ME 3120: Manufacturing Processes and Their Application, 3 (3,0)

Fall 2022, TuTh 8-9:15 AM

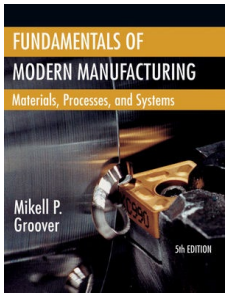
Dillard 200 *(Zoom as necessary)*

Instructor: Rodrigo Martinez-Duarte, Ph.D.
E-mail: rodrigm@clemson.edu I will try my best to answer promptly but it may take me up to 48 hours, plan accordingly!)
Office Hours: By appointment only in order to accommodate your various schedules. We will be meeting in my office or connecting virtually through Zoom as necessary.

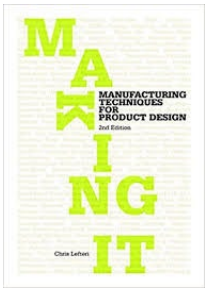
Course Description: Fundamental principles associated with production processes and their application to the manufacture of products from metals, polymers, ceramics, and composites. Emphasizes the physical and quantitative aspects of processing, the selection of processes to create products, and the identification of processes used to manufacture existing products.
Corequisites:
(ME 304) Heat Transfer.
(ME 306) Fundamentals of Machine Design.
(ME 333) Mechanical Engineering Laboratory II.

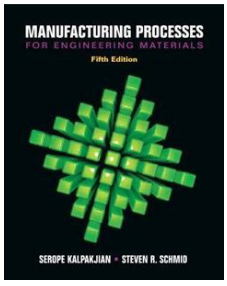
REQUIRED Materials: Carburetor and supplementary tools as specified in the document posted in Canvas. Open Educational Resources (OER) are available for this course. Please see Course outline below and follow correspondent links.

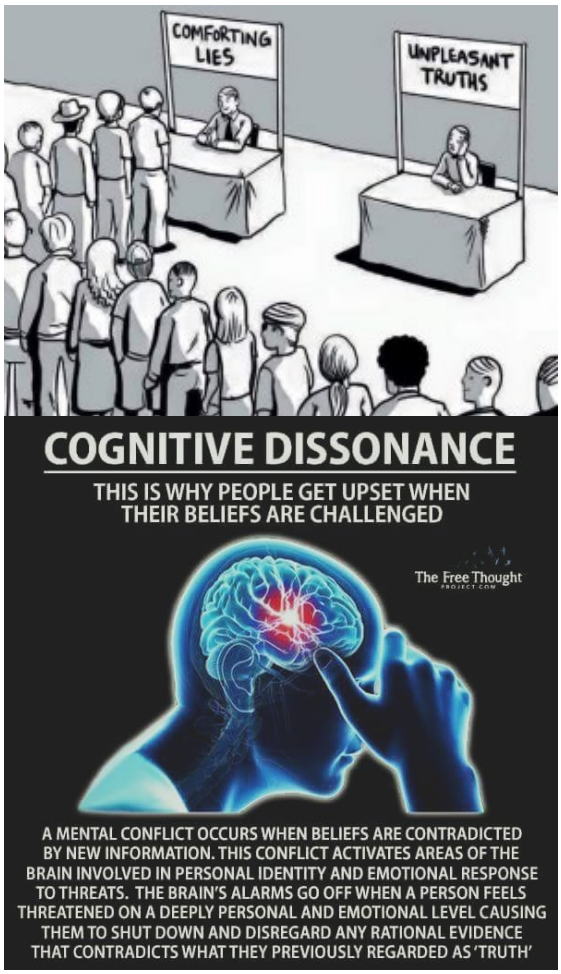
RECOMMENDED References, there is NO required textbook (*These references are not required. They are available for loan at the Library*).



- Groover, Mikell P.; 2015, *Fundamentals of Modern Manufacturing: Materials, Processes and Systems*, 6th edition, Wiley (ISBN #9781119128694). General introduction to manufacturing. Easy read and good structuring.
- Kalpakjian, S., and Schmid, S., 2007, *Manufacturing Processes for Engineering Materials, 5th Edition*, Prentice Hall (ISBN # 9780132272711). More in depth knowledge. Not as user friendly as Groover.
- Lefteri, Chris; 2013, *Making It*, 2nd edition, Laurence King Publishing (978-1-85669-749-1). Good general introduction to different manufacturing techniques. Snippets about each technology. Great overview but not in depth at all. Click here for Ebook available to you through the Clemson Libraries







Manufacturing Processes have a significant impact on the world economy and our daily lives. Look around you, I challenge you to find an item you use every day that has not been manufactured. How was such item made? Where in the world was it made? By whom? How did it get to the store you bought it from? At what cost? These are just few questions that obviate the need to look at Manufacturing through a critical lens that includes more than the technical aspect of the processes themselves. To this end, this course is framed as a ClemsonThinks2 and a Global Challenges course.

Clemson Thinks2: This is a CT2 course to nurture your skill to think critically. Critical thinking is the objective analysis and evaluation of an issue in order to form a judgement. To this end, this course will feature activities focusing on metacognition, or thinking about your thinking. Society expects you to be a mature thinker who is able to think in the abstract and consider a number of solutions to a problem. We were all immature thinkers at some point of our lives but then a fantastic journey started into increasing the quality of our thoughts. This will be an ongoing process for the rest of your life. Metacognition will help you increase the pace at which you develop your thought. Although simple in nature, it takes practice. You must develop the habit of asking yourself why you believe what you do, why do you act the way you do, and other interesting questions that are most likely to lead to unpleasant truths (see cognitive dissonance) but will help you identify the problem and become a better you. A better you can lead to better opportunities, and ultimately a better society. The purpose of making this a CT2 course is to help you strengthen your metacognition skill. Hence, you will be constantly required to think about your thinking through reflections, either individually or as a group.

Global Challenges. This course fulfills 3 hours of the Global Challenges requirement in the Clemson University Crossings/General Education curriculum. Two common Global Challenges student learning outcomes are intentionally woven into the course as detailed below, with the intent that you nurture your critical thinking through analysis of global challenges related to manufacturing processes; and evaluate the impact of these global challenges on the entire chain that connects the manufacturing of a product and its end user. **All the team activities of the semester will feature a Global Challenges component.**

Learning Environment: Research on critical thinking indicate that three activities are particularly effective to nurture critical thinking: dialogue, real-world problems and mentoring.

This class will feature extensive discussion and you must be prepared to partake in this discussion. You must do two things **BEFORE** engaging with your instructor and peers: 1) study the material assigned for that day (check Canvas); *and* 2) take the online quiz. This way, you will be prepared to intellectually contribute to the conversation. Plan well ahead to allow for enough time in your busy schedule for these prep activities and to account for the unexpected. The material to be covered during the entire semester is already posted in Canvas. The calendar is also posted. You must take the assigned quizzes as detailed in Canvas **BEFORE** class. Class time will be dedicated to activities to deepen your learning about a topic. These activities will include evaluation of manufacturing methods not only in terms of their technical parameters to obtain a desired product, but also their environmental, economic and social impact.

My role in this course is that of a facilitator and mentor in your learning process. You are solely responsible for your own learning and you are in control of your own grade. My job is to give you the tools to make the best out of this course and mentor your thinking. Your job is to use them and stay engaged. Prepare before class and before engaging with your peers so you can have a productive experience during this course.

Student Learning Outcomes:
Following successful completion of the course, you should be able to:

- Predict the influence a manufacturing process has on the material properties of a finished product. (*Apply level in Bloom's taxonomy below*)
- Compare economic costs and environmental impacts between manufacturing processes. (*Analyze*)
- Classify fundamental manufacturing processes and identify the key parameters for each process. (*Evaluate*)
- Evaluate the manufacturing process(es) used to produce a finished part. (*Evaluate*)
- Critique your metacognition skill, i.e. Is my thinking deep enough? (*Evaluate*)
- Create a manufacturing process for making a product that fulfills a need. (*Create*)
- Demonstrate critical thinking through analysis of global challenges (*Analyze*)
- Evaluate how varying perspectives influence global challenges (*Evaluate*)

These objectives were set following the well accepted *Bloom's Taxonomy* to develop expertise, shown in Fig. 1. This taxonomy postulates that the development of skills and abilities depend on a knowledge base. In this class, you will achieve the *Remembering* and *Understanding* stages before class by reviewing and studying class materials and solutions to representative problem sets. Class time will be dedicated to strengthen the stages on top of the pyramid in different degrees.

The activities in this course will help you strengthen your skills of analyzing, evaluating and creating by examining the details of your thought process and efforts towards becoming an expert in a topic. Although you will be applying these skills to manufacturing processes in this class, the aim is that you strengthen these skills and keep using in any other future topic.

Figure 1. Bloom's Taxonomy as revised in 2001. From https://www.pinterest.co.uk/pin/551128073140341612/

Overview of Tentative Course Outline (continuously double check details in Canvas) and related Open Educational Resources:

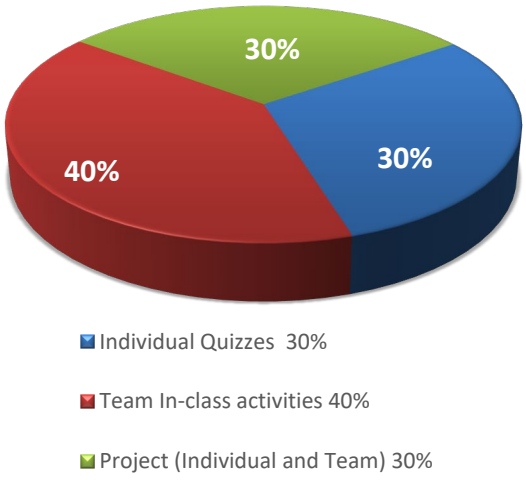
Week	Date	Class Theme/Topic/Focus	Reading Materials available for free through OER
1	8/25	Course Introduction and Class Structure	Chapter 1 – Engineering a Product
2	8/30	Critical Thinking and Manufacturing	Small Group Communication: Forming & Sustaining Teams
2	9/1	Work on Session 1* – Context and Specifications. Bring carburetor. *Teams must be formed by now*	Chapter 2 – Product Specification
3	9/6	Feedback and Discussion on Session 1	Chapter 4 – Material Properties and Behaviors Materials in Manufacturing
3	9/8	**Class meets. Work on Project Team Deliverable #1**	The Sustainable Business Case Book
4	9/13	Guest Discussion on Markets and Pricing * TBC	

4	9/15	Work on Session 2 – Casting Fundamentals I. Bring carburetor	Chapter 7 – Polymer processes
5	9/20	Feedback and Discussion on Session 2	
5	9/22	Work on Session 3 – Casting Fundamentals II. Bring carburetor	
6	9/27	Feedback and Discussion on Session 3	
6	9/29	Work on Session 4 – Taxonomy of Casting. Bring carburetor	
7	10/4	**Class does not meet. Work on Project Team Deliverable #2**	
7	10/6	Feedback and Discussion on Session 4	
8	10/11	Work on Principles of Shaping by Deformation Exercise	
8	10/13 – Issue midterm evaluation	Work on Session 5 – Bulk Deformation Processes. Bring carburetor	
9	10/18	Feedback and Discussion on Session 5	
9	10/20	Work on Session 6 – Sheet Deformation Processes. Bring carburetor	Chapter 8 – Sheet Metal Processes
10	10/25	Feedback and Discussion on Session 6	
10	10/27	Work on Session 7 - Machining. Bring carburetor	Chapter 6 – Fundamentals of Machining Chapter 7 – Production Processes
11	11/1	Feedback and Discussion on Session 7	Chapter 3 – Statistical Quality Control
11	11/3	Work on Session 8 – Additive Manufacturing. Bring Carburetor	
12	**11/8 – FALL BREAK**	**NO CLASS**	
12	11/10	Feedback and Discussion on Session 8	
13	11/15	Work on Session 9 – Wrap up carburetor. Bring carburetor	
13	11/17	Feedback and Discussion on Session 9	
14	11/22	**Class does not meet. Work on Project Team Deliverable #2**	
14	**11/24 - Thanksgiving**	**NO CLASS**	
15	11/29	Work on Session 10* – Global Challenges. Bring carburetor	
15	12/1	Feedback and Discussion on Session 10	
16	12/6	**Class meets. Work on Project Team Deliverable #2**	
16	12/8	Final Remarks and Evaluations	

* The asterisk topics will include Global perspectives related to a variety of subjects including: raw material extraction, energy usage, waste materials, environmental considerations (i.e., toxicity, coolant), sustainability, and/or global supply chain.

Grading Breakdown **(see more information in slides in Canvas):**

90.0-100%	**A**	**Excellent.** Indicates work of a very high character, outstanding quality
80.0-89.99%	**B**	**Good.** Indicates work that is definitely above average, though not of the highest quality
70.0-79.99%	**C**	**Fair.** Indicates work of average or medium character
60.0-69.99	**D**	**Pass.** Indicates work below average and unsatisfactory.
<59.99	**F**	**Fail.** Indicates that the student knows so little of the subject that it must be repeated in order that credit can be received.



INDIVIDUAL ACTIVITIES

The individual activities are meant to ensure YOU are prepared to engage with your team throughout this course. They are very important to guarantee that the time investment from everyone is worth it… after all no one wants to work with an individual that cannot contribute to the team.

INDIVIDUAL QUIZZES (Several, All of equal value): Quizzes feature multiple- choice questions aimed at validating that each of you have studied the material and come prepared to contribute to the team. ***Quizzes are individual, and you must take the quiz online by the deadline stipulated in Canvas.***

Quizzes are timed and you only have one attempt. You are encouraged to assemble a cheat sheet before the quiz and use it during the quiz, but you won't have the time to scan the slides for answers in a separate device while taking the quiz. Hence, **you must study the slides (and do practice problems if applicable) BEFORE taking a quiz. Plan ahead so you can request office hours as needed, bear in mind that immediate office hours will not be available**. ***Late quizzes will be graded as ZERO (even if Canvas still lets you take it).***

All quizzes have the same value, regardless of the number of questions in each of them. Check the deadline schedule for quizzes in Canvas. **All quizzes are now available for you to take. Plan ahead and do not leave taking the quiz to the last day, emergencies do happen. There will be no make-up quizzes.** The only exception to this rule will be major emergencies, i.e. becoming ill with COVID-19, long-term hospitalization and other long-term undesirable scenarios that prevent you from engaging with the course for periods >2 days. *In those cases, you are directed to BOTH use the Notification of Absence module in Canvas AND notify your instructor by email ASAP.*

SELF-ASSESSMENT REQUIRED THROUGHOUT THIS COURSE As mentioned above, critically thinking about yourself and your work is a must to keep growing sustainably. Continue your self-assessment throughout this course. A good tool to do this is here https://wabisabilearning.com/blogs/mindfulness-wellbeing/self-assessment-questions-growth-mindset

EW Online Modules – The E-learning modules from EducateWorkforce (EW) are available for your further reference. You can find them under Assignments tab in Canvas. Use this material to refresh or reinforce concepts related to materials and manufacturing. ***There is no credit associated with ANY of these activities.*** Nevertheless, you are encouraged to benefit from this resource. To this end, there will be reminders in your Canvas home about completing selected modules that closely map the contents of this class. Please contact support@educateworkforce.com **DIRECTLY** in case of any trouble with the e-learning platform and *copy me* in your email to them.

TEAM ACTIVITIES

It should not be a surprise to you that your future professional life will largely rely on you collaborating with a team. Those teams will likely be formed by members of different cultures, background, disciplines, etc. who have different expectations, priorities, time commitments and capabilities. It is a challenging endeavor to form a functional team! It takes practice to first be an excellent team member and eventually an inspiring team leader. To this end, this course features many team activities.

FORMING A TEAM: As a first step, analyze yourself in the context of this course. What grade are you targeting? How hard are you willing to work for such grade? What is your time, effort, and resource commitment to this course? How important is this course to you? What is your preferred way of working? What are your skills? What are your weaknesses? What behaviors, attitudes, skills are you expecting from other team members? Are you looking for teammates who are likely to wear a mask during meetings? Are you looking for teammates who are vaccinated? Towards facilitating the formation of teams, please fill the survey here https://forms.gle/63JYKNbBqJsrnmUe7 Completion of this survey will count as a quiz. You will receive full quiz credit (1/1) if you complete the survey in a meaningful way that reflects self-analysis. Incomplete surveys will receive no credit (0/1). You will be able to opt-in to include your profile in a database to be released to the rest of the class with the purpose of facilitating team formation. Profiles will only be linked to an email address, not names. You must fill the survey for credit regardless of whether you share it with the group or not. You may only edit your responses before the deadline posted in Canvas.

Using such database or through your own means, engage in an honest conversation with individuals about teaming together. You can use the address provided in a profile to directly send an email to potential teammates and start such conversations. Ideally you will team with individuals with similar expectations, priorities, work ethic and with skills complementing yours. Practically, you likely won't find your ideal teammate but you will know what strengths, weaknesses, attitudes, etc. to expect so you can proactively address any concerns that may compromise the efficiency and productivity of the team.

TEAM IN-CLASS ACTIVITIES: Team In-class activities are scheduled throughout the semester and are announced in Canvas. When previously announced in Canvas, you are required to have the required supporting material available to you. Supporting material may include carburetor, measurement tools, and show pieces. You will be provided with a guided activity/challenge in most activities. You will

address these questions with your team and assemble a deliverable that is due by the specified date in Canvas. Get effective at collaborating online with your team so you can make the most of your time in class and continue working on the activity outside class. *See section below for tips on online collaboration*. You are responsible to coordinate with your team in case you did not attend class. Credit for a team activity will only be given to those names written in the submitted deliverable. **There will be no make-up in-class activities. Since last minute emergencies do happen and in the case of team activities you cannot control the schedule of your teammates (as you can control your schedule in the case of individual quizzes), the lowest grade of in-class activities will be dropped at the end of the semester.** Further consideration will be possible but only in case of major emergencies, i.e. becoming ill with COVID-19, long-term hospitalization and other long-term undesirable scenarios that prevent 2 or more team members from engaging with the course for periods >2 days. In those cases, you are directed to BOTH use the Notification of Absence module in Canvas AND notify your instructor by email ASAP.

TEAM PROJECT: Your team will be required to submit a deliverable for each of these activities. Instructions and details will be posted in Canvas in a separate document. Your deliverable will be due on the dates detailed in Canvas. You are responsible to coordinate with your team in case you did not come to class. Credit for an activity will only be given to those names written in the submitted deliverable.

IMPORTANT: significant amount of points will be taken for omitting the unit of measurement in your results, *i.e*. kg, m, in, etc., or providing the wrong units. You are responsible for knowing conversion values between metric and English units such as meters to inches, kilograms to pounds, liters to ounces, etc.

TEAM EVALUATIONS to be included in ALL team activities and projects: Your grade in each team activity will depend on the evaluation of Your performance by you and the rest of your team. You may not receive full credit for the activity if your team considers your performance was not at par with the rest. The following table details the guidelines for evaluating the work by you and each team member.

Grade	Rationale
0-30	NOT ACCEPTABLE: Did not show up to meetings/activities or exhibited detrimental behavior when he/she did. Insignificant contributions to the team, if any. Constantly provided excuses to the team, unwilling to communicate with the team.

31-60	UNACCOUNTABLE: Does not respond to the team effort, i.e. it was difficult to get him/her show up to team meetings and exhibited negative behavior when he/she did. Marginal and/or sporadic contributions of varying quality, e.g. came to one meeting, wrote one paragraph, only suggested ideas, made 1 figure here and there… that actually required more work from the rest of the team.
61-80	POOR: Assisted to ALL meetings/activities but came unprepared, his/her contributions were of poor quality, i.e. poor digital drawings, unclear/unedited text, hand-written equations or pictures of hand-written equations, hand drawings or pictures of hand-drawings. It was difficult to keep him/her engaged with the team.
100	EXPECTED: Easy to organize team meetings with him/her and always came prepared and with a positive attitude, remained engaged in ALL meetings/activities and constantly made high quality contributions to the team. It was a positive experience to work with such accountable person. *This should be the standard grade for all team members in a functional team.*

Each deliverable from a team activity will include the following table. The grades given to you by yourself and your teammates will be averaged and reported in the last column for each team member. This average will be a multiplier to the grade your team gets for the project, i.e. you got a 0.65 average from your team and your project got a 85/100 grade… *YOU* get 55.25/100. **Note that self-evaluation and calculated averages are required**. Any disputes will be solved with all team members present. **Team members must provide hard evidence (i.e. emails, text messages) to support their arguments.**

Team member to evaluate	**Team member evaluating**					
	1, John Doe	2	3	4	5	Average
1, i.e. John Doe						
2						
3						
4						
5						

POSTING OF GRADES AND REQUESTS FOR REVISION

Grades will only be posted in Canvas. Requests to re-evaluate individual or team deliverables will only be accepted during the 5 business days following the posting of the grade, regardless of whether you became aware of it or not. Hence, check Canvas regularly and make sure your Canvas communication settings are correct and your email can always receive new notifications. Revision requests must be submitted by email and must provide a detailed justification for re-evaluation. Revisions will be done online. The entire deliverable will be subjected to a complete re-evaluation of the grade.

Course and University Policies

Attendance at every class is expected. If you have an unavoidable conflict with the class schedule, please contact me before the class. In the case of a sudden emergency or illness, contact me as soon as possible using the Notification of Absence form in Canvas

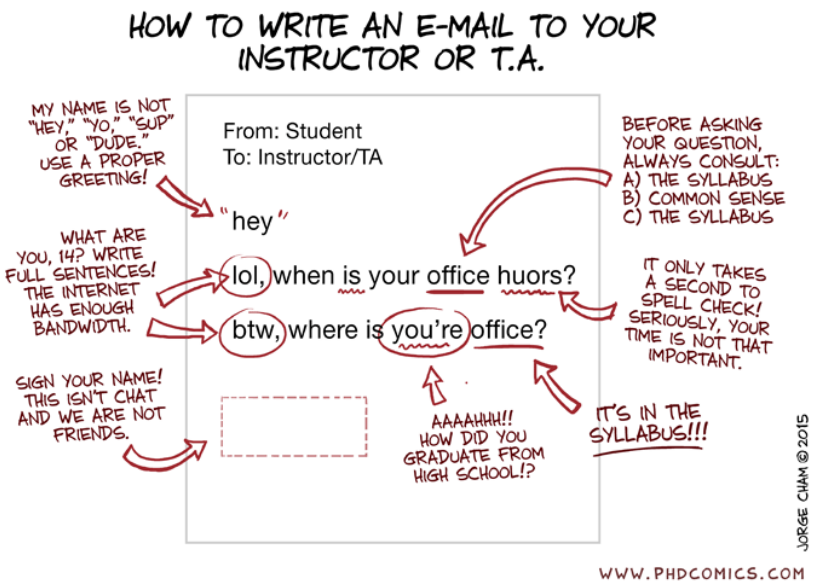
Any behavior, such as verbal abuse, threats, disruptive audio or visuals, that compromises the learning environment during class will be reported to campus police immediately.

CANVAS: Your Canvas web page will be used to post your schedule with all assignments and other useful documents, announcements and deadlines. You are responsible for the continuous monitoring of your Canvas page for such information. Canvas will also be the way I will keep you informed about your progress in the course.

TECHNOLOGY USAGE: Canvas, CAD, word processing, presentation slides, possibly video production using Adobe Premiere or similar tools. You are responsible for having the appropriate instructional technology as required for each activity.

E-mail: E-mail will be used to deliver important and/or urgent information throughout the semester. You are responsible for checking your e-mail for such information and keeping your e-mail address in Canvas accurate. You will be responsible if you miss important information because your account is full, not available, etc. or because you don't regularly check the e-mail address listed in Canvas. Forwarding to external accounts such as Hotmail and Yahoo accounts that get overloaded will cause you to miss important information.

There is a professional etiquette you will follow when sending me an email. You may address me as Dr. Rodrigo, Prof. Rodrigo, Dr. Martinez-Duarte or Prof. Martinez-Duarte. See figure for common mistakes when sending an email. The use of Hey as greeting is particularly discouraged in a professional setting (links to external site)



ACADEMIC INTEGRITY: As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

When, in the opinion of a faculty member, there is evidence that a student has committed an act of academic dishonesty, the faculty member shall make a formal written charge of academic dishonesty, including a description of the misconduct, to the Associate Dean for Curriculum in the Office of Undergraduate Studies. At the same time, the faculty member may, but is not required to, inform each involved student privately of the nature of the alleged charge."

- Cheating on any class activity, including exams, quizzes and project, will not be tolerated in any form. A grade of 0 will be given for that activity and formal charges of academic dishonesty will be pursued.
- Outstanding submissions of any class activity may be used as instructional aids in future offerings of this course, so all project submissions must be free of copyrighted work.

PLAGIARISM. A simple definition of plagiarism is when someone presents another person's words, visuals, or ideas as his or her own. All students, faculty and administrators at Clemson University are expected to abide by ethical standards of conduct. Accordingly, students are prohibited from copying or submitting any work done by others for personal credit. The instructor will deal with plagiarism on a case-by-case basis. I will use, at my discretion, the Plagiarism Resolution Form. All infractions of academic dishonesty will be reported to Undergraduate Studies for resolution through that office. See the Undergraduate Academic Integrity Policy (Links to an external site.) website for additional information about academic integrity at Clemson. Examples of plagiarism include copying any portion of an assignment (including any solution manuals), quiz, or test and submitting it as your original work. If in any doubt, consult pages about Do's and Dont's about plagiarism, ask your instructor, ask a librarian. Some examples of websites:
http://online.sfsu.edu/rone/StudentHelp/Plagiarism.html#examples
https://www.indiana.edu/~istd/examples.html
http://www.deltastate.edu/academics/libraries/library-guides/roberts-laforge-guides/plagiarism-prevention-a-guide-for-students/
http://www.aresearchguide.com/6plagiar.html

COPYRIGHT OF ALL MATERIAL IN THIS COURSE. All materials found in this course**, including exams, quizzes and other forms of assessment,** are strictly for the use of students currently enrolled in this course and only for instructional activities associated with and for the duration of the course; they may not be retained in another medium or further disseminated. They are provided in compliance with the provisions of the Teach Act. Students must seek permission from instructors to record any class activity, including lectures, discussions, and presentations. Students should be reminded to refer to the Use of Copyrighted Materials and "Fair use Guidelines" policy on the CU website for additional information https://clemson.libguides.com/copyright Clemson students, faculty, and staff are expected to comply fully with institutional copyright policy as well as all other copyright laws.

ACADEMIC GRIEVANCES. Students are advised to visit the Ombuds' Office (Links to an external site.)Links to an external site. prior to filing a grievance. After discussion with the undergraduate academic ombudsman, students should contact Undergraduate Studies (656-3022) for assistance filing official paperwork.

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions and financial aid. Any form of abuse, including verbal, will not be

tolerated. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at http://www.clemson.edu/campus-life/campus-services/access/title-ix/. The Office of Access and Equity is in 110 Holtzendorff Hall. It can also be reached by phone 864 656 3181 or by email cuae@clemson.edu. You may report an incident following this link https://www.clemson.edu/campus-life/campus-services/access/title-ix/students/reporting.html

STUDENT ACCESIBILITY SERVICES. Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should let the professor know, and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing studentaccess@lists.clemson.edu, or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen if at all possible, but there could be a significant wait due to scheduled appointments. Students who receive Academic Access Letters are strongly encouraged to request, obtain and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information at the Student Accessibility Services Website (Links to an external site.). and the Office of Access and Equity Website (Links to an external site.).

INCLEMENT WEATHER: In case of class cancellation mandated by the university due to inclement weather, I will communicate with the class via Canvas to announce any changes in tests, quizzes, or other assessment.

SAFETY: Clemson University is committed to providing a safe campus environment for students, faculty, staff, and visitors. As members of the community, we encourage you to take the following actions to be better prepared in case of an emergency:

a. Ensure you are signed up for emergency alerts (https://www.getrave.com/login/clemson),
b. Download the Rave Guardian app to your phone (https://www.clemson.edu/cusafety/cupd/rave-guardian/)
c. Learn what you can do to prepare yourself in the event of an active threat (http://www.clemson.edu/cusafety/EmergencyManagement/)

Additional Course Policies:

- Students may leave the classroom or Zoom call if instructor is more than 15 minutes late, and he has not notified the class of a delay.
- Students that perform below expectations (D or less) during the semester should expect to be contacted by the instructor.
- Attendance will not be taken. However, keep in mind that there are no make-up quizzes or in-class activities, and that your performance will be continuously graded by your teammates. Failing to engage with your team and instructor with no valid reason will impact your grades on individual and team activities.
- Student will be kicked out of the classroom or Zoom call if he/she is disturbing the instructor or the class in any way. In these cases, student is responsible to find out about materials covered in class and any assigned work, i.e., homework, team work. If necessary, such disturbances may be reported through the appropriate channels.

The schedule, policies, procedures, and assignments in this course are subject to change to improve learning outcomes.

Student Support Services

Academic Success Center

The Academic Success Center provides free services, including tutoring, academic coaching, and academic skills workshops, for all Clemson students. Visit the Academic Success Center website (Links to an external site.) for more information on their services and workshops.

Writing Center

Clemson University's Writing Center offers free one-on-one tutoring for all Clemson students. Visit the Writing Center's website (Links to an external site.) for more information about their services or to make an appointment.

Cooper Library

Reference librarians are available in person and via text, phone, email, and chat to answer your research questions. Visit Ask a Librarian (Links to an external site.) for more information or to get in touch with a librarian.

Technical Support

If you are having hardware or software problems, CCIT's Service Desk may be able to help you. Contact them at ITHELP@clemson.edu with a detailed description of your problem.

Academic Advising

Academic advising (Links to an external site.) is an ongoing educational process that connects the student to the University. Academic advising supports the University's mission of preparing the student for learning beyond the confines of the academy. Academic advisors represent and interpret University policies and procedures to the student and help the student navigate the academic and organizational paths of the institution.

Registrar

The Registrar's office (Links to an external site.) provides information about important deadlines, degree and program requirements, and other key information, including use of iROAR to add, drop, or withdraw from courses.