

Department	Computer Science and Engineering Technology
Instructor	Professor James Noon
NCC Email	jnoon@ccsnh.edu
Telephone Number	NA
Office Hours	Before or after class
Office Location	NA
Class Days/ Meeting Time	Mon. & Wed.: 6:00 to 8:30 PM
Class Location	Lecture Rm. 208 on Mon./ Lab Rm. 207 on Wed.

Ratio nale :

Electronics I was a study of the physical behavior of electronic devices. Emphasis was on analysis and application of electronic circuits utilizing semiconductor diodes, bipolar transistors, and field effect transistors. Electronics II covers more advanced topics including applications. Operational amplifiers are studied with many real world applications such as A/D and D/A converters, active filters including the study of frequency response of high-pass, low-pass and band-pass types of filters to reinforce the theory. In addition to laboratory experiments, the student needs to be able to simulate the behavior of these types of circuits.

Course Description:

This course is a continuation of Electronics I but covering more advanced electronics topics with a variety of applications. Emphasis is on analysis and application of operational amplifiers. The non-ideal characteristics of op-amps and other electronic devices will be discussed with applications emphasizing offset, gain and linearity. Other topics may include but are not limited to; differential amplifiers, frequency response, A/D and D/A circuits, active filters, troubleshooting of lab test circuits and analysis using computer electronic analysis simulation.

Course Competencies – Key Points of Learning (POL):

At the conclusion of this course, students will be able to:

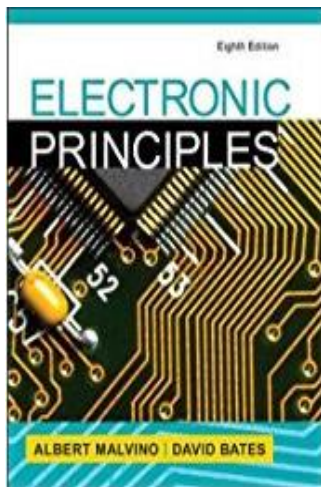
1. Understand logarithms, decibels, Bode Plots and Miller Effect Capacitance
2. Be able to calculate Frequency Response for BJT and FET Amplifiers as well as Op-Amps
3. Show how the single-ended output voltage of an Op-Amp depends on its open-loop gain and differential input voltage.

4. Work with differential, instrumentation and bridge amplifiers and calculate the effects for AC performance, bandwidth, slew rate and noise.

Essential Questions:

- How does electronics serve to improve our understanding of today's technological advances?
- How does knowing the principles of electronics affect your daily life?
- Describe something in today's world that has become more compelling because of an understanding of electronics principles.
- Is it possible to describe how complex circuitry function with a small number of electronics principles? If so, how?

Required Textbook(s):



Malvino / Bates, Electronic Principles, 9th Edition, 2021

ISBN-13: 978-0-07-337388-1

Supplemental Materials:

- USB flash drive will be required for saving and submitting student work.
- Loaned by EET Dept. - Most lab materials are provided by NCC; however tool & proto-board quality is not guaranteed.
- Students are encouraged to acquire some lab materials for their exclusive use during lab. For ELET241N, these materials are: (1) small/medium gauge wire strippers. (2) Prototyping board (breadboard). These items will be discussed in lab and are available from a variety of sources.
- Calculator: The TI-84 Graphing Calculator or better is recommended but any scientific calculator with the following keys: () (parentheses), ^ or yx (raise to a power), and a square root key will also suffice. **YOUR CELLPHONE CANNOT BE USED AS A**



CALCULATOR IN THIS CLASS.

Course Expectations:

Canvas

All materials presented in class along with lab assignments can be found on Canvas. All assignments must be uploaded to canvas to be graded. Do not email your submissions or provide printed copies.

Home work / Lab Assignments:

Assigned homework will be due at the beginning of the next class (as stated on Canvas).

Acceptable formats include .pdf or .jpg or .png.

Lab reports must be uploaded in Microsoft WORD format. Note that scanned figures (jpg, png or pdf format) can be integrated into a WORD document if needed.

No late submissions will be accepted except in extraordinary circumstances.

Notes Missed:

See a classmate so that you can copy their notes.

Tests:

See Department policy section.

Grading:

There will be assignments, chapter exams and a final. They will tentatively count toward the final grade as follows:

Quizzes and HW	20%
Exams:	30%
Lab Assignments	35%
Class/Lab Professionalism (See Department Policies)	5%
Final Exam	10%



Grades will be assigned according to the department scale:

Grading System:

A	93 - 100	B	83 – 86.9	C	73 – 76.9	D	63 – 66.9
A-	90 – 92.9	B-	80 – 82.9	C-	70 – 72.9	D-	60 – 62.9
B+	87 – 89.9	C+	77 – 79.9	D+	67 – 69.9	F	0 – 59.9

Available Support Services

Tutoring, The Writing Center, Available Academic Services:

The Academic Success Center | in the library offers academic support services which are open to all NCC students looking for additional help with their college assignments. Math tutoring and writing assistance are available. The Writing Center is for any student seeking assistance with the writing process for any class, not just College Composition. For more information and to view the tutoring schedules view here:

<http://www.nashua.cc.edu/student-services/academic-success-center>

Classroom Accommodations:

Students who have a documented disability (physical, learning, or mental health) and require reasonable classroom accommodations must meet with the Disabilities Support Coordinator to set up a NCC Reasonable Accommodation Plan (RAP). If you had an IEP or 504 in high school, you may qualify for a plan. If you would like more information or if you are not sure if you qualify for a plan, please contact Jodi Quinn, Disabilities Support Coordinator, located in The Academic Success Center (Room 100), 603-578-8900 ext. 1451. View additional information and the application here: <http://www.nashua.cc.edu/student-services/academic-success-center/disability-services>

In order to receive classroom accommodations, it is the student's responsibility to meet with his/her instructor privately and provide a hard copy of the signed Reasonable Accommodation Plan (RAP) each term the student wants to utilize classroom accommodations even if the student has had that instructor in a previous term.



Audio Record Classroom Lecture:

Please note that as a student in this class, you may have a classmate who by permission can audio record class lectures for his/her learning purposes. **Only students with prior written permission** from the instructor or the Disabilities Support Coordinator may audio record class lectures - *for educational purposes only*. Students who audio record class lectures are prohibited from selling, transcribing, or distributing the recordings in **any manner** and are asked to delete the recordings when it is no longer essential for their learning purposes.

Title IX Statement:

Classroom instructors at Nashua Community College are encouraged to create and maintain a safe learning environment in which students feel able to share opinions and related life experiences in classroom discussions, in written work, and in meetings with professors. To the greatest extent possible, this information will be kept private. However, staff and faculty have a legal obligation to report information concerning sexual misconduct, violence, and exploitation of individuals per federal statute and in compliance with established policies and procedures at Nashua Community College. If you have been subjected to sexual misconduct, violence, or exploitation, we encourage you to contact your NCC Title IX representative Lizbeth Gonzalez, 603-578-8900 x1528_ or lgonzalez@ccsnh.edu for support and assistance. You may also contact Bridges, the local crisis center, for free and confidential services at their 24hr support line 603-883-3044. You do not need to be in crisis to call.

Additional information including resources can be found at:

New Hampshire Coalition Against Domestic and Sexual Violence:

https://www.nhcadv.org/uploads/1/0/7/5/107511883/nhcadv_attachment_map.pdf

uSafe US <https://usafe.us.org/app3/webviewer.html>

Bridges <https://www.bridgesnh.org/>

Additional Student Support Services:

Information on additional support services for NCC students can be found at

<http://nashua.c.c.edu/student-services/where-to-find-assistance-at-ncc>



Department Policies

Professionalism includes the following:

Students are expected to adhere to the "NCC Student Code of Conduct" as described in the "NCC Student Handbook" (<https://nashua.cc.edu/images/PDF/handbook/2019-2020-NCC-Student-Handbook.pdf>).

Students are also expected to contribute to a cooperative and productive learning environment. To meet this objective, students are expected to show up for class on time, be attentive, not disrupt the instructor or other students, work quietly and use time in the lab to complete assigned work, stay in lab until assigned work is complete, demonstrate respect for other people, demonstrate initiative and self-motivation, and take responsibility for academic success.

Attendance:

Attendance is vital to the student's success in this course. You are expected to attend all classes and laboratory sessions, and to be on time. It is extremely difficult to make up for lost hours of instruction time. You are responsible for all material and information given in class whether present or not.

Notes Missed:

See a classmate so that you can copy their notes.

Lab / Homework Assignments:

Assigned homework will be due as specified in the write-up of the assignment. Your homework will be checked for effort and completeness.

All work during the scheduled lab time must be submitted before the student leaves the lab, even if only partially completed. The student will automatically receive a "0" for that lab if they don't. This applies even if additional files or updates to the lab are to be uploaded later. For those labs where students work with a partner (specifically in engineering courses), the final lab writeup describing the results needs to be individually written and submitted.

Exams:

The exams and final project presentations (if applicable) must be given on the date announced by the instructor. Only in an extreme case will a make-up be permitted. The student also must provide documentation for the absence, and it is the student's responsibility



to notify the instructor of the absence prior to the exam. In addition, the instructor may choose to move the seating assignments for exams / quizzes.

Cell Phones/ Laptops:

DO NOT TEXT OR TALK ON THE PHONE DURING CLASS. It is rude and will not be tolerated. If something important should arise and you need to use your cell phone for personal matters, you are expected to excuse yourself from the room before completing the call or text. Please let the instructor know before class starts that you may be expecting an important call, etc. If you need to leave your cell phone on, please use the vibrate mode. Penalties will be applied as designated by the instructor if you are caught using it or if your phone rings. Laptop computers are also not to be used during class without first getting instructor permission.

College Policies

AF Policy:

If a student misses more than the number of hours the course meets during a two-week period (e.g. six hours for a three credit course), the faculty may withdraw a student from the course with an "AF" grade. Please note that absences, tardies, and leaving class early all count towards "missed class time."

Students should also understand an AF grade can be assigned by an instructor or an administrator at any time for reasons other than poor grade performance or failure to meet attendance requirements e.g., violation of the Student Code of Conduct, disruptive behavior, etc.

Please be advised that if the behavior of any student (or students) continually disrupts the learning of his/her classmates, the following steps will be taken 1) verbal warning; 2) meeting with instructor and department chair; 3) referral to Vice President of Academic Affairs and/or removal from the course with AF grade.

An "AF" grade is calculated in the GPA as an "F". Students should refer to the student handbook for additional information about the AF policy.

Canvas:



All instructors at NCC will be using Canvas. Canvas is the online learning management system used by instructors and learners at Nashua Community College. Instructors may post syllabi, course related documents and grades in Canvas. Students may be required to submit assignments and/or take assessments through Canvas and/or participate in discussion boards.

To directly link to Canvas-on-Demand tutorials, please visit the following link:

https://community.canvaslms.com/community/answers/guides/video-guide#jive_content_id_Students

If you have forgotten your Easy Login Password information, please visit the following link: <https://password.ccsnh.edu/accounts/Reset>

If class is ever cancelled because of instructor illness or inclement weather, students will need to check Canvas for their assignments.

College Email System:

Nashua Community College has established a College electronic mail ("email") system as a means of the College sending official information to enrolled students, and for students to send communication to their instructors and College personnel. All students registered at NCC will be assigned a College email account/address to be used as the only email address for all email communication: 1) sent to the students from their instructors and from all College personnel; and, 2) sent by the students to their instructors and to all College personnel.

In addition:

- Students should check their College email account regularly to ensure they are staying current with all official communications. Official communication includes, but is not limited to, policy announcements, registration and billing information, schedule changes, emergency notifications and other critical and time sensitive information.
- Students should also check their college email account to be sure that they are current with all email communication from their faculty.
- The student email account/address should be the only e-mail address students use to send email to faculty and College personnel so that student email is recognized and opened.

- This service is provided exclusively to the students of NCC. Accounts are for individual use only and are not transferable or to be used by any other individual.
- Students using their College email account do so under the policies set forth in the Student Handbook under "Student Computer Conduct Code".

Sensitive Materials Policy:

During the semester, in order to cover certain academic topics, there may be occasions to view or discuss material which may not meet the student's own personal definition of appropriateness. At such times, every student has the right to decide not to participate. Every effort will be made by the instructor to notify students in advance of when such sensitive material will be used so that students can make alternative arrangements. Faculty will guide students in the identification of alternative learning opportunities consistent with relevant course objectives so that students opting out of scheduled "sensitive" learning experiences will not be penalized academically in any way. Please note the opportunity to leave the classroom discreetly is always available to each student when such sensitive material is being discussed. The student then has the responsibility before the next class meeting to inform the instructor as to the reason for leaving.

Plagiarism Policy:

Plagiarism is a serious violation of a student's academic integrity and the trust between a student and his or her teachers. Plagiarism is the act of a person presenting another person's work as if it were his or her own original work. Such acts of plagiarism include, but are not limited to:

1. A student submitting as his or her own work an entire essay or other assignment written by another person.
2. A student taking word for word a section or sections of another person's work without proper acknowledgment of the source and that the material is quoted.
3. A student using statistics or other such facts or insights as if these were the result of the student's efforts and thus lacking proper acknowledgment of the original source.
4. The paraphrasing of another person's unique work with no acknowledgment of the original source.
5. Copying another student's work on a quiz or test.

When a student is found to have plagiarized an academic assignment, it will be up to each instructor to determine the penalty. Depending on the severity of the incident, this could range from a warning to a loss of credit for the assignment. In all cases of plagiarism, the student's advisor will be notified, and the incident will be documented. If any further incidents of plagiarism are reported to the student's advisor, additional sanctions will be imposed. These may include notification of the Vice President of Academic Affairs; loss of credit for the course; suspension or dismissal from a department program; academic probation; and/or expulsion from the College.

Credit Hour Guidelines


1. A credit hour shall be the equivalent of one (1) hour of classroom or direct faculty instruction and a minimum of two (2) hours of out-of-class student work each week for 15 or 16 weeks.
2. A credit hour shall be allocated based on the following:

Category	Contact Hours per Week	Contact Hours per Sem. (based on minimum 15-week semester)
Class	1	15
Laboratory	2 or 3	30-45
Clinical	3 to 5	45-75
Practicum, Fieldwork	3	45
Internship	3 to 6	45-90
Co-op	Variable by Dept.	Variable by Dept.

Course Calendar

Posted on the Canvas Calendar

The schedule is subject to change. In the event of class cancellation due to inclement weather or instructor illness, students are directed to the course Canvas site for an alternate assignment for that day.

 Nashua Community College	ELET250N-1: Microcontrollers Fall 2021
Department	Engineering and Computing Sciences Department
Instructor	Professor Susan Hughes
NCC Email	shughes@ccsnh.edu
Telephone Number	603-578-8900 x1582
Office Hours	See office hours posted on Canvas or contact instructor for appointment
Office Location	Room 312
Class Days/ Meeting Time	Lecture Tuesday 6:00pm – 8:50pm Lab Thursday 1LA: 3:00pm – 5:50pm Lab Thursday 1LB: 6:00pm – 8:50pm
Class Location	Lecture: Room 208 Lab: Room 207

Rationale:

Introduction to Programming using C++ is the first of two programming courses in the EET Program, the other is ELET250N Microcontrollers. This first course provides the students with all of the basic programming techniques to be successful in the second course and both also prepares them if they choose to eventually pursue a Bachelor's Degree.

Course Description:

Today's computers fall into two categories. The first uses high performance microprocessors such as the Intel Pentium Class of Processors. The second category focuses on issues of space, cost, low power and fast development in products such as wireless phones, automobiles, security systems, and appliances. These lower performance processors are called Microcontrollers and are merely a lower power version of the larger microprocessors. The principles of operation are the same. This

course focuses on this second category and the Hardware and Software design of these Microcontrollers.

Students will learn how to design embedded systems via both lecture and laboratory instruction. Laboratory projects will include designing, building and testing of these systems and evaluating the HW / SW trade offs. Note that ELET250N is a required course for all Computer Engineering and Electrical Engineering Majors.

Course Competencies:

At the conclusion of this course, students will be able to:

- Analyze the Hardware and Software Architectures of the Intel Family of Embedded Microprocessors.
- Understand and interpret coding schemes, such as Assembly Language Fundamentals, including looping, calls, and procedures and the differences between microcontrollers and microprocessors
- Interface the on-board ROM, RAM, registers, timers, counters, serial port, and general purpose I/O to digital, analog, and time-varying input and output signals
- Apply microcontroller principles to real world situations. This includes develop real-time assembly language programs using linear, polling, handshaking, and interrupt techniques.

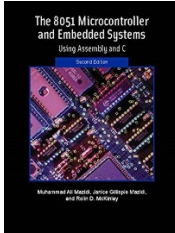
Essential Questions:

- How do I program microcontrollers?
- How do I connect to and use other devices such as LCD, LEDs, Buttons, and Switches?
- How to put all of this together and make something?

Required Textbook(s):



“the 8051 microcontroller, a system’s approach” By Mazidi, Mazidi and McKinlay. ISBN 13: 978-0-13-508044-3, 2013 Pearson (currently **OUT OF PRINT**). However, you can use it if you can find it but the page numbers will be different than the one below).



OR the following – **which is preferred!**

“The 8051 Microcontroller and Embedded Systems Using Assembly and C”, Mazidi, Mazidi, and McKinlay” Second Edition ISBN: 0-130119402-X, 2006 Pearson

Click on this link to access the NCC bookstore’s website
<https://www.bkstr.com/nashua bookstore/home>

Technology:

In order to be successful at NCC, all students need a laptop or personal computer (PC) as well as reliable internet access. It is recommended that students purchase a laptop for in-class use. Specifications can be found by clicking on the link below. If you do not have internet access or the right kind of computer equipment (e.g., laptop, webcam, etc.) you may be eligible for the college’s technology lending program, which is a first come first served program. Click on this link for more information <https://www.nashua.edu/technology>

Laptops that meet NCC technology specifications are available for purchase at the NCC bookstore. Financial aid may be used for purchases made at the bookstore. Contact the bookstore for more information
<https://www.bkstr.com/nashua bookstore/home>

Supplemental Materials:

- USB flash drive will be required for saving and submitting student work.
- Calculator: The TI-83 Graphing Calculator or better is recommended but any scientific calculator with the following keys: () (parentheses), \wedge or y^x (raise to a power), and a square root key will also suffice. **YOUR CELLPHONE CANNOT BE USED AS A CALCULATOR IN THIS CLASS.**
- **Required Hardware and Software;**

- USB flash drive will be required for saving student work.
- Keil 8051 Assembler/ Debugger (or equivalent) – provided free
- Loaned by EET Dept. - MDE-8051 Trainer (USB) and related peripheral hardware will be signed out to the student. These must not be removed from the lab.

Grading:

Letter Grade	Numeric Score	Letter Grade	Numeric Score	Letter Grade	Numeric Score
A	93.0% & up	B-	80.0 - 82.9%	D+	67.0 - 69.9%
A-	90.0 - 92.9%	C+	77.0 - 79.9%	D	63.0 - 66.9%
B+	87.0 - 89.9%	C	73.0 - 76.9%	D-	60.0 - 62.9%
B	83.0 - 86.9%	C-	70.0 - 72.9%	F	< 59.9%

Method of Evaluation:

There will be assignments, chapter exams and a final. They will count toward the final grade as follows:

Exams	45%
Final Exam	10%
Class/Lab Professionalism (See below):	5%
HW, Lab Assignments/ Programs and Performance	40%

Zoom Policy:

We need to be able to see and hear you during Zoom classes. Therefore, when participating in a zoom class/lab, please leave your video turned on.

Diversity, Equity, and Inclusion Statement:

We are all responsible for creating a diverse, equitable, inclusive, and just environment. Thus, we must treat individuals with respect by valuing all types of diversity. This is fundamental in creating a welcoming and inclusive learning environment. Diversity may include multiple ways of identifying ourselves, including, but not limited to race, color, national origin, language, sex, disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. These diverse identities, among many others not mentioned, influence the perspectives of our students, faculty, and staff bring to the NCC community. Through use of various approaches that enhance intellectually rich, respectful, safe, and inclusive learning environments, this dynamic process will demonstrate our sustained commitment at NCC. It is our core belief that diversity,

e quality, and inclusion promote excellence, collaboration, and innovation while also seeking justice.

Available Support Services:

Tutoring and Writing Center: The Tutoring and Writing Center, located in the library, offers free academic support services to all NCC students. Meet in-person or via Zoom with experts who can tutor you in math or accounting or help you with writing for any course. Tutoring is drop-in or by appointment. View the current tutoring schedule at <https://library.nashua.cc.edu/home/tutoring>

Online chat tutoring is also available 24/7 with Smarthinking. Find a link on the left navigation menu inside Canvas courses.

Classroom Accommodations: Students who have a documented disability (physical, learning, or mental health) and require reasonable classroom accommodations must meet with the Disabilities Support Coordinator to set up an NCC Reasonable Accommodation Plan (RAP). If you had an IEP or 504 in high school, you may qualify for a plan. If you would like more information or if you are not sure if you qualify for a plan, please contact Jodi Quinn, Disabilities Support Coordinator, located in the library, 603-578-8900 ext. 1451. View additional information and the application here: <https://nashua.cc.edu/student-services/disability-accessibility-information>. In order to receive classroom accommodations, it is the student's responsibility to meet with his/her instructor privately and provide a hard copy of the signed Reasonable Accommodation Plan (RAP) each term the student wants to utilize classroom accommodations even if the student has had that instructor in a previous term.

Audio Record Classroom Lecture: Please note that as a student in this class, you may have a classmate who by permission can audio record class lectures for his/her learning purposes. **Only students with prior written permission** from the instructor or the Disabilities Support Coordinator may audio record class lectures - *for educational purposes only*. Students who audio record class lectures are prohibited from selling, transcribing, or distributing the recordings in *any manner* and are asked to delete the recordings when it is no longer essential for their learning purposes.

Instructors may record their own class lectures, activities, and discussions using electronic video, still photo, or audio recording for educational purposes, including academic research, professional development, and recording of course content for access through online learning and other formats. Every student present will be informed by the instructor of any recording at the beginning of class.

Course Expectations:

Attendance:

Attendance is absolutely vital to the student's success in this course. You are expected to attend all classes and laboratory sections, and to be on time. It is extremely difficult to make up for lost hours of instruction time, and difficult to reserve the laboratory classroom. You are responsible for all material and information given in class whether present or not.

Exams must be taken on the date announced by the instructor. Only in an extreme case will any make-up exam be permitted. The student also must provide documentation for the absence, and it is the student's responsibility to notify the instructor of the absence prior to the exam.

Notes Missed:

See a classmate so that you can copy their notes.

Lab Assignments:

Lab work must be completed and the lab report is typically due no more than 1 week after the lab and will be uploaded.

Cell Phones/ Laptops:

“DO NOT USE YOUR CELLPHONE FOR ANYTHING DURING CLASS UNLESS PREVIOUSLY AGREED TO BY THE PROFESSOR. It is rude and will not be tolerated. If something important should arise and you need to use your cell phone for personal matters you are expected to excuse yourself from the room before completing the call or text. *If you need to leave your cell phone on, please notify the instructor at the beginning of class and only use the vibrate mode.* Laptop computers are also not to be used during class without first getting instructor permission. **AGAIN, YOUR CELLPHONE CANNOT BE USED AS A CALCULATOR IN THIS CLASS.**

Professionalism includes the following:

Students are expected to adhere to the “NCC Student Code of Conduct”. Students are also expected to contribute to a cooperative and productive learning environment. To meet this objective, students are expected to show up for class on time, be attentive, not disrupt the instructor or other students, work quietly and use time in the lab time to complete assigned work, stay in lab until assigned work is complete, demonstrate respect for other people, demonstrate initiative and self-

motivation, and take responsibility for academic success.

Department Policies

Professionalism includes the following:

Students are expected to adhere to the “NCC Student Code of Conduct” and the “NCC Student Handbook” (<https://www.nashuacc.edu/images/2017-images/student-handbook/2017-2018-NCC-Student-Handbook.pdf>). Students are also expected to contribute to a cooperative and productive learning environment. To meet this objective, students are expected to show up for class on time, be attentive, not disrupt the instructor or other students, work quietly and use time in the lab time to complete assigned work, stay in lab until assigned work is complete, demonstrate respect for other people, demonstrate initiative and self-motivation, and take responsibility for academic success.

Homework / Lab Assignments:

Assigned homework will be due as specified in the write-up of the assignment. Your homework will be checked for effort and completeness.

Attendance:

Attendance is vital to the student’s success in this course. You are expected to attend all classes and laboratory sessions, and to be on time. It is extremely difficult to make up for lost hours of instruction time. You are responsible for all material and information given in class whether present or not.

The exams and final project presentations (if applicable) must be given on the date announced by the instructor. Only in an extreme case will a make-up be permitted. The student also must provide documentation for the absence, and it is the student’s responsibility to notify the instructor of the absence prior to the exam.

Notes Missed:

See a classmate so that you can copy their notes.

Cell Phones/ Laptops:

DO NOT TEXT OR TALK ON THE PHONE DURING CLASS. It is rude and will not be tolerated. If something important should arise and you need to use your cell phone for personal matters you are expected to excuse yourself from the room before completing the call or text. Please let the instructor know before class starts that you may be expecting an important call, etc. If you need to leave your cell phone on,

please use the vibrate mode. Penalties will be applied as designated by the instructor if you are caught using it or if your phone rings. Laptop computers are also not to be used during class without first getting instructor permission.

College Policies

Non-Discrimination Policy: The NCC Equity Committee is designated to coordinate compliance with the Non-Discrimination Policy and handles all concerns of discrimination that occur on campus that are not covered under Title IX. View more information here [Non-Discrimination Policy and Grievance Procedure](#)

Title IX Policy: Classroom instructors at Nashua Community College are encouraged to create and maintain a safe learning environment in which students feel able to share opinions and related life experiences in classroom discussions, in written work, and in meetings with professors. To the greatest extent possible, this information will be kept private. However, staff and faculty have a legal obligation to report information concerning sexual misconduct, violence and exploitation of individuals per federal statute and in compliance with established policies and procedures at Nashua Community College. If you have been subjected to sexual misconduct, violence or exploitation, we encourage you to contact your Title IX representative Lizbeth Gonzalez, 603-578-8900 x1528 or lgonzalez@ccsnh.edu for support and assistance. View more information here [Title IX Policy and Grievance Procedure](#)

Attendance: Regular attendance and active class participation are essential for academic success. If a student must be absent from class, the student should contact his/her professor and follow the professor's make up policy listed in the syllabus under course expectations.

Rarely, a student may experience a serious situation that prevents that student from attending class for an extended period. This could be for reasons such as illness/hospitalization, loss of child care, or lack of transportation. In these situations, the student should notify his/her professor as soon as possible and contact the advising center for assistance NCCAcademicAdvisingCenter@ccsnh.edu.

AF Policy: If a student misses more than the number of hours the course meets during a two-week period (e.g. six hours for a three credit course), the faculty may withdraw a student from the course with an "AF" grade. Please note that absences, tardies, and leaving class early all count towards "missed class time." In an online or hybrid course, the faculty may withdraw a student for not participating in online activities and/or submitting assignments for two weeks. Logging into Canvas does not count as participation.

Students should also understand an AF grade can be assigned by an instructor or an administrator at any time for reasons other than poor grade performance or failure


to meet attendance requirements e.g., violation of the Student Code of Conduct, disruptive behavior, etc.

Please be advised that if the behavior of any student (or students) continually disrupts the learning of his/her classmates, the following steps will be taken 1) verbal warning; 2) meeting with instructor and department chair; 3) referral to Vice President of Academic Affairs and/or removal from the course with AF grade.

An "AF" grade is calculated in the GPA as an "F". Students should refer to the student handbook for additional information about the AF policy.

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24/7 Canvas Support: To access support through email, phone or chat

click on the  icon. Students can also find guides, videos, and a Canvas community by clicking on the *CCSNH Resources* icon on the toolbar at the left of the Canvas screen then choosing Canvas Resources.

If you have forgotten your Easy Login Password information, please visit the following link: <http://password.ccsnh.edu/accounts/Reset>

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In addition:

- Students should check their College email account regularly to ensure they are staying current with all official communications. Official communication includes, but is not limited to, policy announcements, registration and billing information, schedule changes, emergency notifications and other critical and time sensitive information.
- Students should also check their college email account to be sure that they are current with all email communication from their faculty.

- The student email account/address should be the only e-mail address students use to send email to faculty and College personnel so that student email is recognized and opened.
- This service is provided exclusively to the students of NCC. Accounts are for individual use only, and are not transferable or to be used by any other individual.
- Students using their College email account do so under the policies set forth in the Student Handbook under "Student Computer Conduct Code".

Sensitive Materials Policy: During the semester, in order to cover certain academic topics, there may be occasions to view or discuss material which may not meet the student's own personal definition of appropriateness. At such times, every student has the right to decide not to participate. Every effort will be made by the instructor to notify students in advance of when such sensitive material will be used so that students can make alternative arrangements. Faculty will guide students in the identification of alternative learning opportunities consistent with relevant course objectives so that students opting out of scheduled "sensitive" learning experiences will not be penalized academically in any way. Please note the opportunity to leave the classroom discretely is always available to each student when such sensitive material is being discussed. The student then has the responsibility before the next class meeting to inform the instructor as to the reason for leaving.

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1. A student submitting as his or her own work an entire essay or other assignment written by another person.
2. A student submitting as his or her own creation the artwork (including but not limited to a painting, drawing, photograph, object, digital representation) of another person.
3. A student taking word for word a section or sections of another person's work without proper acknowledgment of the source and quotation.
4. A student using statistics or other such facts or insights as if these were the result of the student's efforts and thus lacking proper acknowledgment of the original source.
5. The paraphrasing of another person's unique work with no acknowledgment of the original source.
6. Copying another student's work on a quiz or test.

Some instructors may consider self-plagiarism to be a form of plagiarism. Self-plagiarism includes **submitting the same paper** in response to **two different** assignments. Please consult with your instructor and carefully review instructor expectations posted on your syllabus if you have any questions.

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Credit Hour Guidelines

1. A credit hour shall be the equivalent of one (1) hour of classroom or direct faculty instruction and a minimum of two (2) hours of out-of-class student work each week for 15 or 16 weeks.
2. A credit hour shall be allocated based on the following:

Category	Contact Hours per Week	Contact Hours per Sem. (based on minimum 15 week semester)
Class	1	15
Laboratory	2 or 3	30-45
Clinical	3 to 5	45-75
Practicum, Fieldwork	3	45
Internship	3 to 6	45-90
Co-op	Variable by Dept.	Variable by Dept.

Course Calendar

The course calendar will be in a separate document which will be posted in Canvas.

	HUMA230N Section A: Ethics in the Workplace Fall 2021
Department	Arts, Humanities, Communications & Design
Instructor	Jennifer Tripp, MAT
NCC Email	jtripp@ccsnh.edu
Telephone Number	603-578-6870
Office Hours	Tuesdays and Thursdays 12:30-2:30 pm
Office Location	Gregg Hall Room 279B
Class Days/Meeting Time	Mondays 1-2:50 pm & Wednesdays 1-1:50 pm
Class Location	Gregg Hall 180

Rationale:

In today's world, the ability to make ethical decisions is more important than ever. The cases we discuss in class will help students to understand how businesses find a balance between making a profit and remaining ethical. College graduates, who often go on to work in management roles, have a responsibility to make the workplace a more ethical environment, and this class will guide them towards finding their own ethical compasses.

Course Description:

An introductory study of classical and contemporary ethical philosophies and how these philosophies apply to current business practices. The course stresses analytical and problem-solving skills to comprehend the ethical dimensions of business relationships: employer to employee; managers to owners; manufacturers to consumers; and corporations to the environment. **Pre-requisite ENGL101.**

Course Competencies:

Students will be able to:

1. Understand an overview of the major philosophical bases of business ethics
2. Appreciate and understand the role of social responsibility expected of the American corporation by the general public
3. To understand the potential conflict in the American business between profits and ethical responsibility
4. To improve analytical skills through critical reading of case studies

Essential Questions:

1. Where do we get our ethical standards, and how do they determine how we will behave in the workplace?
2. How do businesses find a balance between making a profit and remaining ethical?

3. What determines whether a decision made in the workplace is ethical or unethical?
4. How can employees, especially those in management roles, contribute to making the workplace a more ethical environment?
5. What is the difference between legal and ethical, and why do we need ethics when there are laws protecting businesses and consumers already?

Required Materials:

Required Textbook: The textbook for this class is free and available on Canvas. You can find it inside the “Start Here” Module. It’s also right here:

<https://openstax.org/books/business-ethics/pages/1-introduction>

Business Ethics by Stephen M. Byars and Kurt Stanberry. Published by OpenStax on Sep 24, 2018 in Houston, Texas.

If you prefer a hard copy, you can buy one at the campus bookstore or online via Amazon (there’s a link to purchase a hard copy through the link above).

Click on this link to access the NCC bookstore’s website

<https://www.bkstr.com/nashuaccstore/home>

Supplemental Materials:

- Notebook & Pen
- Computer with internet access for Canvas at-home tests
- Access to Microsoft PowerPoint (you can download a free version of Microsoft Office—including Word, Excel and PowerPoint—to your own computer at this site: <https://www.ccsnh.edu/wp-content/uploads/2019/12/Free-Office-365-for-Students.pdf>)

Technology

In order to be successful at NCC, all students need a laptop or personal computer (PC) as well as reliable internet access. It is recommended that students purchase a laptop for in-class use. Specifications can be found by clicking on the link below. If you do not have Internet access or the right kind of computer equipment (e.g., laptop, webcam, etc.) you may be eligible for the college’s technology lending program, which is a first come first served program. Click on this link for more information

<https://www.nashuacc.edu/technology>

Laptops that meet NCC technology specifications are available for purchase at the NCC bookstore. Financial aid may be used for purchases made at the bookstore. Contact the bookstore for more information <https://www.bkstr.com/nashuaccstore/home>

Course Expectations:

Assignments

You will be completing weekly tests, writing one essay, presenting two oral PowerPoint presentations (one with a partner or two) and taking a final exam. Reading and writing assignments will focus on the textbook, case studies, news articles, YouTube clips, etc.

- **Reading/Tests:** Each week you will be required to read a chapter in the textbook, then take a corresponding chapter test on Canvas. These tests are not timed, and you have all week to do them. These are not quick true/false or multiple choice style tests. Many of the answers are lengthy, so look at the test early and give yourself enough time to do it. I recommend typing up your answers on Microsoft Word first, and then cutting and pasting each answer into the Canvas test. This way, if you lose your internet connection or Canvas stops working in the middle of the test, you won't lose all the work you've done.
- **Projects:** In addition to tests, there are two PowerPoints and one essay due. All written materials must follow proper typed MLA format (except tests). MLA Guide: <https://owl.english.purdue.edu/owl/resource/747/01/>
- **PowerPoints:** You will create two PowerPoint (or Google Slides) presentations this semester. One will be with a partner or two. The other will be on your own.
- **Discussion:** Each week, our in-class time will be dominated by discussion. We will view and discuss ethical dilemmas from YouTube clips, newspaper articles, and your textbook reading. You are required to participate in these class discussions and will earn a weekly participation grade.
- **Late work:** All weekly tests must be submitted on time to earn credit. If you submit one of the major projects late, you will lose one full letter grade for each week it is late. After three weeks, I will not accept the project. **Only the major projects may be turned in late. Tests cannot be turned in late.**

Attendance:

Students are expected to attend all classes and are responsible for completing all class work. If a student is absent for more than four classes, the instructor may withdraw the student from class with an AF grade. An AF is equivalent to an F and is calculated into the student's GPA. Attendance is VERY important. See attendance policy below.

If you are unable to attend in-person class due to circumstances beyond your control, such as not being able to enter NCC because you did not pass the health screening questions on the MyNCC app's daily pre-screening form, please join the class via Zoom.

Access Zoom via the link on our Canvas course homepage. You must email your instructor before class explaining the reason you need to Zoom into class. Only students with permission to use the Zoom link will be admitted to the Zoom class.

Instructor’s Communication Policy

- **Email Response Time:** 24 hours on weekdays. 48 hours on weekends.
- **Assignment/Homework Response Time:** 1-2 weeks

Grading:

Assignment	Weight
Class Discussion	15%
Tests	25%
Field of Study Ethical Situation/Case Study PowerPoint	15%
Code of Ethics Written Assignment	15%
Textbook Case Study PowerPoint with partner	15%
Final Exam	15%
Total	100%

Grades will be assigned according to the following department scale:

- A = 100 – 94**
- A- = 93 - 90**
- B+ = 89 – 87**
- B = 86 - 84**
- B- = 83 - 80**
- C+ = 79 – 77**
- C = 76 – 74**
- C- = 73 – 70**
- D+ = 69 – 67**
- D = 66 – 64**
- D- = 63—60**
- F = 59 or Below**

****ALL Arts, Humanities, Communications & Design Department courses must use this grading scale when determining final grades.**

Diversity, Equity, and Inclusion Statement:

We are all responsible for creating a diverse, equitable, inclusive, and just environment. Thus, we must treat individuals with respect by valuing all types of diversity. This is fundamental in creating a welcoming and inclusive learning environment. Diversity may include multiple ways of identifying ourselves, including, but not limited to race, color, national origin, language, sex, disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status,

or genetic information. These diverse identities, among many others not mentioned, influence the perspectives our students, faculty, and staff bring to the NCC community. Through use of various approaches that enhance intellectually rich, respectful, safe, and inclusive learning environments, this dynamic process will demonstrate our sustained commitment at NCC. It is our core belief that diversity, equity, and inclusion promote excellence, collaboration, and innovation while also seeking justice.

Available Support Services

Tutoring and Writing Center: The Tutoring and Writing Center, located in the library, offers free academic support services to all NCC students. Meet in-person or via Zoom with experts who can tutor you in math or accounting or help you with writing for any course. Tutoring is drop-in or by appointment. View the current tutoring schedule at <https://library.nashuacc.edu/home/tutoring>

Online chat tutoring is also available 24/7 with Smarthinking. Find a link on the left navigation menu inside Canvas courses.

Classroom Accommodations: Students who have a documented disability (physical, learning, or mental health) and require reasonable classroom accommodations must meet with the Disabilities Support Coordinator to set up an NCC Reasonable Accommodation Plan (RAP). If you had an IEP or 504 in high school, you may qualify for a plan. If you would like more information or if you are not sure if you qualify for a plan, please contact Jodi Quinn, Disabilities Support Coordinator, located in the library, 603-578-8900 ext. 1451. View additional information and the application here: <https://nashuacc.edu/student-services/disability-accessibility-information> In order to receive classroom accommodations, it is the student's responsibility to meet with his/her instructor privately and provide a hard copy of the signed Reasonable Accommodation Plan (RAP) each term the student wants to utilize classroom accommodations even if the student has had that instructor in a previous term.

Audio Record Classroom Lecture: Please note that as a student in this class, you may have a classmate who by permission can audio record class lectures for his/her learning purposes. ***Only students with prior written permission*** from the instructor or the Disabilities Support Coordinator may audio record class lectures - *for educational purposes only*. Students who audio record class lectures are prohibited from selling, transcribing, or distributing the recordings in *any manner* and are asked to delete the recordings when it is no longer essential for their learning purposes.

Instructors may record their own class lectures, activities, and discussions using electronic video, still photo, or audio recording for educational purposes, including academic research, professional development, and recording of course content for access through online learning and other formats. Every student present will be informed by the instructor of any recording at the beginning of class.

Department Policies

Students are expected to attend all their regularly scheduled classes, laboratory periods, and other academic exercises. Should an absence from regularly scheduled academic exercise be unavoidable (beyond a student's control), it will be the student's responsibility to communicate with the professor, preferably beforehand, concerning the absence. Documentation of said absence may be required by the professor.

Students are advised that absence from class, for whatever reason, does not excuse them from meeting course requirements and objectives.

If a student is absent more than six hours (for a four-credit course, the total is eight hours) of class time during the term or semester, the instructor may withdraw the student from class using an AF grade, which means an F will be averaged into the GPA.

It is the responsibility of the student to make up any missed class work, homework assignment, quizzes, or tests in accordance with the instructor's make-up policy.

Depending on the instructor's policy, late papers may or may not be accepted for full credit. See this syllabus for policy details.

All assignments must be either submitted through Canvas or submitted as hard typed copies (depending on the instructor's policy).

College Policies

Non-Discrimination Policy: The NCC Equity Committee is designated to coordinate compliance with the Non-Discrimination Policy and handles all concerns of discrimination that occur on campus that are not covered under Title IX. View more information here [Non-Discrimination Policy and Grievance Procedure](#)

Title IX Policy: Classroom instructors at Nashua Community College are encouraged to create and maintain a safe learning environment in which students feel able to share opinions and related life experiences in classroom discussions, in written work, and in meetings with professors. To the greatest extent possible, this information will be kept private. However, staff and faculty have a legal obligation to report information concerning sexual misconduct, violence and exploitation of individuals per federal statute and in compliance with established policies and procedures at Nashua Community College. If you have been subjected to sexual misconduct, violence or exploitation, we encourage you to contact your Title IX representative Lizbeth Gonzalez, 603-578-8900 x1528 or lgonzalez@ccsnh.edu for support and assistance. View more information here [Title IX Policy and Grievance Procedure](#)

Attendance: Regular attendance and active class participation are essential for academic success. If a student must be absent from class, the student should contact his/her professor and follow the professor's make up policy listed in the syllabus under course expectations.

Rarely, a student may experience a serious situation that prevents that student from attending class for an extended period. This could be for reasons such as illness/hospitalization, loss of childcare, or lack of transportation. In these situations, the student should notify his/her professor as soon as possible and contact the advising center for assistance NCCAcademicAdvisingCenter@ccsnh.edu.

AF Policy: If a student misses more than the number of hours the course meets during a two-week period (e.g. six hours for a three credit course), the faculty may withdraw a student from the course with an "AF" grade. Please note that absences, tardies, and leaving class early all count towards "missed class time."

In an online or hybrid course, the faculty may withdraw a student for not participating in online activities and/or submitting assignments for two weeks. Logging into Canvas does not count as participation.


Students should also understand an AF grade can be assigned by an instructor or an administrator at any time for reasons other than poor grade performance or failure to meet attendance requirements e.g., violation of the Student Code of Conduct, disruptive behavior, etc.

Please be advised that if the behavior of any student (or students) continually disrupts the learning of his/her classmates, the following steps will be taken 1) verbal warning; 2) meeting with instructor and department chair; 3) referral to Vice President of Academic Affairs and/or removal from the course with AF grade.

An “AF” grade is calculated in the GPA as an “F”. Students should refer to the student handbook for additional information about the AF policy.

Canvas: Canvas is the online learning management system used by instructors and learners at Nashua Community College. Instructors will post syllabi, course related documents and grades in Canvas. Students may be required to submit assignments and/or take assessments through Canvas and/or participate in discussion boards. **If class is ever cancelled because of instructor illness or inclement weather, students will need to check Canvas for their assignment.**

24/7 Canvas Support: To access support through email, phone or chat

click on the  icon. Students can also find guides, videos, and a Canvas community by clicking on the *CCSNH Resources* icon on the tool bar at the left of the Canvas screen then choosing Canvas Resources.

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Internship	3 to 6	45-90
Co-op	Variable by Dept.	Variable by Dept.

<p style="text-align: center;">HUMA230N-A: Ethics in the Workplace Professor Jennifer Tripp Mondays 1-2:50 pm & Wednesdays 1-1:50 pm Gregg Hall 180 Fall 2021 Course Calendar</p>					
Week	Month	Day	Topic	Assignment Due	Targeted Competencies*
1	Aug. Sept.	30 & 1	Introductions, Ethics in the World of Business & Advertising	Read and take notes on Chapter 1. Take open-book test. Due via Canvas Sept. 8 by 1 pm Submit Syllabus Contract via Canvas by Sept 8 at 1 pm	1, 3, & 4
2	Sept.	6 & 8	<i>No class Sept. 6—Labor Day</i> Why Ethics Matter?	Read and take notes on Chapter 2. Take open-book test. Due via Canvas Sept. 13 by 1 pm	1, 3, & 4
3	Sept.	13 & 15	Ethical Theories Discussion of First Project <i>Sept. 13 is the last day to drop a class with a full refund.</i>	Read and take notes on Chapter 3. Take open-book test. Due via Canvas Sept. 20 by 1 pm	1, 3, & 4 1 & 3

4	Sept.	20 & 22	Ethical Decision Making & Stakeholders	Project #1: Field of Study Ethical Situation/Case Study PowerPoint Oral Presentation. Due Sept. 27 & 29	1&3
5	Sept	27 & 29	Project #1: Field of Study Ethical Situation/Case Study PowerPoint Oral Presentation. Due Sept. 27 & 29	Read and take notes on Chapter 4 Take open-book test. Due via Canvas Oct. 4 by 1 pm	1, 3, & 4
6	Oct.	4 & 6	Corporate Social Responsibility, Milton Friedman, & Environmental Ethics.	Read and take notes on Chapter 6 (we're skipping chapter 5). Take open-book test. Due via Canvas Oct. 11 by 1 pm	1, 3, & 4
7	Oct.	11 & 13	What Employers Owe Employees: privacy, working conditions, and fair wages	Read and take notes on Chapter 7. Take open-book test. Due via Canvas Oct. 18 by 1 pm	1, 3, & 4
8	Oct.	18 & 20	What Employees Owe Employees: whistleblowing & loyalty	Project #2: Code of Ethics Written Assignment Due Oct. 27	2, 3 & 4
9	Oct.	25 & 27	Project #2: Code of Ethics Written Assignment. Due Oct. 27	Read and take notes on Chapter 8. Take open-book test. Due via Canvas Nov. 1 by 1 pm	1, 3, & 4
10	Nov.	1 & 3	Diversity and Inclusion <i>Nov. 4 is the last day to withdraw with grade of "W."</i>	Read and take notes on Chapter 9. Take open-book test. Due via Canvas Nov. 8 by 1 pm	1, 3, & 4
11	Nov.	8 & 10	Professions Under The Microscope: start-ups, advertising,	Read and take notes on Chapter 10. Take open-book test. Due via Canvas Nov. 15 by 1 pm	1, 3, & 4

			insurance, health care, etc.		
12	Nov.	15 & 17	Changing Work Environments and Future Trends	Read and take notes on Chapter 11. Take open-book test. Due via Canvas Nov. 22 by 1 pm	1, 3, & 4
13	Nov.	22 & 24	Why Ethics Still Matter—making a difference	Project #3: Partner/Group Case Study PowerPoint Oral Presentations: Due Nov 29 & Dec. 1 Nov. 25-28: No School. Thanksgiving Break	2, 3, & 4
14	Nov. Dec.	29 & 1	Project #3: Partner/Group Case Study PowerPoint Oral Presentations: Due Nov 29 & Dec. 1	Begin studying for final exam	1, 2, 3, & 4
15	Dec.	6 & 8	Continue Oral Presentations if necessary Final Exam Review	Study for Final Exam. Exam will be given in a two-hour time block between Dec. 13-16. Date and time to be determined.	1, 2, 3, & 4
16	Dec.	13-16 TBA	Final Exam Date and Time TBA		1, 2, 3, & 4

*Targeted competencies refer to the established course competencies listed above.

This schedule is subject to change
In the event of class cancellation due to inclement weather or instructor illness,
students are directed to the course Canvas site for an alternate assignment for that day.



Calculus I – MATH210N Fall 2021

Department	Department of Mathematics & Science
Instructor	Christine Morris
NCC Email	cmorris@ccsnh.edu
Telephone Number	(603) 578-8900 ext. 1667
Office Hours	M & W 8:30 -930, Th 12 – 1
Office Location	Streeter Hall Room 216
Class Days/ Meeting Time	Monday & Wednesday: 10:00 – 11:50
Class Location	Streeter Hall 222

Rationale:

Calculus is one of the few mathematical courses that integrates and builds from knowledge of all previous math courses. The mathematics of calculus apply to fields of studying including business, statistics, computer technology, and engineering, just to name a few. Calculus is essential in understanding population growth, climate change, and economic trends. Calculus students apply and strengthen their analytical and problem-solving skills building a strong foundation for their chosen career path.

Course Description:

Calculus is introduced through studies of functions, limits, differentiation and higher order derivatives. Problems in maximum, minimum and related rates are considered. Integration is introduced by analyzing the definite and indefinite integral, and areas.

Course Competencies:

At the successful completion of this course the student should be able to:

- Discuss the notion of a limit
- Evaluate limits of algebraic and trigonometric functions
- Know and apply the basic rules for differentiation, including power rule, chain rule, product rule, quotient rule, and implicit differentiation
- Accurately find the derivative of trigonometric, inverse trigonometric, exponential, and logarithmic functions
- Use differentiation in applications including optimization and related rates, and L'Hopital's Rule

- Know and apply the Fundamental Theorem of Calculus
- Evaluate integrals and be able to calculate the area under a curve

Essential Questions:

- What is a limit?
- What is a derivative and how is this different in different contexts?
- What does optimization mean?
- How is the Fundamental Theorem of Calculus used? and What is its purpose?
- What is the relationship between a definite integral and the area under a curve?

Required Materials:

Textbook(s)

William Briggs, Lyle Cochran, Bernard Gillett, *Calculus: Early Transcendentals*, Pearson, 3rd Ed.

ISBN: 9780134763644

Click on this link to access the NCC bookstore's website

<http://www.bkstr.com/nashuaaccstore/home>

Technology

In order to be successful at NCC, all students need a laptop or personal computer (PC) as well as reliable internet access. It is recommended that students purchase a laptop for in-class use. Specifications can be found by clicking on the link below. If you do not have Internet access or the right kind of computer equipment (e.g., laptop, webcam, etc.) you may be eligible for the college's technology lending program, which is a first come first served program.

Click on this link for more information <https://www.nashuaacc.edu/technology>

Laptops that meet NCC technology specifications are available for purchase at the NCC bookstore. Financial aid may be used for purchases made at the bookstore. Contact the bookstore for more information

<http://www.bkstr.com/nashuaaccstore/home>

Supplemental Materials:

A TI-83, TI-84 is the recommended calculator for this course but any scientific calculator will do. You may not use your phone.

Course Expectations:

Attendance/ Phones/ Laptops:

Attendance is absolutely vital to the student's success in this course. You are expected to attend all classes and to be on time. It is extremely difficult to make up for lost hours of instruction time. You are responsible for all material and information given in class whether present or not.

When in class please turn off all cell phones and pagers upon entering class. If you need to leave your cell phone on, please use the vibrate mode. Please use appropriate technology etiquette.

The class will consist of lectures, independent problem solving and answering questions. This is your time to learn and practice the material with the support of your instructor and your peers. Use it wisely.

Homework and Assignments:

An outline of assignments and practice for each section is attached to this syllabus and posted on Canvas. The expectation is that you will complete the assignment after each lesson. All assignments and work will be due on the day of the unit exam. Your work will be submitted in person the day of the exam. Late work will not be accepted. Assignments will be graded based on completeness of work shown. Credit will not be given for solutions only. All work must be organized, labeled and neatly presented.

Your homework not only contributes 10% to your overall course grade, but it is the means by which you practice the material in order to master it and perform well on the corresponding exams. It is very important that you set aside an appropriate amount of time each week to do the homework assignments.

Homework Quiz:

Occasionally we will have a "homework quiz" where you will be asked to submit the work for a few problems from your homework. These problems will be graded for accuracy and completeness. The quiz will be announced in the class prior. You can expect at least one per unit.

Unit Exams and Final Exam:

There will be 5 unit exams throughout the semester. I do understand that sometimes life happens and you may be absent the day of the unit exam. For this reason I give you **one** free pass for exams. Because of this policy **I do not allow missed exams to be made up**. If you do not use this free pass than your lowest score of the five will be dropped.

The Final Exam must be taken on the scheduled day, which will be announced mid-semester. Only in an extreme case will a make up be permitted for the final exam. The student must provide documentation for the absence, and it is the student's responsibility to notify the instructor of the absence prior to the final exam.

Course Cancellation Expectation:

If for some reason I need cancel a class, you will be notified through your CCSNH email. I will also have a note posted on the door. In this situation I will post a reading assignment or video related to the lesson on Canvas as well as a practice assignment to be completed before the next class. This will also be the case if campus is closed due to weather or an emergency. You are responsible for the posted lesson and practice assignment.

Instructor's Communication Policy:

I will usually respond to emails within 24 hours during the week and 48 hours on the weekend. Please note that Sundays are my family time and I rarely check my email.

Statement:

This class is a partnership. We will be engaging in many mathematical discussions. Be an active participant. Do not let yourself fall behind, nor assume that it is ok to not understand a topic here and there. You should always ask for clarification of anything you do not understand and you are strongly encouraged to communicate any other matters relevant to your learning to me. If you do not get a question in-class you should see me during my office hours or visit me in math tutoring.

Grading:

- Unit Exams 60%
- Homework and Assignments 10%
- Homework Quiz 10%
- Final Exam (comprehensive) 20%

Your course average will be kept up to date in Canvas as the semester progresses.

Grades will be assigned according to the following department scale:

Mathematics Department Grading Scale:

> 93	A	73-76	C
90-92	A-	70-72	C-
87-89	B+	67-69	D+
83-86	B	63-66	D
80-82	B-	60-62	D-
77-79	C+	< 60	F

Diversity, Equity, and Inclusion Statement:

We are all responsible for creating a diverse, equitable, inclusive, and just environment. Thus, we must treat individuals with respect by valuing all types of diversity. This is fundamental in creating a welcoming and inclusive learning environment. Diversity may include multiple ways of identifying ourselves, including, but not limited to race, color, national origin, language, sex, disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. These diverse identities, among many others not mentioned, influence the perspectives of our students, faculty, and staff bringing to the NCC community. Through use of various approaches that enhance intellectually rich, respectful, safe, and inclusive learning environments, this dynamic process will demonstrate our sustained commitment at NCC. It is our core belief that diversity, equity, and inclusion promote excellence, collaboration, and innovation while also seeking justice.

Available Support Services

Tutoring and Writing Center: The Tutoring and Writing Center, located in the library, offers free academic support services to all NCC students. Meet in-person or via Zoom with experts who can tutor you in math or accounting or help you with writing for any course. Tutoring is drop-in or by appointment. View the current tutoring schedule at

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None

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Students should also understand an AF grade can be assigned by an instructor or an administrator at any time for reasons other than poor grade performance or failure to meet attendance requirements e.g., violation of the Student Code of Conduct, disruptive behavior, etc.

Please be advised that if the behavior of any student (or students) continually disrupts the learning of his/her classmates, the following steps will be taken 1) verbal warning; 2) meeting with instructor and department chair; 3) referral to Vice President of Academic Affairs and/or removal from the course with AF grade.

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In addition:

- Students should check their College email account regularly to ensure they are staying current with all official communications. Official communication includes, but is not limited to, policy announcements, registration and billing information, schedule changes, emergency notifications and other critical and time sensitive information.
- Students should also check their college email account to be sure that they are current with all email communication from their faculty.
- The student email account/address should be the only e-mail address students use to send email to faculty and College personnel so that student email is recognized and opened.
- This service is provided exclusively to the students of NCC. Accounts are for individual use only, and are not transferable or to be used by any other individual.
- Students using their College email account do so under the policies set forth in the Student Handbook under "Student Computer Conduct Code".

Sensitive Materials Policy: During the semester, in order to cover certain academic topics, there may be occasions to view or discuss material which may not meet the student's own personal definition of appropriateness. At such times, every student has the right to decide not to participate. Every effort will be made by the instructor to notify students in advance of when such sensitive material will be used so that students can make alternative arrangements. Faculty will guide students in the identification of alternative learning opportunities consistent with relevant course objectives so that students opting out of scheduled "sensitive" learning experiences will not be penalized academically in any way. Please note the opportunity to leave the classroom discreetly is always available to each student when such sensitive material is being discussed. The student then has the

responsibility before the next class meeting to inform the instructor as to the reason for leaving.

Plagiarism Policy: Plagiarism is a serious violation of a student's academic integrity and the trust between a student and his or her teachers. Plagiarism is the act of a person presenting another person's work as if it were his or her own original work. Such acts of plagiarism include, but are not limited to:

1. A student submitting as his or her own work an entire essay or other assignment written by another person.
2. A student submitting as his or her own creation the artwork (including but not limited to a painting, drawing, photograph, object, digital representation) of another person.
3. A student taking word for word a section or sections of another person's work without proper acknowledgment of the source and quotation.
4. A student using statistics or other such facts or insights as if they were the result of the student's efforts and thus lacking proper acknowledgment of the original source.
5. The paraphrasing of another person's unique work with no acknowledgment of the original source.
6. Copying another student's work on a quiz or test.

Some instructors may consider self-plagiarism to be a form of plagiarism. Self-plagiarism includes **submitting the same paper** in response to **two different** assignments. Please consult with your instructor and carefully review instructor expectations posted on your syllabus if you have any questions.

When a student is found to have plagiarized an academic assignment, it will be up to each instructor to determine the penalty. Depending on the severity of the incident, this could range from a warning to a loss of credit for the assignment. In all cases of plagiarism, the instructor will notify the student's advisor by posting an alert on EAB Navigate. The advisor will then document the incident on EAB using advisor notes. If any further incidents of plagiarism are reported to the student's advisor, additional sanctions will be imposed. These may include notification of the Vice President of Academic Affairs; loss of credit for the course; suspension or dismissal from a department program; academic probation; and/or expulsion from the College.

Credit Hour Guidelines

1. A credit hour shall be the equivalent of one (1) hour of classroom or direct faculty instruction and a minimum of two (2) hours of out-of-class student work each week for 15 or 16 weeks.
2. A credit hour shall be allocated based on the following:

Category	Contact Hours per Week	Contact Hours per Sem. (based on minimum 15 week semester)
Class	1	15
Laboratory	2 or 3	30-45
Clinical	3 to 5	45-75
Practicum, Fieldwork	3	45
Internship	3 to 6	45-90
Co-op	Variable by Dept.	Variable by Dept.

Course Calendar
MATH210N – Calculus I
Fall 2021

Day/ Date	Section and Topic	Assignment to Complete
08/30	2.1 The Idea of Limits 2.2 Definition of Limits	<u>Section 2.1</u> : pg. 61 - # 3, 13, 17, 19, 23, 25, 29 <u>Section 2.2</u> : pg. 67 - # 3, 5, 7, 9, 17, 19, 21, 29, 47, 49
09/01	2.3 Techniques for Computing Limits	<u>Section 2.3</u> : pg. 79 - # 5, 7, 9, 11, 13, 15, 17, 19, 23, 27, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 53, 73, 75
09/06	Labor Day – No Class	
09/08	2.4 Infinite Limits 2.5 Limits at Infinity	<u>Section 2.4</u> : pg. 89 - # 9, 11, 17, 21, 23, 27, 45, 47 <u>Section 2.5</u> : pg. 100 - # 3, 7, 9, 13, 17, 19, 23, 25, 27, 29, 31, 39, 43, 45, 57, 59, 71, 75, 87
09/13	2.6 Continuity	<u>Section 2.6</u> : pg. 112 - # 5, 7, 11, 13, 17, 19, 21, 23, 25, 27, 29, 39, 41, 43, 45, 47, 61, 63, 65, 87
09/15	Unit 1 Review 3.1 Introducing the Derivative 3.2 The Derivative as a Function	<u>Section 3.1</u> : pg. 138 - # 21, 23, 33, 35, 39, 43, 44 <u>Section 3.2</u> : pg. 149 - # 21, 23, 25, 27, 31, 35, 37, 41
09/20	<u>Unit 1 Exam (Chapter 2)</u>	Homework for 2.1 – 2.6 due today
09/22	3.3 Rules of Differentiation 3.4 Product and Quotient Rules	<u>Section 3.3</u> : pg. 160 - # 9-43 odd, 47, 49, 59, 61, 63, 65, 67, 69 <u>Section 3.4</u> : pg. 168 - # 19-53 odd, 61, 71, 73
09/27	3.5 Derivatives of Trigonometric Functions	<u>Section 3.5</u> : pg. 176 - # 11, 13, 15, 23, 25, 27, 29, 31, 33, 43, 45, 47, 53, 73, 75

09/29	3.7 Chain Rule	<u>Section 3.7</u> : pg. 197 - # 25 – 69 odd, 91
10/04	Mid Chapter Review 3.8 Implicit Differentiation	<u>Section 3.8</u> : pg. 205 - # 9 – 39 odd, 45 – 55 odd
10/06	<u>Unit 2 Exam: Mid Chapter 3</u> <u>(3.1-3.5, 3.7)</u>	Homework for Sections 3.1 – 3.5 & 3.7 due today
10/11	3.9 Derivatives of Logarithmic and Exponential Functions 3.10 Derivatives of Inverse Trigonometric Functions	<u>Section 3.9</u> : pg. 215 - # 15 – 53 odd, 63 – 71 odd, 75, 79 <u>Section 3.10</u> : pg. 225 - # 13 – 45 odd
10/13	3.6 Derivatives of as Rates of Change	<u>Section 3.6</u> : pg. 186 - # 9, 11, 15, 17, 19, 21, 25, 29, 37, 41
10/18	3.11 Related Rates	<u>Section 3.11</u> : pg. 231 - # 11, 13, 15, 17, 26
10/20	3.11 Continued	<u>Section 3.11</u> : pg. 231 - # 33, 35, 37, 39, 41, 43, 49
10/25	Chapter 3 Review 4.1 Maxima and Minima 4.2 Mean Value Theorem	<u>Section 4.1</u> : pg. 247 - # 11 – 53 odd <u>Section 4.2</u> : pg. 254 - # 5, 11, 15, 17, 21, 23, 25, 39
10/27	<u>Unit 3 Exam: Full Chapter 3</u>	Homework for Section 3.8 – 3.11 & 3.6 due today
11/01	4.3 What Derivatives Tell Us 4.4 Graphing Functions	<u>Section 4.3</u> : pg. 267 - # 9, 11, 23, 25, 27, 29, 31, 35, 47, 49, 59, 61, 63, 67, 101, 103, 105 <u>Section 4.4</u> : pg. 278 - # 13, 15, 17, 19, 29, 31
11/03	4.5 Optimization	<u>Section 4.5</u> : pg. 285 - # 11 – 21 odd
11/08	4.5 Optimization Continued	<u>Section 4.5</u> : pg. 285 - # 23, 25, 27, 31, 37, 39
11/10	4.7 L'Hôpital's Rule	<u>Section 4.7</u> : pg. 310 - # 17 – 79 odd

11/15	Chapter 4 Review 5.1 Approximating Areas Under Curves Continued	<u>Section 5.1</u> : pg. 347 - # 3, 5, 9, 15, 17, 21, 25, 29, 33, 39, 45
11/17	<u>Unit 4 Exam: Chapter 4</u>	Homework for Sections 4.1 – 4.5 & 4.7 due today
11/22	5.2 Definite Integrals	<u>Section 5.2</u> : pg. 364- # 7, 9, 39, 41, 43, 45, 47, 49, 51, 53, 55, 59, 61, 63, 65, 67
11/24	5.3 Fundamental Theorem of Calculus 5.4 Working with Integrals	<u>Section 5.3</u> : pg. 378 - # 13, 15, 19, 29 - 69 odd <u>Section 5.4</u> : pg. 385 - # 11 – 31 odd, 35, 37, 39, 41
11/29	5.5 Substitution Rule	<u>Section 5.5</u> : pg. 395 - # 17 – 71 odd
12/01	More 5.5 Chapter 5 Review	
12/06	<u>Unit 5 Exam: Chapter 5</u>	Homework for Sections 5.1 – 5.5 due today
12/08	Final Exam Review	
TBA	FINALEXAM	

This calendar is subject to change



PHYS131N - Physics II
Fall 2021

Department	Department of Mathematics & Science
Instructor	Bob Bragdon
NCC Email	rbra@nccsnh.edu
Telephone Number	(603) 578-8941
Office Hours	Monday and Wednesday 10-11:30am
Office Location	Room 220
Class Days/Meeting Time	Monday/Wednesday/Friday 3-4:50pm
Class Location	Room 220

Rationale:

Physics encompasses the study of the universe from the largest galaxies to the smallest subatomic particles. Moreover, it's the basis of many other sciences, including chemistry, oceanography, seismology, and astronomy (and can be applied to biology or medical science).

Course Description:

A continuation of the study of physics at the non-calculus level. Topics include waves, optics, electricity and magnetism, atoms, nuclei and modern physics.

Course Competencies:

1. Apply mathematical skills, at the algebraic level, to analyze physical situations.
2. Demonstrate problem solving skills in problems concerning physical situations.
3. Explain the relevance and importance of physics to everyday experiences.
4. Demonstrate lab techniques based on the scientific method.
5. Demonstrate the ability to communicate both qualitative and quantitative information, orally and written.

Essential Questions:

How does physics serve to improve our understanding of physical systems?

How do the principles of physics affect your daily life?

Describe something in nature that has become more compelling because of an understanding of physics principles

Is it possible to describe the whole natural world (chemical and biological) with a small number of physical principles? If so, how?

Required Materials:

Textbook(s)

Coletta; Physics Fundamentals Second Edition; Physics Curriculum & Instruction 2010; ISBN 9780971313453

This electronic textbook is copyright protected and is licensed for use only by enrolled students and faculty at Nashua Community College. Use by any other person is prohibited by law and subject to copyright infringement penalties.

Enrolled students may install the electronic textbook on their own notebook computer or home computer. Each student may perform only one installation to a single personally-owned computer. Each student may also print a single copy of the textbook for personal use only.

Technology

In order to be successful at NCC, all students need a laptop or personal computer (PC) as well as reliable internet access. It is recommended that students purchase a laptop for in-class use. Specifications can be found by clicking on the link below. If you do not have Internet access or the right kind of computer equipment (e.g., laptop, webcam, etc.) you may be eligible for the college's technology lending program, which is a first come first served program. Click on this link for more information

<https://www.nashua.cc.edu/technology>

Laptops that meet NCC technology specifications are available for purchase at the NCC bookstore. Financial aid may be used for purchases made at the bookstore. Contact the bookstore for more information

<https://www.bkstr.com/nashua/cc/store/home>

Supplemental Materials:

A scientific calculator (note that an expensive graphing calculator is not needed).

Graphing paper (for the lab reports)

USB Memory Stick (for saving lab work)

Course Expectations:

Learning/ Instructional Methods:

1. Independent Study
2. Hands on Lab Work
3. Interactive Computer Activities

Performance Evaluation:

- | | |
|---------------|-----|
| 1. Homework | 10% |
| 2. Labs | 25% |
| 3. Exams | 45% |
| 4. Final Exam | 20% |

Tests:

Exams are closed book – but each student is allowed to make up a formula sheet that lists any useful equations.

Home work:

Home work will be due one week after completing the chapter.

Home work should be neat and legible. Home work should be scanned and uploaded into the course Canvas site.

Lab Work:

Labs will be done weekly, and in order to get credit for the lab, students will have to hand in a written lab report (see lab rubric for details). The completed lab report is due one week after the lab is done. The report must be submitted electronically to the course Canvas site.

Late Work:

Home work and Lab Assignments that are turned in late may be penalized 5% per day they are late.

Attendance:

- Students are expected to attend and be on time for all classes. A student is responsible for all material and information given in class whether present or not. If absent, assignments for the day of absence must be ready on the day of return.
- In the event a student is absent for a legitimate reason then the recordings of the lecture are available. Please also see the Attendance and AF college policies later in this syllabus.
- Due to the schedule of the Physics Lab and the instructor, it will not be possible to make up a missed lab experiment. However, the lowest lab grade will be dropped.

Grading:

Grades will be assigned according to the following department scale:

Mathematics & Science Department Grading Scale:

> 93	A	73-76	C
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- This service is provided exclusively to the students of NCC. Accounts are for individual use only, and are not transferable or to be used by any other individual.
- Students using their College email account do so under the policies set forth in the Student Handbook under "Student Computer Conduct Code".

Sensitive Materials Policy: During the semester, in order to cover certain academic topics, there may be occasions to view or discuss material which may not meet the student's own personal definition of appropriateness. At such times, every student has the right to decide not to participate. Every effort will be made by the instructor to notify students in advance of when such sensitive material will be used so that students can make alternative arrangements. Faculty will guide students in the identification of alternative learning opportunities consistent with relevant course objectives so that students opting out of scheduled "sensitive" learning experiences will not be penalized academically in any way. Please note the opportunity to leave the classroom discreetly is always available to each student when such sensitive material is being discussed. The student then has the responsibility before the next class meeting to inform the instructor as to the reason for leaving.

Plagiarism Policy: Plagiarism is a serious violation of a student's academic integrity and the trust between a student and his or her teachers. Plagiarism is the act of a person presenting another person's work as if it were his or her own original work. Such acts of plagiarism include, but are not limited to:

1. A student submitting as his or her own work an entire essay or other assignment written by another person.

2. A student submitting as his or her own creation the artwork (including but not limited to a painting, drawing, photograph, object, digital representation) of another person.
3. A student taking word for word a section or sections of another person's work without proper acknowledgment of the source and quotation.
4. A student using statistics or other such facts or insights as if they were the result of the student's efforts and thus lacking proper acknowledgment of the original source.
5. The paraphrasing of another person's unique work with no acknowledgment of the original source.
6. Copying another student's work on a quiz or test.

Some instructors may consider self-plagiarism to be a form of plagiarism. Self-plagiarism includes **submitting the same paper** in response to **two different** assignments. Please consult with your instructor and carefully review instructor expectations posted on your syllabus if you have any questions.

When a student is found to have plagiarized an academic assignment, it will be up to each instructor to determine the penalty. Depending on the severity of the incident, this could range from a warning to a loss of credit for the assignment. In all cases of plagiarism, the instructor will notify the student's advisor by posting an alert on EAB Navigate. The advisor will then document the incident on EAB using advisor notes. If any further incidents of plagiarism are reported to the student's advisor, additional sanctions will be imposed. These may include notification of the Vice President of Academic Affairs; loss of credit for the course; suspension or dismissal from a department program; academic probation; and/or expulsion from the College.

Credit Hour Guidelines

1. A credit hour shall be the equivalent of one (1) hour of classroom or direct faculty instruction and a minimum of two (2) hours of out-of-class student work each week for 15 or 16 weeks.
2. A credit hour shall be allocated based on the following:

Category	Contact Hours per Week	Contact Hours per Sem. (based on minimum 15 week semester)
Class	1	15
Laboratory	2 or 3	30-45
Clinical	3 to 5	45-75
Practicum, Fieldwork	3	45
Internship	3 to 6	45-90
Co-op	Variable by Dept.	Variable by Dept.

Course Calendar – Subject to Change

	Material	Lab/Exam	Competencies
Week 1 Aug 30	Ch. 15 Review and Ch. 16 Waves	Simple Harmonic Motion	1, 2, 3, 4, 5
Week 2 Sep 6	Ch. 16 -Mechanical Waves and Sound	Resonance Tubes	1, 2, 3, 4, 5
Week 3 Sep 13	Ch. 17 – The Electric Field	Faraday Ice Pail	1, 2, 3, 4, 5
Week 4 Sep 20	Ch. 18 – Electric Potential	Electric Field Mapping	1, 2, 3, 4, 5
Week 5 Sep 27	Ch. 19 – Electric Current	Ohm’s Law	1, 2, 3, 4, 5
Week 6 Oct 4	Ch. 20 – DC Circuits	RC Circuits	1, 2, 3, 4, 5
Week 7 Oct 11	Ch. 21 – Magnetism	EXAM ONE	1, 2, 3, 4, 5
Week 8 Oct 18	Ch. 22 – EM Induction	Transformers	1, 2, 3, 4, 5
Week 9 Oct 25	Ch. 23 – Light	RLC Circuits	1, 2, 3, 4, 5
Week 10 Nov 1	Ch. 24 – Geometrical Optics	Optics Lab	1, 2, 3, 4, 5
Week 11 Nov 8	Ch. 26 – Wave Optics	Diffraction	1, 2, 3, 4, 5
Week 12 Nov 15	Ch. 27 Relativity	EXAM TWO	1, 2, 3, 4, 5
Week 13 Nov 22	Ch. 28 – Quantum Concepts	No Lab – Thanksgiving	1, 2, 3, 4, 5
Week 14 Nov 29	Ch. 29 The Atom	Hydrogen Atom	1, 2, 3, 4, 5
Week 15 Dec 06	Ch. 30 – Nuclear Physics	Radioactive Dating	1, 2, 3, 4, 5
Week 16 Dec 13	Final Exam Week	FINAL EXAM	