

Nashville State Community College
School of Science, Technology, Engineering, and Mathematics
Mathematics

Master Course Syllabus

MATH 1730 - Precalculus

The purpose of the syllabus is to tell you how the course is organized, what the expectations are, and how you will be graded. In addition, there is important information about how the college will operate during severe weather and how the college will communicate with you. The syllabus is not a contract. Instead, it is meant to help you succeed in this course. If any of the content changes during the semester, you will be notified.

Course information:

Course Title: MATH 1730 – Precalculus

Credits: 5

Class Hours: 5

Course Description:

A single course in precalculus algebra and trigonometry. Topics include polynomial, radical, rational, exponential and logarithmic expressions and equations and functions, polynomial and rational inequalities, inverse functions, trigonometric functions, and their graphs, right and oblique triangles, degree/radian measure, trigonometric equations, identities, inverse trigonometric functions, vectors, the polar coordinate system, conic sections, and applications. PREREQUISITE (S): Initial Level 2 placement or higher in Math or Math 1000.

Instructor Information:

Name:

Email:

Office Phone:

Office Location:

Office Hours:

Required Textbook(s) & Other Materials: (Students must check with the instructor before purchasing any materials.)

Textbook(s): A digital copy of the textbook is automatically provided to you through the Digital Course Materials (DCM) program: Precalculus: Graphs and Models, A Right Triangle Approach, 6th edition, by Bittenger/Beecher Publisher: Pearson

ISBN: (if you are using the automatically provided Digital Course Materials (DCM), you do not need to worry about these): 9780134179056 (text only) or 9780135834411 (18-week MyMathLab access only) and 9780135834459 (24-month MyMathLab access only)

Reference Materials: The Student Solutions Manual is optional and is NOT automatically provided to you. The ISBN for the Student Solution Manual is 9780134265230

Supplies: A graphing calculator is *required* (TI-84 or TI-83 or TI-83+ are recommended). It is NOT automatically provided to you. Calculators like the TI-89 will not be allowed (those with a Computer Algebra System - CAS). The TI-nspire calculator will only be allowed with the TI-84 Plus keypad (during tests).

Once you have registered for your courses, you should make sure you have the correct textbook and materials for each course. Before courses begin, you can do this by looking up your courses on the bookstore's website (<https://www.bkstr.com/nscstore/shop/textbooks-and-course-materials>) using your A# or by entering your course information. If you are registered with the Access Center and need an alternate format for the textbook and other course materials, please contact the Access Center at 615-353-3721, 615-353-3741, or accesscenter@nsc.edu

Digital Course Materials: These ensure you pay less for your course materials and have easy access through D2L throughout the semester. When you registered for this course, the charge for these materials appeared on your account. If you decide you do not want to purchase the course materials embedded in NS Online, you can opt out of the program **until the end of the second week of classes**. If you opt out, you will be responsible for purchasing the required course materials on your own. For more information, please visit www.nsc.edu/dcm.

Accessing MyMathLab: In NS Online you need to click the Content tab in your course. This will display the Table of Contents. Under the Table of Contents choose the MyLab Math – Student Links to access your assignments.

Honors Option: Honors credit is available in some classes. If you are interested in participating in the Honors Program, please see your instructor within the first four weeks of class.

Course Outcomes: At the end of the semester, this is what you should know and/or be able to do:

- Solve problems using mathematics, and determine if solutions are reasonable.
Solve logarithmic and trigonometric equations, solve triangles, find the domain of rational functions, and find the difference quotient, and determine if the solution/result is reasonable.
- Apply mathematical concepts to solve real-life problems using formulas (deduction) and interpret the meaning of the solution.
Create, analyze, and interpret results for applications involving polynomial functions, vectors, navigation, and conic sections.
- Construct meaningful connections (transfer of knowledge) between mathematics and other disciplines.
- Apply technology for mathematical reasoning and problem solving.
Apply mathematical reasoning and technology for applications involving rational and exponential functions, and vectors.
- Analyze data/graphs by using mathematical modeling and/or statistical reasoning.

Use appropriate technology to approximate local (relative) extrema and increasing/decreasing intervals and real zeros of functions, approximate solutions to trigonometric equations, and determine information involving graphs of conic sections.

Topics to Be Covered:

Introduction to graphing, distance formula, midpoint formula; Functions and graphs, domain, applications; Linear functions, slope, applications; Equations of lines, modeling; Linear Equations, functions, zeros, applications; Linear inequalities; Increasing and decreasing and constant intervals, relative maxima, relative minima, piecewise functions; Difference quotients; Composition of functions; Transformations; Complex numbers; Quadratic equations, functions, zeros, models; Analyzing graphs of quadratic functions; Rational and radical equations; Absolute value equations and inequalities; Polynomial functions; Polynomial division, remainder theorem, factor theorem; Theorems about zeros of polynomial functions; Rational functions; Polynomial and rational inequalities; Inverse functions; Exponential functions and graphs; Logarithmic functions and graphs; Properties of logarithmic functions; Exponential and logarithmic equations; Exponential growth and decay, compound interest, logistic functions; Trigonometric functions of acute angles; Solve right triangles, applications; Trigonometric functions of any angle; Radians, arc length, angular speed; Circular functions, graphs and properties; Graphs of transformed sine functions and cosine functions; Identities: Pythagorean, Sum/Difference, Co-function, Double-angle, Half-angle; Inverses of trigonometric functions and graphs; Trigonometric equations; Law of Sines and Law of Cosines; Vector operations, applications; Conic sections (parabola, circle, ellipse, hyperbola)

Course Assessments: We will use the following assessments to demonstrate your understanding, knowledge, and skills:

Grading Policy:

Final Exam: 20 percent to 25 percent (5% of the Final Exam score will be determined by the score students make on the Commonly Missed Final Exam Questions assignment that will be loaded in students' NS Online course shells...students have up to 10 attempts on this assignment to score as high as they possibly can...students will be able to see problems they get incorrect on this assignment so they can study that content and then attempt the assignment again...describe this how it makes most sense for you and your students)

Other tests: 50 percent to 60 percent

Other (homework, quizzes, projects, etc.): 15 percent to 30 percent

Grading Scale:

Letter Grade	Percentage Range
A	90 to 100
B	80 to 89
C	70 to 79
D	60 to 69
F	0 to 59

FA

If you stop attending class or if you are in an online class and stop submitting assignments, but do not turn in a withdrawal form by the deadline, you are still enrolled in class. You will be given a grade of FA, which means you have failed due to not attending class and not completing your assignments. Please refer to the current academic calendar available on the Nashville State web site, looking for the date that indicates it is the “Last Day to Earn F for Attendance (FA).” If you stop attending your course after this date, you will receive an F. (For the full Fall term, this date is **XXXXXXXX**.)

FN

An FN is awarded if you have never attended your course or done any of the work in an online course.

Late Work Policy & Make-up Procedures for Missed Assignments and Work:

(Each instructor will provide policy)

Attendance Policy

General Policy

- *Absences in a course may affect your final grade.*
- *Tardiness may also affect your final grade.*
- *You are responsible for all work/tests that occur during any missed course session(s) regardless of reason(s) for absence.*
- *If you are not well enough to attend a course session (class), you must notify the instructor as soon as possible before the scheduled course time.*
 - *If you are unable to notify an instructor before the scheduled course time, you must contact the instructor as soon as reasonably possible.*
- *If you have an unavoidable conflict with a scheduled course session, you must notify the instructor before the course session.*
 - *If you are unable to notify an instructor before the scheduled course time, you must contact the instructor as soon as reasonably possible.*

Instructor’s Policy

The attendance policy for this course is: *(add instructor’s attendance policy)*

For financial aid purposes, **attendance** is measured by participation in the course. Instructors can determine your level of participation in several ways. Some of those ways are:

- Continued attendance
- Participation in on-ground or virtual class sessions
- Participating in D2L as prompted
- Responding to an instructor’s email
- Posting to a discussion board
- Completing and submitting assignments

Technology Statement

- All classes at the College are web enhanced. “Web enhanced” means that components of the course, such as assignments and online discussions, may be located online in the class D2L/NS Online course shell and used in the course, even if the course meets in a classroom on ground.
- You must have access to a computer and an Internet connection to complete assignments, engage in online discussions, and access various course materials through D2L/NS Online course shells.
- You may also be required to use free video conferencing platforms (examples: Zoom, Teams, etc.) for course sessions and meetings.
- You will be responsible for appropriate dress while on video. This means that you are expected to dress as if you were in a classroom.
- You will be responsible for a distraction free environment while on video. This means that the professor and others in the course should not be able to hear noise in your home, such as cell phones, TVs, or barking dogs. The best way to do this is to keep yourself on “mute” until you need to speak.
- You will be responsible for making sure your background is neutral. Keep in mind that students and professors come from all around the world, and you are all a part of our community. Therefore, please avoid having images in your background that may be offensive to your classmates.
- Certain publisher materials, such as textbook figures, may not work on cellphones and may require a laptop or a tablet.
- If you have questions or concerns regarding access to a computer or Internet resources, please contact your instructor. Additional information is available on this website: <https://www.nsc.edu/current-students/student-online-resources/access-to-internet-and-technology>.

Computer Labs

Computers are available for all Nashville State students to use at each campus during open hours. Open computer lab availability may vary from campus to campus.

You should check the NSCC website for current hours of operation.

D2L/NS Online and myNSCC

It is your responsibility to check your email in **both** D2L/NS Online course shells and your @my.nsc.edu (student email) on a regular basis. These are the official communication channels between the college and you. You are responsible for the information communicated through these email channels. D2L/NS Online emails contain specific course information and @my.nsc.edu emails contain important information from college offices, such as Financial Aid.

ADA Compliance Statement

If you need accommodations due to a disability, please do not hesitate to reach out to our Access Center. Disabilities for which you can receive accommodations include documented physical, emotional, and/or learning conditions. Nashville State is committed to supporting your success, and we encourage

you to get assistance if needed. If you require accommodations for any courses in which you are enrolled, contact the Access Center at 615.353.3741 or 615.353.3721, or e-mail accesscenter@nsc.edu.

Classroom Misconduct

Disruptive conduct is not allowed in the classroom. Disruptive conduct is any behavior that prevents students from learning and interferes with the ability of the instructor to teach. This may change from course to course; therefore, your individual instructors will give you guidance on what qualifies as “disruptive conduct” in their courses. Please review the [Nashville State Student Code of Conduct policy](#). Please be aware that children are not allowed in class or to be left unattended on campus.

Academic Misconduct

You have started this academic journey to prepare for a future career. Because of this, it is important that you learn the materials being presented in your courses. For this reason, cheating, in any form, robs you of your opportunity to learn and master the material that will enable you to succeed in that future career. Nashville State has a clear [Academic Misconduct Policy](#) that you are expected to follow. In addition, your instructors will clarify what Academic Misconduct looks like and the consequences for violations in each course that you take. The instructor has the authority to assign an “F” or a “zero” for such violations or for the semester grade.

Academic Early Alert System

If you are not doing well in your course, your instructor may send you an Early Alert through your @my.nsc.edu email. This email will go to your academic advisor and Student Success advisor, as well. If you get an Early Alert, contact your instructor immediately. Instructors send these when they want to help you figure out how to get extra support to pass the course. An Early Alert does not mean that you have already failed the course. Rather, it means you are in danger of failing the course if you do not change your learning strategy. Please use an Early Alert to your advantage and as an opportunity to improve your grade.

RAVE Emergency Alert System

You can log in to this free alert system to receive text messages about emergencies related to NSCC campuses: <https://www.getrave.com/login/nsc>. The instructions for this are listed below.

- Your RAVE Username is your NSCC email address.
- If you've never received an email from RAVE with your password, or if you need to reset your password, select “Forgot your password?” and a new password will be emailed to you.
- Should the RAVE system indicate “user not found,” select Register and create your own RAVE account.

Student Wellness

Your well-being is important to us. With this in mind, the college has several resources available to provide support when needed:

- Free tutoring: <https://www.nsc.edu/current-students/on-campus-resources/learning-center-and-tutoring>

- NSCC email, scheduling, online courses, textbooks, tech check out and support, computer labs on campuses, academic advising, financial advising, COVID-19 information, and procedures on campuses: <https://www.nsc.edu/current-students/student-online-resources>
- Services that help with bus passes, food, childcare, textbooks, housing, financial counseling, personal counseling, suicide prevention, health insurance: <https://www.nsc.edu/current-students/on-campus-resources/student-support-services>

Equity Statement

We are taking steps to become more aware of the many different needs of students. Faculty, staff, and administrators are committed to helping students find ways to meet their needs so that ALL students can reach their goals. Please ask for things you need.

Inclement Weather & Campus Closings

You get notices about campus closings in these places: text messages from RAVE and www.nsc.edu. Even when campuses are closed, you are still responsible for completing all assigned work. Check D2L/NS Online for a message from your instructor so you do not miss important assignments and due dates, which may change due to the campus closure.

Class Cancellation Policy

Our instructors post messages about cancelling classes in the D2L/NSOnline course shells and/or on the classroom door on campus. These messages can be found in the News and Content section or the Email tab in the online shell. Please check these to be sure that you take advantage of opportunities for learning and points toward your grade.