# MATH 103-COLLEGE ALGEBRA <br> Course Syllabus - Online 

## Spring Semester, 2020

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Web Pages: https://bb.ndsu.nodak.edu/ (Blackboard will be your main website, this is where class announcements and important files will be posted regularly, and through which you will be accessing MML "MyMathLab" for online tutorials, assignments, quizzes, practice tests, and individual assignment scores)
http://www.pearsonmylabandmastering.com or http://www.mathxl.com (use this only if Blackboard is down) For technical MML issues, contact MML student tech support at 1-800-677-6337

Office Hours: Monday, Wednesday, Thursday 9:00-9:50, Tuesday 11:00-12:00; other times available by appointment.

## General Information:

| Title: | Mathematics 103 Online - College Algebra |
| :--- | :--- |
| Credits: | 3 credits |
| Prerequisite: | Mathematics 098 (or equivalent) or appropriate placement test score |
| Required for: | Mathematics 105 <br> Mathematics 144 \& 146 |
| Text: | e-Course Series Algebra and Trigonometry 3/E by Kirk Trigsted (access code for <br> MyMathLab and the Guided Notebook are included) |

1. GOALS OF THE COURSE: The primary purpose of College Algebra is to improve students' skills and competency in algebra so that they will be successful in calculus, the other math courses required for a major, and in the courses that use mathematics. Another goal is to help students develop their mathematical learning skills in order to be more confident in future mathematical courses.
2. LEARNING OUTCOMES: After completing Math 103, students should be able to:

- Solve linear equations, quadratic equations, equations that are quadratic in form, rational equations, exponential equations, logarithmic equations, and systems of linear equations
- Solve polynomial and rational inequalities
- Determine the domain of polynomial functions, rational functions, root functions, exponential functions, and logarithmic functions
- Understand the concept of composite functions, one-to-one functions, and inverse functions
- Use synthetic division, the remainder theorem, the factor theorem, the fundamental theorem of algebra, and the intermediate value theorem to determine the zeros of polynomial functions
- Sketch the graphs of basic functions using transformations including polynomial functions, root functions, absolute value functions, rational functions, exponential functions and logarithmic functions
- Use critical thinking skills to solve word problems which include optimization problems in economics, physics, geometry, and other fields


## 3. REQUIRED STUDENT MATERIALS

The following two items are mandatory for this course and they are sold together as a package at the NDSU Bookstore located in the Memorial Union:

1. MATH 103 COURSE GUIDED NOTEBOOK: Must be purchased at NDSU Bookstore in the Memorial Union.

Note: If you have an access code from the last three semesters of Math 103, you will only need to purchase the guided notebook (sold separately without the access code at the bookstore.)
2. MyPearson ACCESS CODE: Students must purchase a MyMathLab (MML) Access Code at the Bookstore. This access code will allow you to access the e-text for the course and complete all required online work.
Follow the steps posted on Blackboard for proper MyMathLab registration through Blackboard. Do not register for MML directly! Note: Failure to register for MML by 11:59pm on Saturday, January 18 will result in an automatic drop from the course!

STUDENT COMPUTER ACCOUNT: All students need a computer account. If you need help with your login information, go to the ITS Help Desk in one of the following locations:

- Quentin Burdick Building 150
- Library Main Floor
- Barry Hall 270

NDSU ID: All students will need their NDSU ID in order to take the exams. There will be no online exams!
NON-GRAPHING CALCULATOR: You will need a calculator to work on some problems from the assignments, quizzes and/or tests. A non-graphing calculator is allowed when testing. Your instructor recommends the TI 30XIIS (solar) or TI 30XIIB (battery). See more details on the calculator policy in section 12 below.

DISTRACTION NOTICE: During exams, put your cell phones, tablets, and laptops away and silent. Their use is not allowed. Any student who is caught using a cell phone while taking an exam will be asked to leave and will receive zero for that exam. No notes or guided notebook pages will be allowed during exams.

MYMATHLAB NON-REGISTRATION DROPS: Students who fail to register for MyMathLab by 11:59 pm on Saturday, Jan. $18^{\text {th }}$ will automatically be dropped from the course and will not be able to re-register for any section of Math 103 this semester.

ATTENDANCE DROPS: Students who miss more than $20 \%$ of classes or more than $20 \%$ of assignments prior to the "Last day for no-record Drop of classes $=$ Jan. $23^{\text {th" }}$ may be administratively dropped from the course at the discretion of the instructor.

## 4. GRADE CALCULATION

## MML Syllabus Quiz: 10 points

- Students will earn 10 points for completing the online syllabus quiz. You must score $100 \%$ on this quiz to be able to access your first online homework and every homework thereafter. These are easy 10 points but it is more important to know the class policies at the very start. Consider these easy 10 points a welcome to the class gift.


## MML Homework: 150 points

(There are 11 homework assignments; one will be dropped)

- Students will earn up to 15 points for every homework assignment.
- There will be homework assignments in MyMathLab (MML) due at 11:59pm on Mondays (see section 11 below). Most of these can be lengthy and getting started on them early and completing them with the notebook pages is the most efficient way and is highly recommended (see task lists posted on blackboard). Please do not get started on your homework assignments on the day they are due, follow the course calendar as closely as possible!
- You always have an unlimited number of attempts on almost all of the questions in the online homework assignments. To improve your homework score, you only need to redo the problems you never attempted or did incorrectly.
- A minimum score of $80 \%$ is mandatory on an online homework assignment in order to access the corresponding quiz!

MML Online Quizzes: 100 points
(There are 11 quizzes; one will be dropped)

- Students will earn up to 10 points for every quiz. There will be quizzes in MyMathLab (MML) due at 11:59pm on Tuesdays (see section 11 below.)
- Students must earn at least $80 \%$ on the corresponding homework assignment before the quiz becomes available. Students will not be able to open the quiz and will therefore receive 0 points if $80 \%$ is not achieved on the corresponding homework assignment. Getting started on your weekly tasks early and following the course calendar is key to getting things completed on time and successfully.
- Quizzes may be worked up to 10 times; only the highest score will count. To improve your quiz score, you must redo the entire quiz. Each quiz includes 10 questions.


## Notebook Pages (NBP): 120 points

- Notebook pages will be collected twice. One at the beginning of the midterm exam and one at the beginning of the final exam. You will be expected to turn in all pages of your guided notebook. Make sure to bring your completed notebook pages when you come to take your scheduled exams. Notebook pages are worth 50 points each. The work that you submit must be completely filled out and correct to earn all points. Failure to bring your notebook pages to each exam will result in a score of zero for that NBP.
- NBP \#1 (worth 60 points) will have all pages from the assigned sections 1.1-3.6 (See calendar in section 11.)
- NBP \#2 (worth 60 points) should have all pages from the assigned sections 4.1-5.5 (See calendar in section 11.)
- Be sure to follow the task lists posted on blackboard to ensure you are not completing sections or objectives not assigned.
- You must turn in only your own notebook pages. You cannot have another student turn them in for you.
- There will be one 2-hour written midterm exam to be taken for this class on campus (location TBA) from 3:00 to 5:00 pm on March $3^{\text {rd }}$. You must have a valid photo ID to take the test.
- The midterm exam will cover sections 1.1-3.6 as indicated in the calendar (see Section 11 below.)
- Make-up tests will only be given for students with a valid excuse (see Section 10 below.)


## Final Exam: 150 points

- There will be one 2-hour comprehensive written final exam to be taken for this class on campus from 3:15 to 5:15 p.m. on Monday, May 11 ${ }^{\text {th }}$ (location TBA). You must have a valid photo ID to test.
- Make-up tests will only be given for students with a valid and documented excuse (see Section 10 below.)


## Total: 650 points

Extra credit opportunities may be offered throughout the semester, you must be logging into blackboard and checking your NDSU email regularly for announcements about the possible extra credit opportunities and other important announcements. These extra credit points can make a difference in your final grade and taking advantage of them is highly recommended. The midterm and final exams will include extra credit questions as well.

Your course grade will be based on the total number of points $X$ that you have earned as follows:

| $\mathbf{A}$ | $\mathbf{B}$ | $\mathbf{C}$ | D | F |
| :---: | :---: | :---: | :---: | :---: |
| $X \geq 582$ | $517 \leq X \leq 581$ | $452 \leq X \leq 517$ | $387 \leq X \leq 451$ | $X \leq 386$ |

When adding up your points, remember to drop your lowest applicable non-test scores and to add any extra credit points!
A spreadsheet will be posted on Blackboard after the first 2-3 weeks and will be updated weekly thereafter.
During these first 2-3 weeks, please pick a 4-digit code number of your choice and email (via Blackboard or MML) it to your instructor.

## 5. TIMING

In most three credit college courses the average student spends 9 to 12 hours per week to be successful in the course. In traditional courses, students spend 3 hours in a lecture and 6 or more hours working alone, usually doing homework assignments and studying. Take advantage of your instructor's office hours if you have questions about the course material, including online assignments and the guided notebook.

## 6. COMMUNICATIONS AND EMAIL

Announcements about the course, special sessions, necessary changes in schedules or procedures, and so forth, will be made on Blackboard and will be sent to your NDSU email address. You are expected to check your course blackboard webpage and email regularly.

The best way to communicate with your instructor is to speak to them in person during their office hours. Office hours are listed on the first page of this syllabus. Email is the second best option (when office visits are inconvenient for you.)

All emails are welcome but must be sent through Blackboard by clicking on the "Send Email" icon located on the left side or MML (MyMathLab). This way, your instructor knows from which sections these emails are coming and it makes responding to them more efficient. Emails sent from elsewhere will not get prompt attention, so please refrain from using this method to send emails.

## 7. STUDENTS WITH SPECIAL NEEDS

Any students with disabilities or other special needs, who need special accommodations in the course are invited to share these concerns or requests with the instructor and contact the Disability Services office (www.ndsu.edu/disabilityservices) as soon as possible. We are committed to accommodate such students. If you need special accommodations, see Student Support Services or Student Disability Services. We will work with them to supply you with the appropriate tools and services.

## 8. ADDITIONAL HELP

The Mathematics Department has resource staff available for any student seeking additional help, free of charge. This help is provided by graduate tutors who serve in the lower level of the West Dining Center (WDC) from 10 am to 6 pm on Mo, Tu, We, \& Th, and from 10am to 6 pm on Fridays. Check the department webpage (https://www.ndsu.edu/math/) for more information.
The Office of Orientation and Student Success (http://www.ndsu.edu/studentsuccess/) also has additional tutoring available for interested parties.

## 9. ACADEMIC HONESTY

Students are expected to maintain Academic Honesty in all their work. Collaboration is encouraged on many assignments such as homework, and tutors are available to assist you with this kind of work. However, your instructor may assign other work or quizzes that should be completed independently. Copying another student's work on any assignment, homework or quiz is considered cheating. The midterm and the final exams are considered individual work and must be completed without unauthorized assistance of any kind, including the help of other students, tutors, notes, or graphing calculators. All test materials and scratch paper are to be turned in with the test paper and attempting to bring test work out of the testing area and/or share that work with other students is considered cheating.
The academic community is operated under the basis of honesty, integrity, and fair play. NDSU Policy 335: Code of Academic Responsibility and Conduct applies to cases in which cheating, plagiarism, or other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records.
The full text of the Student Code of Conduct may be found at https://www.ndsu.edu/fileadmin/policy/335.pdf
Informational resources about academic honesty for students and instructional staff members can be found at
www.ndsu.edu/academichonesty

## 10. ASSIGNMENT/TEST EXTENSIONS

Make up work for assignments missed because of absence will not be allowed unless an arrangement with the instructor is made prior to the absence, or in cases of medical or family emergency, in which case documentation of the emergency will be required. Documentation must be provided within two business days of the assignment's due date, not to exceed Friday, May $8^{\text {th }}$. Bring appropriate documentation to your instructor during office hours.
If an ongoing illness or other circumstances fitting the catalog definition of an excused absence prevent you from bringing documentation for your absence within two business days, then each additional delay must also be documented and the documentation for the delay must be presented with the documentation for the original absence.

Field trips and official student travel require preparation and notification in advance of departure.
Note that problems with your personal computer or internet connection are not grounds for an extension or make-up work.
It is often the case that students wait until the last few hours of the due date/time of an assignment. If something comes up during those hours, you might not be able to finish your homework on time, and that will not grant you an extension. You need to get started early on your assignments since you have at least a whole week to complete each one.
Waiting until the last day to complete assignments and tasks adds more pressure on students and they end up trying to desperately finish them more than trying to learn and retain that information; this habit is not a proper way to get things accomplished in this course.

## 11. TENTATIVE SCHEDULE

| Math 103 Online - Spring 2020 Schedule/Calendar |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|  | Jan 13 | Jan 14 <br> * First Day - Syllabus <br> * Register for MML <br> * Online Diagnostic Test, Syllabus Quiz, Online HW1 \& Q1 open | Jan 15 <br> * Complete sec. 1.1 Notebook pages \& questions 1-13 from HW \#1 | Jan 16 | Jan 17 <br> * Complete sec. 1.3 <br> Notebook pages \& questions 14-26 from HW \#1 | Jan 18 <br> * Students who fail to register for MML by 11:59pm will automatically be dropped from the course! |
| Jan 19 <br> * Complete sec. 1.4 Notebook pages \& questions 27-42 from HW \#1 | Jan 20 <br> MLK Day Holiday <br> * HW \#1 Due @11:59pm | Jan 21 * Q 1 Due @11:59pm | Jan 22 <br> * Complete sec. 1.5 Notebook pages \& questions 1-9 from HW \#2 | Jan 23 <br> * Last day to drop classes with NO record! | Jan 24 <br> * Online Diagnostic Test Due @ 11:59pm <br> * Complete sec. 1.6 Notebook pages \& questions 10-26 from HW \#2 | Jan 25 |


| Math 103 Online - Spring 2020 Schedule/Calendar |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| Jan 26 <br> * Complete sec. 1.7 <br> Notebook pages \& questions 27-45 from HW \#2 | Jan 27 <br> * HW \#2 Due @11:59pm | Jan 28 <br> * Q 2 Due @11:59pm | Jan 29 <br> * Complete sec. 1.8 Notebook pages \& questions 1-17 from HW \#3 | Jan 30 | Jan 31 <br> * Complete sec. 1.9 Notebook pages \& questions 18-39 from HW \#3 | Feb 1 |
| Feb 2 <br> * Complete sec. 2.1 <br> Notebook pages \& questions 40-52 from HW \#3 | Feb 3 <br> * HW \#3 Due @11:59pm | Feb 4 <br> * Q 3 Due @11:59pm | Feb 5 <br> * Complete sec. 2.2 Notebook pages \& questions 1-16 from HW \#4 | Feb 6 | Feb 7 <br> * Complete sec. 2.3 Notebook pages \& questions 17-34 from HW \#4 | Feb 8 |
| Feb 9 <br> * Complete sec. 2.4 Notebook pages \& questions 35-50 from HW \#4 | Feb 10 <br> * HW \#4 Due @11:59pm | Feb 11 <br> * Q 4 Due @11:59pm <br> *Test 1 Review | Feb 12 <br> * Complete sec. 3.1 Notebook pages \& questions 1-21 from HW \#5 | Feb 13 | Feb 14 <br> * Complete sec. 3.2 Notebook pages \& questions 22-41 from HW \#5 | Feb 15 |
| Feb 16 <br> * Complete sec. 3.3 <br> Notebook pages \& questions 42-55 from HW \#5 | Feb 17 <br> Pres. Day Holiday <br> * HW \#5 Due @11:59pm | Feb 18 <br> * Q 5 Due @11:59pm | Feb 19 <br> * Complete sec. 3.4 Notebook pages \& questions 1-27 from HW \#6 | Feb 20 | Feb 21 <br> * Complete sec. 3.5 Notebook pages \& questions 28-48 from HW \#6 | Feb 22 |
| Feb 23 <br> * Complete sec. 3.6 Notebook pages \& questions 49-62 from HW \#6 | Feb 24 <br> * HW \#6 Due @11:59pm | Feb 25 * Q 6 Due @11:59pm | Feb 26 <br> Start reviewing for the midterm exam and completing the online practice midterm exam | Feb 27 | Feb 28 <br> Continue reviewing for the midterm exam and completing the online practice midterm exam | Feb 29 |
| Mar 1 <br> * Finish reviewing for the midterm exam completing the online practice midterm exam | Mar 2 <br> * Complete Practice Midterm Exam on MML with a score of $80 \%$ or better for 5 bonus points! | Mar 3 <br> * Midterm Exam <br> @ 3:00-5:00pm <br> Room TBD <br> Midterm exam <br> Covers sec. 1.1-3.6 <br> * NBP \#1 (1.1-3.6 <br> notebook pages) <br> Due @ 3:00pm | Mar 4 <br> * Complete sec. 4.1 Notebook pages \& questions 1-13 from HW \#7 | Mar 5 | Mar 6 <br> * Complete sec. 4.2 <br> Notebook pages \& questions 14-30 from HW \#7 | Mar 7 |
| Mar 8 <br> * Complete sec. 4.3 Notebook pages \& questions 31-49 from HW \#7 | Mar 9 <br> * HW \#7 Due @11:59pm | Mar 10 * Q 7 Due @11:59pm | Mar 11 <br> * Complete sec. 4.4 Notebook pages \& questions 1-21 from HW \#8 | Mar 12 | Mar 13 <br> * Complete sec. 4.5 Notebook pages \& questions 22-41 from HW \#8 | Mar 14 |
| Mar 15 | Mar 16 <br> Spring Break | Mar 17 <br> Spring Break | Mar 18 <br> Spring Break | Mar 19 <br> Spring Break | Mar 20 <br> Spring Break | Mar 21 |


| Math 103 Online - Spring 2020 Schedule/Calendar |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| Mar 22 <br> * Finish sec. 4.5 Notebook pages \& questions 22-41 from HW \#8 | Mar 23 <br> * HW \#8 Due @11:59pm | Mar 24 <br> * Q 8 Due @11:59pm | Mar 25 | Mar 26 <br> * Complete sec. 4.6 Notebook pages \& questions 1-18 from HW \#9 | Mar 27 | Mar 28 |
| Mar 29 <br> * Complete sec. 5.1 Notebook pages \& questions 19-58 from HW \#9 | Mar 30 <br> * HW \#9 Due @11:59pm | Mar 31 <br> * Q 9 Due @11:59pm | Apr 1 | Apr 2 <br> * Complete sec. 5.2 Notebook pages \& questions 1-52 from HW \#10 | Apr 3 | Apr 4 |
| Apr 5 <br> * Complete sec. 5.3 Notebook pages \& questions 53-84 from HW \#10 | Apr 6 <br> * HW \#10 Due @11:59pm | Apr 7 <br> * Q 10 Due @11:59pm | Apr 8 | Apr 9 <br> * Last day to drop Spring 2020 classes with "W" record! | Apr 10 <br> Spring Recess | Apr 11 |
| Apr 12 <br> * Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 10 points | Apr 13 <br> Spring Recess | Apr 14 <br> * Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 10 points | Apr 15 | Apr 16 <br> * Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 10 points | Apr 17 <br> Start sec. 5.4 Notebook pages \& questions 1-44 from HW \#11 | Apr 18 |
| Apr 19 <br> * Complete sec. 5.4 Notebook pages \& questions 1-44 from HW \#11 | Apr 20 | Apr 21 <br> Start sec. 5.5 Notebook pages \& questions 45-55 from HW \#11 | Apr 22 | Apr 23 <br> * Complete sec. 5.5 Notebook pages \& questions 45-55 from HW \#11 | Apr 24 | Apr 25 |
| Apr 26 | Apr 27 <br> * HW \#11 Due @11:59pm | Apr 28 <br> * Q 11 Due @11:59pm | Apr 29 <br> * Final Exam Review <br> * Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 15 points | Apr 30 <br> * Final Exam Review <br> *Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 15 points | May 1 <br> * Final Exam Review <br> * Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 15 points | May 2 |
| May 3 <br> * Final Exam Review <br> * Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 15 points | May 4 <br> * Final Exam Review | May 5 <br> * Final Exam Review <br> *Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 15 points | May 6 <br> * Final Exam Review | May 7 <br> * Final Exam Review <br> * Work on Extra Credit (Sec. 11.1-11.3 HW) for up to 15 points | May 8 <br> * Extra Credit (Chap11 HW) Due @11:59pm | May 9 <br> * Final Exam Review |
| May 10 <br> * Final Exam Review | May 11 <br> Final Exam @ 3:155:15pm worth 150 points - Room TBA <br> * NBP \#2 (4.1-5.5 notebook pages) Due @ 3:15 pm | Your final exa on Blackboar Work hard, d you need it a Good luck! | am and cours rd by Friday m on't fall behin nd you will do | grades will orning (May d, complete a well in this c | be posted in th $15^{\text {th }}$ ). <br> all your tasks, course. | spreadsheet <br> k help when |

## 12. CALCULATOR POLICY

## Graphing calculators are NOT allowed on tests and should not be used during assignments!!!

A non-graphing calculator with logarithmic and exponential capabilities is required. The TI30 XIIS (solar) or TI30 XIIB (battery) with a two-line display (pictured below) is preferred.


Calculators with symbolic notation or natural display capabilities, such as the TI-30XS Multiview, the TI-34 Multiview, the TI-36XPro, and the Casio 115ES Plus or 300ES Plus Natural Textbook Display series, are NOT allowed on tests and on the Final Exam.

Following are current examples of calculators NOT allowed on tests:


Casio uses the description Natural Display.


HP uses the term SmartCalc.


Sharp uses the word WriteView.


TI sometimes uses the term MultiView.

