Instructor
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Brown University School of Public Health
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Phone: office: 401-863-6283; cell: 401-369-0443

Class Location
121 South Main St., Room 331

Instructor’s Office Hours
Tuesday, 2:30-3:30 or by appointment
Location: 121 South Main St., Office 211

Teaching Assistants
Hannah Kimmel
Email: hannah_kimmel@brown.edu

Patrick Kreidler
Email: patrick_kreidler@brown.edu

Audience
This course is open to high school, undergraduate and graduate students. There are no prerequisites.

Course Description
This course provides an overview on the relation of mindfulness (the ability to attend in a nonjudgmental way to one’s own physical and mental processes during ordinary, everyday tasks) with various health outcomes and disease risk factors such as diet, obesity, physical activity, sleep, depression, and anxiety. Mechanisms by which mindfulness may influence health will be addressed. The course will assess studies in the field for methodological rigor, and students will be taught strengths and weaknesses of current research. Mixed teaching methods will be used, such as small and large group discussions, informal student presentations, and lectures. Students will be taught various mindfulness practices including direct experience with mindfulness meditation.

Mindfulness and meditation interventions have become more mainstream in behavioral medicine and psychiatry, with the advent of therapies such as Acceptance and Commitment Therapy (ACT), Dialectic Behavior Therapy (DBT), Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT), Mindfulness Training for Smoking (MTS), Mindfulness-Based Eating Awareness Training (MB-EAT), amongst others. Mindfulness-based interventions have been building evidence to potentially, in part, alleviate many of the critical health outcomes that public health is focused on, such as depression, anxiety, and cardiovascular disease. However, moving forward, it is important to provide students with a methodologically rigorous, critical evaluation of the evidence to date, plausible mechanisms, and interventions with the strongest evidence base to be effective.
LEARNING OUTCOMES

By the end of this course students should be able to:
• Explain the state of the evidence on causal associations between mindfulness and various health outcomes and disease risk factors (e.g. diet, obesity, physical activity, sleep, depression, and anxiety).
• Describe plausible mechanisms by which mindfulness may influence health.
• Assess studies in the field for methodological rigor.
• Understand strengths and weaknesses of current research on mindfulness and health.
• Define the primary mindfulness interventions used in health care and community settings.
• Describe first-person experience with mindfulness practices, and how the practices helped personal well-being, if at all.

COURSE CONTENT

Topics Expected to be Addressed in the Course
• State of the evidence on causal associations between mindfulness and various health outcomes and disease risk factors (e.g. diet, obesity, physical activity, sleep, depression, and anxiety).
• Plausible mechanisms by which mindfulness may influence health.
• Assessment of studies in the field for methodological rigor.
• Strengths and weaknesses of current research on mindfulness and health.
• Primary mindfulness interventions used in health care and community settings.
• First-person experience with mindfulness practices customized to foster well-being in college student settings.
<table>
<thead>
<tr>
<th>CLASS</th>
<th>DATE</th>
<th>TIME</th>
<th>TOPIC</th>
<th>CLASS LEADER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6/27</td>
<td>1:00-1:30</td>
<td>Introduction to mindfulness, meditation and health class.</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
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<td>1:40-3:30</td>
<td>Experiential module – MB-College Orientation</td>
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<td></td>
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<td>3:45-5:20</td>
<td>Lecture: &quot;Basic epidemiologic concepts, including causal inference approaches and control groups for evaluating relations of mindfulness and meditation with health.&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td>2</td>
<td>6/29</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 1 (focus on introduction to mindfulness practices)</td>
<td>Dr. Eric Loucks</td>
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<td></td>
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<td>3:00-3:50</td>
<td>Instructor-Led Discussion: Readings on &quot;Basic epidemiologic concepts, including causal inference approaches and control groups for evaluating relations of mindfulness and meditation with health.&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
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<td>4:00-5:00</td>
<td>Lecture: &quot;Potential Impacts of Mindfulness on Diet and Adiposity&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td>3</td>
<td>7/6</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 2 (focus on diet)</td>
<td>Dr. Eric Loucks</td>
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<td></td>
<td></td>
<td>3:00-3:50</td>
<td>Student-Led Discussion: Readings on &quot;Potential Impacts of Mindfulness on Diet and Adiposity&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
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<td>4:00-5:00</td>
<td>Lecture: &quot;Potential Impacts of Mindfulness on Physical Activity&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td>4</td>
<td>7/11</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 3 (focus on physical activity)</td>
<td>Dr. Eric Loucks</td>
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<td></td>
<td></td>
<td>3:00-3:50</td>
<td>Student-Led Discussion: Readings on &quot;Potential Impacts of Mindfulness on Physical Activity&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
<td></td>
<td>4:00-5:00</td>
<td>Lecture: &quot;Potential Impacts of Mindfulness on Sleep&quot;</td>
<td>Dr. Willoughby Britton</td>
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<tr>
<td>5</td>
<td>7/13</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 4 (focus on sleep)</td>
<td>Dr. Eric Loucks</td>
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<td></td>
<td></td>
<td>3:00-3:50</td>
<td>Student-Led Discussion: Readings on &quot;Potential Impacts of Mindfulness on Sleep&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
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<td>4:00-5:00</td>
<td>Review Session for Mid-Term Exam</td>
<td>Dr. Eric Loucks</td>
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<td>6</td>
<td>7/18</td>
<td>1:30-3:00</td>
<td>Mid-Term Exam</td>
<td>Dr. Eric Loucks</td>
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<td>3:15-4:15</td>
<td>Lecture: &quot;Potential Impacts of Mindfulness on Social Support and Loneliness&quot;</td>
<td>Dr. Eric Loucks</td>
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<td>7</td>
<td>7/20</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 5 (focus on communication, social support and loneliness)</td>
<td>Dr. Eric Loucks</td>
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<td></td>
<td></td>
<td>3:00-3:50</td>
<td>Student-Led Discussion: Readings on &quot;Potential Impacts of Mindfulness on Social Support and Loneliness&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
<td></td>
<td>4:00-5:00</td>
<td>Lecture: &quot;Potential Impacts of Mindfulness on Depression and Anxiety&quot;</td>
<td>Dr. Eric Loucks</td>
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<td>8</td>
<td>7/25</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 6 (focus on depression and anxiety)</td>
<td>Dr. Eric Loucks</td>
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<td>3:00-3:50</td>
<td>Student-Led Discussion: Readings on &quot;Potential Impacts of Mindfulness on Depression and Anxiety&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
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<td>4:00-5:00</td>
<td>Lecture: &quot;Potential Impacts of Mindfulness on Cognitive Function and Performance.&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td>9</td>
<td>7/27</td>
<td>1:30-5:00</td>
<td>Experiential module – MB-College Retreat Session</td>
<td>Dr. Eric Loucks</td>
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<td>Term Paper Due Today</td>
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<td>10</td>
<td>8/1</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 7 (focus on cognitive function and performance).</td>
<td>Dr. Eric Loucks</td>
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<td></td>
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<td>3:00-3:50</td>
<td>Student-Led Discussion: Readings on &quot;Potential Impacts of Mindfulness on Cognitive Function and Performance.&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td></td>
<td></td>
<td>4:00-5:00</td>
<td>Lecture: &quot;Common Evidence-Based Mindfulness Interventions in Health Care Settings&quot;</td>
<td>Dr. Eric Loucks</td>
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<tr>
<td>11</td>
<td>8/3</td>
<td>1:30-2:50</td>
<td>Experiential module – MB-College Class 8 (focus on summarizing experiential modules and exploring next steps).</td>
<td>Dr. Eric Loucks</td>
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### INSTRUCTIONAL METHOD

- Each class session will be approximately 3 ½ to 4 hours duration (with regular breaks), involving lectures, group discussions, practical mindfulness intervention experience, and informal student presentations. Classes will typically be arranged to use mixed teaching methods, including a blend of lectures and group work to ensure that the class remains dynamic and interesting to the students as much as possible through the duration of each session.
- Assigned readings will be provided with clear reading objectives.

### COURSE MATERIALS

**Course Texts**

There are no mandatory course texts. For deepening understanding of course material, the two optional texts may be helpful and of interest.

For those with minimal background in Epidemiology, it is can be helpful to familiarize yourself with the major concepts addressed in the following brief book: Rothman, Kenneth J. *Epidemiology: An Introduction.* Oxford University Press. New York, NY. 2012.

The following book is a high quality overview of mindfulness. It is not mandatory to obtain, but is a good source. Brown KW, Creswell JD, Ryan RM (eds.). *Handbook of Mindfulness: Theory, Research, and Practice.* The Guildford Press. New York, NY. 2015.

**Additional Materials**

There will be mandatory weekly readings, distributed through the course website.

### IS THIS A GOOD TIME TO ENGAGE IN MINDFULNESS PRACTICES?

- Meditation involves a fair amount of time coming closer to our thoughts, feelings and physical sensations. This can sometimes be uncomfortable, but there are also a number of resources available to support you. If you have a history of psychiatric issues, especially trauma, post-traumatic stress disorder (PTSD), depression, anxiety or bipolar disorder, you are encouraged to let Dr. Loucks know. It is worth discussing approaches in these contexts. Also, another mindfulness meditation expert, professor, and clinical psychologist who is available to discuss potential challenges with meditation is Dr. Willoughby Britton. She can be reached at willoughby_britton@brown.edu.

- Finally, some mindfulness movements (light yoga) will be done in class. The movement patterns are in the Class 1 folder on the Canvas website. If you have any physical limitations that may affect your ability to do the mindful movements, you are welcome to show these postures to your health professional to gain advice on which postures you may want to avoid. The mindful movements are not mandatory in this class, and you should always listen more closely to your body than to any words of the instructor offering postures.
ASSIGNMENTS AND EVALUATION

Assignments and evaluation are designed to be consistent with the learning outcomes described above. It is hoped that the assignments provide a supportive structure to aid student learning. The course is designed to be clearly structured so that the students are able to gain an excellent understanding of the key concepts in the field.

Assessment

1. **Mid-Term and Final Exam.** The role of the exams are to help gauge overall understanding of the concepts of the class. The mid-term exam will serve to check in on your understanding part way through the term. The final exam will be cumulative. The exams will be composed of short answer and short essay (e.g. 1-2 paragraph answer) questions. The questions will aim to test understanding of the learning outcomes listed above.

2. **Term Paper.** The topic of the term paper should be a literature review of evidence on the relation between a specific mindfulness intervention and a particular health outcome. For example, the paper could present on the state of evidence for a novel mindfulness intervention that has not been covered in class, or only minimally covered in class (e.g. Mindfulness-Based Relapse Prevention, Prison Mindfulness Institute Intervention, Mindfulness-Based Eating Awareness Training, Dialectical Behavior Therapy) and health. Another option would be to present on the evidence of how a particular mindfulness-based intervention already covered in class (e.g. Mindfulness-Based Stress Reduction, Mindfulness-Based Cognitive Therapy) may influence a particular health outcome that was not covered in class (e.g. diabetes). Students are encouraged to utilize Hill’s criteria of causal inference as a guide to evaluate the level of evidence on the mindfulness-based intervention. This is a chance for students to delve more deeply in an area that they are particularly interested in. Similar to the course objectives, the papers should include:
   - State of the evidence on causal associations between the mindfulness-based intervention and the health outcome
   - Plausible mechanisms by which the mindfulness-based intervention could influence health.
   - Assessment of studies in the field for methodological rigor.
   - Strengths and weaknesses of current research on this topic

Papers should be limited to 6 double-spaced pages (not including references), using 1” margins and 11 point Arial font, 12 point Times New Roman or 12 point Calibri font.

The article will be graded based on the following criteria:

**A quality work** shows creative thinking and superior communication skills: original, tightly organized, fully developed, properly documented texts; texts that require no further editing for correct language or appropriate style. Work of this quality is not only easy for readers to comprehend, summarize and remember, but it is also fresh, new and insightful. The writer shows an ability to think critically, to take a clear position and create a compelling argument with appropriate evidence. To earn a grade of A, students must do more than display information in predetermined formats and error-free language. They must also show they can summarize accurately, analyze and synthesize information, and apply what they have read in new contexts to solve new problems. In order to achieve an A, the writer must come up with his or her own ideas and be able to support them with the readings.

**B quality work** is of fairly high quality, lacks originality. Language may need a modest amount of editing for minor usage problems (punctuation, spelling, vocabulary, minor grammar errors). Problems in development and organization are also relatively minor. Overall, the writer can discuss the literature well and the text can be read and understood with minimal difficulty, but it contains little that pushes beyond what was given. In addition a B paper may contain some weakness in documentation. There may be
improper framing of arguments so that the reader cannot tell where the writer’s ideas and the source’s ideas start and end.

C quality work either says very little (offering only obvious, shallow arguments or summaries) or the work is difficult to read and understand.

NC quality work indicates failure and is usually granted in the case where the student did not do the required work, or the quality of language and analysis was so poor that the objectives of the assignment were in no way fulfilled. It may also mean that the student has been found to have committed plagiarism, which results in an irrevocable NC for the assignment and the student may be asked to leave the program.

3. Reading Assignments. Reading assignments will be provided weekly. This course is designed to maximize efficient use of in-class and out-of-class time. Studies have shown that surface knowledge acquisition is often more efficiently performed by students studying outside of class. However practice of that knowledge (e.g. through group discussions, presentations; practical applications, problem-based learning assignments) is necessary for attaining deep knowledge that lasts for years. Consequently students are encouraged to perform readings before class, so that the class discussions and learning will be more effective. Focused reading objectives will be provided. Answers to the reading objectives will be submitted to the instructor – 5% of grade will be given for completion of answering the reading objectives before each class.

4. Self-Reflection Exercises. Self-reflection exercises on the first-person experiential modules will be provided weekly. This course is designed to foster understanding of potential influences of mindfulness on health from both within (i.e. first-person experience) as well as knowing scientific findings on the topic. First-person experiences will be shared with the instructor through reflections on the formal and informal mindfulness practices that the student is engaging with, and sharing insights, challenges, doubts, and positive experiences with the practices that students are comfortable sharing with the instructor. The instructor will provide personalized feedback on the self-reflection exercises at the midway point and end of the course. Answers to the self-reflection exercises will be submitted to the instructor – 5% of grade will be given for completion of answering the self-reflection exercises each week.

5. Class Participation. Class participation is very important for furthering the learning of students, including during the student-lead reading discussions. It gives a chance for students to practice the surface knowledge gained, and allows the knowledge to evolve into deeper understanding. Various opportunities will be provided for group discussions and informal presentations. The scoring method for class participation is listed below:

A: a student receiving an A or A- comes to class prepared; contributes readily to the conversation but doesn’t dominate it; makes thoughtful contributions that advance the conversation; shows interest in and respect for others’ views, participates actively in small groups. Presentations are clear and show creative thinking and superior communication skills: original, tightly organized, fully developed communication of concepts. Work of this quality is not only easy for the audience to comprehend, summarize and remember, but it is also fresh, new and insightful. The student shows an ability to think critically, to take a clear position and create a compelling argument with appropriate evidence. To earn a grade of an A or A- students must do more than display information in predetermined formats and error-free language. They must also show they can summarize accurately, analyze and synthesize information, and apply what they have read in new contexts to solve new problems. In order to achieve an A or A-, the writer must come up with his or her own ideas and be able to support them with evidence.

B: comes to class prepared and makes thoughtful comments when called upon, contributes occasionally without prompting, shows interest and respect for others’ views, participates actively in small groups. A “B” score may also be appropriate to an active participant whose contributions are less developed or
cogent than those of an A level but still advance the conversation. For presentations, B quality work is of fairly high quality, lacks originality. Language may not be particularly clear. Problems in development and organization are also relatively minor. Overall, the presenter can discuss the concepts well and the presentation can be understood with minimal difficulty, but it contains little that pushes beyond the background information that was given. In addition a B presentation may contain some weakness in documentation. There may be improper framing of arguments so that the audience cannot tell where the presenter’s ideas and the source’s ideas start and end.

C: is given to students who participate in discussion, but in a problematic way. Such students may talk too much, make rambling or tangential contributions, continually interrupt the instructor with digressive questions, bluff their way when unprepared, or otherwise dominate discussions, not acknowledging cues of annoyance from instructor or students. A “C” is also given to students who come to class prepared, but do not voluntarily contribute to discussions and gives only minimal answers when called upon. Nevertheless these students show interest in the discussion, listen attentively, and take notes. With regard to presentations, C quality work either says very little (offering only obvious, shallow arguments or summaries) or the work is difficult to understand.

NC: students in this range often don’t participate, have not read the material or done the homework. Students may be disruptive or overtly rude, thereby imposing a negative affect on the participation of others. With regard to class presentations specifically, “NC” quality work indicates failure and is usually granted in the case where the student did not do the required work, or the quality of language and analysis was so poor that the objectives of the assignment were in no way fulfilled.

6. Leading Reading Discussion: In leading the reading discussions, students will be expected to summarize the readings in about a 5 min informal presentation, with focus on the course Learning Outcomes, described on page 2 above. Furthermore, they will be expected to share particular elements of the papers they felt were particularly applicable to the course objectives or to their first-person mindfulness experience of the impacts of that reading on well-being. Students are expected to have questions they would like clarification on, and feedback on from the group, as both clarification for themselves, and what they feel would be important discussion topics to deepen the knowledge of students in the class, related to the course objectives.

A: a student receiving an A or A- comes to class prepared; provides a clear overview of the papers that relate to all relevant course learning outcomes (stated on pg. 2 above). Students provide insightful, rich questions for discussion that lead to deeper understanding for fellow students in the topics that the readings address, and related to the course learning outcomes. A student receiving this grade facilitates the class discussion skillfully, helping students in the group to contribute readily to the conversation but not dominating it; making thoughtful contributions that advance the conversation; showing interest in and respect for others’ views. Presentations are clear and show creative thinking and superior communication skills: original, tightly organized, fully developed communication of concepts. Work of this quality is not only easy for the audience to comprehend, summarize and remember, but it is also fresh, new and insightful.

B: a student received a B provides an overview of the papers, but there may be some lapses in organization of the overview, or the overview addresses some, but not all relevant course learning outcomes (stated on pg. 2 above). Students provide questions for group discussion, but questions could be more rich or insightful to help lead to deeper understanding for fellow students in the topics that the readings address, and related to the course learning outcomes. A student receiving this grade facilitates the class discussion, but misses some opportunities to foster conditions for helping students in the group to contribute readily to the conversation without dominating it; making thoughtful contributions that advance the conversation; showing interest in and respect for others’ views.

C: is given to students who provide an overview of the papers, but in a problematic way. The overview is disorganized, says very little (offering only obvious, shallow arguments or summaries), or does not address the course objectives. Students provide questions for group discussion, but questions are
lacking richness and insight to help lead to deeper understanding for fellow students in the topics that
the readings address, and related to the course learning outcomes. A student receiving this grade
facilitates the class discussion, but misses many opportunities to foster conditions for helping students in
the group to contribute readily to the conversation without dominating it; making thoughtful contributions
that advance the conversation; showing interest in and respect for others' views.

**NC**: students in this range often provide an overview of the readings demonstrating minimal
understanding of the material. Students receiving an NC often have a lack of insightful questions or
facilitation so that there is minimal fostering of group discussion, leading to minimal opportunities for
deepening understanding for fellow students in the topics that the readings address, and related to the
course learning outcomes. “NC” quality work indicates failure and is usually granted in the case where
the student did not do the required work, or the quality of presentation and group facilitation was so poor
that the objectives of the assignment were in no way fulfilled.

**Weighting of Grades**
- Mid-term exam: 20%
- Final exam: 25%
- Term paper: 30%
- Reading assignment completion: 5%
- Self-reflection exercise completion: 5%
- Class participation: 5%
- Leading reading discussion: 10%

**Classification of Grades**

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<thead>
<tr>
<th>Grades</th>
<th>Numerical Scale</th>
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<tr>
<td>A</td>
<td>90-100%</td>
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<tr>
<td>B</td>
<td>80-89%</td>
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<tr>
<td>C</td>
<td>65-79%</td>
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<tr>
<td>NC</td>
<td>0-64%</td>
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