

Bennett, Briggs, and Triola. Statistical reasoning for everyday life, 3rd Edition, published by Pearson/Addison Wesley, 2007.

Hershbarger and Ronald. Mathematical Applications for management, life, and social sciences, 9th Edition, published by Thomson Brooks, 2008.

Bennett and Briggs. "Using and Understanding Mathematics Quantitative Reasoning Approach”, 5thEdition, published by Pearson Education, 2010.

LooseLeaf for Math in Our World: A Quantitative Reasoning Approach, 1st Edition, published by McGraw-Hill Education, 2017