University of North Texas at Dallas
SYLLABUS (Spring 2025)
Math 3303: Advanced Study of the High School Curriculum; 3 Hours

Department of	Mathematics and Information Sciences
Instructor Name	Dr. Joshua Goodson
Office Location	FH 227
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Email Address	Joshua.goodson@untdallas.edu
Office Hours	MW 8am-8:30am, 1pm-2:30pm, or by appointment
Virtual Office Hours	Tu 11:30am-12:30pm (Teams link in Canvas), or by appointment
Course Format/Structure	Face-to-face
Classroom Location	Dal1 326
Class Meeting Days & Times	MW 8:30am-9:50am
Course Catalog Description	Study of mathematical topics in the secondary curriculum from and advanced viewpoint. Discussion of the relationship between the secondary and collegiate curricula. Combinatorics. The Euclidean algorithm, congruence classes, and prime factorization. Modeling with differential equations. Conic sections. Pedagogical techniques.
Prerequisites	Math 3405 (formerly Math 3320) with a C or better
Corequisites	None
Required Text	**None**
Recommended Text & References	• Teaching Secondary and Middle School Mathematics by D. Brahier
Access to Learning Resources	**UNT Dallas Library:** Phone: (972) 338-1616; Website URL: http://www.untdallas.edu/library **UNT Dallas Bookstore:** Phone: (972) 780-3652; Website URL: http://www.untdallas.edu/bookstore Email: untdallas@bkstr.com
Canvas Resources **Supported Browsers:**	**Getting Help with Canvas:** **Canvas 24/7 Phone Support for Students: 1-833-668-8634**

• Chrome 67 & 68 • Firefox 60 & 61 • Flash 29, 30 (for audio/video) • Respondus Lockdown Browser • Safari 10, 11 **Supported Devices:** • iPhone • Android • Chromebook *Note: Tablet users can use the Canvas app* **Screen Readers:** • VoiceOver (Safari) • JAWS (Internet Explorer) • NVDA (Firefox) *Note: There is no screen reader support for Canvas in Chrome*	**Canvas Help Resources:** **Canvas Student Guide - https://community.canvaslms.com/docs/DOC-10701** For additional assistance, contact Student Assistance (UNT Dallas Distance Learning): DAL1, Room 157 Phone: 972-338-5580 Email: distancelearning@untdallas.edu

Course Goals/Overview:

The goal of this course is to extend your knowledge about the fundamental mathematical structures present in middle and high school Mathematics curriculum. We will cover some Pedagogical techniques as well. While the topics may seem elementary, the approach we will take is certainly advanced. The goal is that you will develop a profound understanding of the topics you will be teaching in your future classrooms. The goal is that you will demonstrate ability to apply the following concepts from an advanced standpoint to the teaching of Mathematics in secondary schools:

- Real and complex numbers, real function, solving equations, integers and polynomials, conic sections and geometry.
- Demonstrate through written and visual/oral presentations, the ability to present high school Mathematics from advanced perspective.
- Demonstrate comprehension of core mathematical concepts and how to teach it in high school settings

Learning Objectives/Outcomes: At the end of this course, the student will

- Have studied high school Mathematics from a deeper level.
- Make connections between different topics in Mathematics.
- Demonstrate alternative approaches to solving mathematical problems.
- Demonstrate an understanding of the state standards of mathematics
- Be able to state and prove many of the fundamental theorems problems in high school mathematics classes.

- Realize that teaching mathematics is much more than just how to manipulate formulas.

Course Outline: This schedule is subject to change by the instructor; any changes to this schedule will be announced in class. We will try to cover as much as we can from the following topics as time permits.

Topics	Timeline
Overview of the course, TEKS & the Math 4-8/7-12 certification exams, Functions, Lines in the plane, Quadratic Polynomials, Lesson planning	January
Trigonometry, Real & Complex Numbers, Divisibility Tests, Number system Structure	February
Exponential Functions, Logarithmic Functions, Transcendental Functions, Higher Degree Polynomials, Conic Sections, Classroom Scenarios	March
Geometry & Measurements, Probability & Statistics	April

Grading Matrix:

Assignment	Percentage
Discussion Board	10
Projects, HW, Quizzes, TExEs Practice, etc	30
3 Equal Exams (20% each)	60
Total:	**100**

The following standard grading scale will be used to determine your final letter grade:
100**%** $\geq A \geq 90\% > B \geq 80\% > C \geq 70\% > D \geq 60\% > F \geq 0$ **.**

Technology Use Policy: Using technology, when appropriate, is encouraged. We will be using TI 84 Calculator. You **cannot** use the TI-89 Calculator or any other calculator, which performs symbolic operations.

Portfolio Policy: Each student will be asked to participate in activities such as writing papers about topics related to teaching high/middle school mathematics, presenting solutions to certain problems, participate in an online discussion, homework and/or quizzes**.**

Make-up exam policy: All requests for make-up exams MUST be submitted to the instructor in writing, with the supported documents. It is imperative that you contact your instructor as soon as possible (do **NOT** wait until you return to class!) and include a way that you can be reached.

Other Course Specific Policies:

- The first and most fundamental expectation I have for everyone in the class is to respect one another. Among other things, this means that only one person speaks at a time, **no one works on anything not related to the class (no cell use, no texting, no reading, no sleeping,…) and** everyone will put forth an honest effort.
- It is the student's responsibility to stay abreast of all class announcements and changes made to this syllabus in class, whether present or not.
- Arrive to class promptly and do not leave until the scheduled ending time of the class.
- You are expected to review all graded quizzes, homework, and project and exam papers as soon as they are returned. All questions about the grading of quizzes, homework or exam papers must be reported within **seven** calendar days of the date on which the paper was returned.
- To do well in this course, attend class every meeting on time, be prepared to work for the full class time, bring all necessary materials to class, participate as much as possible, do the homework and extra problems steadily every day rather than once a week. Don't be afraid to make mistakes or ask questions, the more you get involved, the better you'll do!

Students with Disabilities (ADA Compliance): The University of North Texas at Dallas makes reasonable academic accommodations for students with disabilities. Students seeking accommodations must first register with the Disabilities Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delays in implementation. Note that a student must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letter during their designated office hours to protect the privacy of the student. For additional information see the Disability Services Office website at http://www.untdallas.edu/disability. You may also contact them by phone at 972-338-1777; by email at UNTDdisability@untdallas.edu on the first floor of the Student Center.

Canvas Instructure Accessibility Statement:

University of North Texas at Dallas is committed to ensuring that online and hybrid courses are usable by all students and faculty including those with disabilities. If you encounter any difficulties with technologies, please contact our ITSS Department. To better assist them, you would want to have the operating system, web browser and information on any assistive technology being used. The Canvas Instructure Accessibility Statement is provided at https://www.canvaslms.com/accessibility.

NOTE: Additional instructional technology tools, such as Turnitin, Respondus, Panopto, and publisher cartridge content (i.e. MyLab, Pearson, etc.) may NOT be fully ADA compliant. Please contact our Disability Office should you require additional assistance utilizing any of these tools.

Academic Integrity: Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and

procedures. Refer to the UNT Dallas Academic Integrity Policy in the appropriate Catalog at http://dallascatalog.unt.edu.

Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

Web-based Plagiarism Detection*:* Please be aware in some courses, students may be required to submit written assignments to Turnitin, a web-based plagiarism detection service, or another method. If submitting to Turnitin, please remove your title page and other personal information.

Diversity/Tolerance Policy: Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student's Rights, Responsibilities, and Conduct will be referred to the Dean of Students as the instructor deems appropriate (UNTD Policy 7.001 found at https://www.untdallas.edu/hr/upol).

Course Evaluations:
Student's evaluations of teaching effectiveness is a requirement for all organized classes at UNT Dallas. This short survey will be made available to you at the end of the semester via your campus email, providing you a chance to comment on how this class is taught. I will not have access to the results of the evaluations until after final grades have posted. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider students' evaluations to be an important part of your participation in this class.

Bad Weather Policy: Campus facilities will close and operations will be suspended when adverse weather and/or safety hazards exist on the UNTD campus or if travel to the campus is deemed dangerous as the result of ice, sleet or snow. In the event of a campus closure, the Marketing and Communication Department will report closure information to all appropriate major media by 7 a.m. That department will also update the UNTD website, Facebook and Twitter with closing information as soon as it is possible. For more information please refer to http://www.untdallas.edu/police/resources/notifications.
Inclement Weather and Online Classes:
Online classes may or may not be affected by campus closures due to inclement weather. Unless otherwise notified by your instructor via e-mail, online messaging, or online announcement, students should assume that assignments are due as scheduled.

Technology Assistance: In order to successfully access the materials in Canvas, UNT Dallas advises that your computer be equipped with the minimum system requirements listed on the first page of the syllabus. If you experience difficulty accessing or using components of the course, try using Google Chrome browser. If you still experience technical difficulties, first, notify your instructor. If the problem is still not resolved, call Distance Learning at the phone number listed on the first page of the syllabus. Also, no matter what browser you use, always enable pop-ups.

For more information see:

- UNT Dallas Canvas Technical Requirements: https://community.canvaslms.com/docs/DOC-10721
- Canvas Instructure Support & Unsupported Operating Systems: https://community.canvaslms.com/docs/DOC-10720

Disruptive Behavior in an Instructional Setting Policy: Students are expected to engage with the instructor and other students in this class in a respectful and civil manner at all times to promote a classroom environment that is conducive to teaching and learning. Students who engage in disruptive behavior will be directed to leave the classroom. A student who is directed to leave class due to disruptive behavior is not permitted to return to class until the student meets with a representative from the Dean of Students Office. It is the student's responsibility to meet with the Dean of Students before class meets again and to provide the instructor confirmation of the meeting. A student who is directed to leave class will be assigned an unexcused absent for that class period and any other classes the student misses as a result of not meeting with the Dean of Students. The student is responsible for material missed during all absences and the instructor is not responsible for providing missed material. In addition, the student will be assigned a failing grade for assignments, quizzes or examinations missed and will not be allowed to make up the work.

The Code of Student's Rights, Responsibilities, and Conduct (Policy 7.001) describes disruption as the obstructing or interfering with university functions or activity, including any behavior that interferes with students, faculty, or staff access to an appropriate educational environment. Examples of disruptive behavior that may result in a student being directed to leave the classroom include but are not limited to: failure to comply with reasonable directive of University officials, action or combination of actions that unreasonably interfere with, hinder, obstruct, or prevents the right of others to freely participate, threatening, assaulting, or causing harm to oneself or to another, uttering any words or performing any acts that cause physical injury, or threaten any individual, or interfere with any individual's rightful actions, and harassment. You are encouraged to read the Code of Student's Rights, Responsibilities, and Conduct for more information related to behaviors that could be considered disruptive.