

# MATH 107: Precalculus

## **Self-paced Enroll Anytime Online Course**

This is an unofficial syllabus and is subject to change at any time. The official course syllabus is posted in Blackboard and is also available upon request.

## Instructor & Course Information

Credits 4 undergraduate credits

Prerequisites Math 93 or an appropriate score in the Placement Test Program.

Instructor Anthony Bevelacqua\*

Email Visit the Blackboard course for contact information.

#### **Textbook and Course Materials**

- Faires, J. Douglas and James DeFranza. PreCalculus. 5th ed. Cengage Learning. ISBN 978-0840068620
- The Student Solutions Manual is also available with complete solutions to the odd numbered problems in the text. This book is optional but strongly recommended:

Faires, J. Douglas and James DeFranza. *Student Study Guide with Solutions for* "PreCalculus" Fifth Edition. Cengage Learning. ISBN: 978-1111427368.

# Course Description and Objectives

Equations and inequalities; polynomial rational, exponential, logarithmic and trigonometric functions; inverse trigonometric functions; algebraic and trigonometric methods commonly needed in calculus.

### **Technical Requirements**

The <u>UND Technical Support webpage</u> contains information on your UND email and how to download a free version of Microsoft Office.

- Students are expected to use their official UND email in the course.
- Adobe Acrobat Reader is required for this course and can be downloaded free from Adobe's website.
- Homework is submitted as a single PDF file. You need a printer and scanner or camera.
- The exams are proctored using ProctorU Live as the proctoring method. Visit the exam folders in Blackboard or the <u>Self-Paced Enroll Anytime Exams webpage</u> for more information on the exam process and technical requirements.
- View the basic technical requirements for every online course.

#### **Course Overview**

There are 45 lessons in this course, given as follows:

<sup>\*</sup>If you have any course questions prior to enrollment, please email und.online@und.edu

- Lesson 1: Introduction and the Real Line
- Lesson 2: The Coordinate Plane
- Lesson 3: Equations and Graphs
- Lesson 4: Using Technology to Graph Equations, and Functions
- Lesson 5: Review 1
- Lesson 6: Linear Functions
- Lesson 7: Quadratic Functions
- Lesson 8: Introduction and Other Common Functions
- Lesson 9: Arithmetic Combinations of Functions
- Lesson 10: Review 2
- Lesson 11: Exam 1
- Lesson 12: Composition of Functions
- Lesson 13: Inverse Functions
- Lesson 14: Review 3
- Lesson 15: Introduction to Polynomial Functions
- Lesson 16: Finding Factors and Zeros of Polynomials
- Lesson 17: Review 4
- Lesson 18: Rational Functions
- Lesson 19: Other Algebraic Functions
- Lesson 20: Complex Roots of Polynomials
- Lesson 21: Review 5
- Lesson 22: Exam 2
- Lesson 23: Measuring Angles
- Lesson 24: The Sine and Cosine Functions
- Lesson 25: Graphs of the Sine and Cosine Functions
- Lesson 26: Review 6
- Lesson 27: Other Trigonometric Functions
- Lesson 28: Trigonometric Identities
- Lesson 29: Right-Triangle Trigonometry
- Lesson 30: Review 7
- Lesson 31: Inverse Trigonometric Functions
- Lesson 32: Applications of Trigonometric Functions
- Lesson 33: Review 8
- Lesson 34: Exam 3
- Lesson 35: Introduction to the Natural Exponential Function
- Lesson 36: Logarithmic Functions
- Lesson 37: Exponential Growth and Decay
- Lesson 38: Review 9
- Lesson 39: Introduction and Parabolas
- Lesson 40: Ellipses
- Lesson 41: Hyperbolas
- Lesson 42: Polar Coordinates
- Lesson 43: Parametric Equations
- Lesson 44: Review 10

Each lesson, except for the four exams and the review lessons, consists of sections from the text and additional notes to be read, a number of practice problems to be completed, some supplemental videos to watch, and, finally, an online quiz to be taken.

The first three exams Lessons 11, 22, and 34 cover the material of the preceding lessons. They are worth 50 points each, with each exam worth 15% of your overall grade. The fourth exam Lesson 45 is a comprehensive final. It is worth 70 points and accounts for 25% of your final grade. Each exam is split into two parts:

- The first part contains the exam **questions** and has multiple-choice answers. This part is worth 10 points for exams 1 through 3, and 14 points for exam 4.
- The remaining 40 points for exams 1 through 3 and 56 points for exam 4 come from your supporting written work. The written work must be submitted within 10 minutes of completing the multiple-choice portion.

There are no notes, textbooks, or calculators allowed on exams. The exams are proctored using ProctorU Live+ as the proctoring method. Visit the exam folders in Blackboard or the <u>Self-Paced Enroll Anytime Exams</u> webpage for more information on the exam process and technical requirements.

### **Assessment and Grading**

The course grade will be determined as follows:

31 Lesson Quizzes	15%
10 Lesson Reviews	15%
First 3 Exams (15% each)	45%
Final Exam	25%

#### Grading Scale

90-100%	Α
80-89%	В
70-79%	C
60-69%	D
Under 60%	F

### About UND Enroll-Anytime Courses

You have 3 to 9 months to complete this course from the time of your enrollment. You may work at your own pace and complete lessons/exams on your own schedule, submitting up to 3 per week for grading.

After you finish your course, your final grade will be posted in Blackboard. Please **allow 3-5 business days for your final grade to appear** on your transcript in Campus Connection. You will receive a confirmation email from the Enroll Anytime staff once the final grade is officially posted on your transcript. You may then order an official transcript, if desired.

If you have an **administrative** question regarding course enrollment dates, extensions, withdrawals, questions regarding your transcript, or need exam assistance, please contact the **Office of Extended Learning** at <u>und.courses@UND.edu</u> or 701-777-0488.

Questions regarding **coursework** should be directed to the **instructor**.

For **technical support** including username and password help, assignment submission, or other technical assistance in the course, contact University Information Technology.

#### **Student Resources**

Many services are available to online students such as writing assistance from the UND Writing Center, free online tutoring, and more. Visit the <u>Student Resources page</u> for more information. You can also access the resources webpage from the <u>Student Resources</u> link in your Blackboard course menu.

# University of North Dakota Policies & Resources

# **Academic Integrity**

Academic integrity is a serious matter, and any deviations from appropriate behavior will be dealt with strongly. At the discretion of the professor, situations of concern may be dealt with as a scholastic matter or a disciplinary matter.

As a scholastic matter, the professor has the discretion to determine appropriate penalties to the student's workload or grade, but the situation may be resolved without involving many individuals. An alternative is to treat the situation as a disciplinary matter, which can result in suspension from the University, or have lesser penalties. Be aware that I view this as a very serious matter, and will have little tolerance of or sympathy for questionable practices. A student who attempts to obtain credit for work that is not their own (whether that be on a paper, quiz, homework assignment, exam, etc.) will likely receive a failing grade for that item of work, and at the professor's discretion, may also receive a failing grade in the course. Read more in the <u>Code of Student Life</u>.

# **Disability Support and Medical Services**

The University of North Dakota is committed to providing equal access to students with documented disabilities. To ensure access to your classes and program, please contact <u>Disability Services for Students</u> (DSS) to engage in a confidential discussion about accommodations for the classroom, clinical and/or online course settings. Accommodations are not provided retroactively. Students are encouraged to register with DSS at the start of their class/program. More information can be obtained by email <u>UND.dss@UND.edu</u> or by phone at 701.777.2664.

If you receive an exam accommodation from Disability Services for Students, share the letter with the Office of Extended Learning at <a href="https://www.under.edu">und.courses@und.edu</a>.

# Religious Accommodations

UND offers religious accommodations, which are reasonable changes in the academic environment that enable a student to practice or observe a sincerely held religious belief without undue hardship on the University. Examples include time for prayer or the ability to attend religious events or observe a religious holiday. To request an accommodation, complete <u>student religious accommodation request form</u>. If you have any questions, you may contact the <u>Equal Opportunity & Title IX Office</u>.

### **Pregnancy Accommodations**

Students who need assistance with academic adjustments related to pregnancy or childbirth may contact the Equal Opportunity & Title IX Office or Academic Affairs to learn about your options. Additional information and services may be found at <a href="Pregnancy Resources">Pregnancy Resources</a>.

### **Resolution of Problems**

Should a problem occur, you should speak to your instructor first. If the problem continues to be unresolved, go to the department chair, and next to the college Dean. Should the problem persist, you have the right to go to the Provost next, and then to the President.

#### Notice of Nondiscrimination

It is the policy of the University of North Dakota that no person shall be discriminated against because of race, religion, age, color, gender, disability, national origin, creed, sexual orientation, gender identity, genetic information, marital status, veteran's status, or political belief or affiliation and the equal opportunity and access to facilities shall be available to all. Concerns regarding Title IX, Title VI, Title VII, ADA, and Section 504 may be addressed to Donna Smith, Assistant Vice President for Equal Opportunity & Title IX and Title IX/ADA Coordinator, by calling 701.777.4171 or emailing <a href="UND.EO.TitleIX@UND.edu">UND.EO.TitleIX@UND.edu</a>. Concerns can also be directed to the Office for Civil Rights, U.S. Department of Education, 230 S. Dearborn St., 37th Floor, Chicago, IL 60604, or any other federal agency.

## Reporting Discrimination, Harassment, or Sexual Misconduct

If you or a friend has experienced sexual misconduct, such as sexual harassment, sexual assault, domestic violence, dating violence, or stalking, please contact the <a href="Equal Opportunity & Title IX Office">Equal Opportunity & Title IX Office</a> or UND's Title IX Coordinator, Donna Smith, for assistance: 701.777.4171; <a href="donna.smith@UND.edu">donna.smith@UND.edu</a>. You may also contact the Equal Opportunity & Title IX office if you or a friend has experienced discrimination or harassment based on a protected class, such as race, color, national origin, religion, sex, age, disability, sexual orientation, gender identity, genetic information, pregnancy, marital or parental status, veteran's status, or political belief or affiliation.

## Faculty Reporting Obligations Regarding Discrimination, Harassment, and Sexual Misconduct

It is important for students to understand that faculty are required to share with UND's Title IX Coordinator any incidents of sexual misconduct or of discrimination or harassment based on a protected class they become aware of, even if those incidents occurred in the past or are disclosed as part of a class assignment. This does not mean an investigation will occur if the student does not want that, but it does allow UND to provide resources to help the student continue to be successful at UND. If you have been impacted by discrimination, harassment, or sexual misconduct, you can find information about confidential support services at the Equal Opportunity & Title IX Office.

### **UND Cares Program**

The <u>UND Cares program</u> seeks to educate faculty, staff and students on how to recognize warning signs that indicate a student is in distress.

### How to Seek Help When in Distress

We know that while college is a wonderful time for most students, some students may struggle. You may experience students in distress on campus, in your classroom, in your home, and within residence halls. Distressed students may initially seek assistance from faculty, staff members, their parents, and other students. In addition to the support we can provide to each other, there are also professional support services available to students on campus through the Dean of Students and University Counseling Center. Both staffs are available to consult with you about getting help or providing a friend with the help that he or she may need. Visit the <u>UND Cares program</u> webpage for more additional information.

# How to Recognize When a Student is in Distress

The term "distressed" can mean any of the following:

- Student has significant changes in eating, sleeping, grooming, spending, or other daily activities.
- Student has cut off or minimized contact with family or friends.
- Student has significant changes in performance or involvement in academics, sports, extracurricular, or social activities.
- Student describes problems (missing class, not remembering, destructive behavior) that result from experiences with drinking or drugs.
- Student is acting withdrawn, volatile, tearful, etc.
- Student is acting out of character or differently than usual.
- Student is talking explicitly about hopelessness or suicide.
- Student has difficulty concentrating or difficulty carrying on normal conversation.
- Student has excessive dependence on others for company or support.
- Student reports feeling out of control of one's emotions, thoughts, or behaviors.

# Land Acknowledgement Statement

Today, the University of North Dakota rests on the ancestral lands of the Pembina and Red Lake Bands of Ojibwe and the Dakota Oyate - presently existing as composite parts of the Red Lake, Turtle Mountain, White Earth Bands, and the Dakota Tribes of Minnesota and North Dakota.

We acknowledge the people who resided here for generations and recognize that the spirit of the Ojibwe and Oyate people permeates this land. As a university community, we will continue to build upon our relations with the First Nations of the State of North Dakota - the Mandan, Hidatsa, and Arikara Nation, Sisseton-Wahpeton Oyate Nation, Spirit Lake Nation, Standing Rock Sioux Tribe, and Turtle Mountain Band of Chippewa Indians.