MARYLAND APPLIED
GRADUATE ENGINEERING

## ENPM808L Analytics for Decision Support (0101, DE01)

**Term:** Spring 2025
**Professor:** Dr. W. Lewis Collier
**Pronouns:** he/him
**Office Phone:** N/A
**Email:** lcollier@umd.edu
**Office Hours:** Monday (before class) & by appt.

**Credits:** 3
**Course Dates:** From 27 January 2025 – 17 May 2025
**Course Times:** Monday 7:00pm - 9:40 pm and Online
**Classroom:** JMP 2216

**Canvas/ELMS:** https://umd.instructure.com/courses/1379614

### Course Description

Understand organizational decision-making characteristics and the roles of analytics and decision support systems to enhance and optimize outcomes. Through hands-on practice, be able to lead/collaborate to implement a data analytics project to support organizational goals and measure its effectiveness.

### Prerequisites

Basic coding skills and basic understanding of math and statistics.

Learning Outcomes
After successfully completing this course, you will be able to:

- Understand organizational decision-making characteristics and the roles of analytics and decision support systems to enhance and optimize outcomes.
- Through hands-on practice, be able to lead/collaborate to implement a data analytics project to support organizational goals and measure its effectiveness.
- Design and deliver effective presentation/visualization of analysis results.
- Build predictive and descriptive analytical models for industry applications/problems.
- Be able to take a role in the planning of a data analytics platform to fit into existing organizational data management infrastructure.
- Develop a strategy for model building and deployment of such models into operational work processes for a selected industry application area.
- Design experiments (in a decision-making context), analyze findings, and recommend adjustments to operational/strategic processes in a given application area.
- Present, in a coherent fashion, a definition of the question being addressed, past research into problem area, methodology, and the results of problem analysis.

**Course Materials**

*Required Resources*
- Books:
    - Data Science for Business: What You Need to Know About Data Mining and Data Analytic Thinking
        - Provost, F. & Fawcett, T
        - First edition (2005).
        - **ISBN-10:** 1449361323
        - **ISBN-13:** 978-1449361327
    - Data Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy
        - O'Neil, Cathy
        - Reprint edition (2017).
        - **ISBN-10:** 0553418831
        - **ISBN-13:** 978-0553418835
- Application/Software: Python IDE, such as Anaconda / Spyder (free).
- Total Estimated costs of required course materials: $35.00

*Supplemental Resources (no purchase required)*
(for a deeper understanding of the concepts and tools)
- Optional Reading and Reference Material:
    - Rajaraman, A., & Ullman, J. D. (2012). Mining of massive datasets. New York, N.Y.: Cambridge University Press.
        - You may be able to access a version of this book at http://infolab.stanford.edu/~ullman/mmds/book.pdf
    - Clemen, Robert T. & Reilly, Terence (2014) Making Hard Decisions, Mason, OH, South-Western CENGAGE Learning ISBN-13: 978-0-538-79757-3
    - The National Research Council of the National Academies. (2013). Frontiers in Massive Data Analysis.
    - Washington, DC: The National Academies Press. Retrieved from http://www.nap.edu/catalog.php?record_id=18374
    - Craig, T., & Ludloff, M. E. (2011). Privacy and big data. Sebastopol, CA: O'Reilly.
    - Hastie, Tibshirani, and Friedman (2009). The Elements of Statistical Learning. NY?. Springer. You may be able to access the book for free from http://statweb.stanford.edu/~tibs/ElemStatLearn/

- ○ Free resource on statistics: Downey, A. (2011). Think stats. Sebastopol, CA: O'Reilly Media. You may be able to access the book from http://greenteapress.com/thinkstats2/

- ○ Free resource on probability: Lebanon, G. (n.d.). Probability: The analysis of data, volume 1. Access book from http://theanalysisofdata.com/probability/0_2.html

- ○ A tutorial on a visualization technology D3: Murray, S. (2006). D3 Tutorials. Retrieved from http://alignedleft.com/tutorials/d3

- ● Python:
  - ○ Python is a very easy-to-learn language and is openly accessible. It has extensive libraries for data manipulation and machine learning. There are many ways to install the system on your machine. However, the following is a very complete and well-maintained distribution for Python and its many libraries:
  - ○ Anaconda is packaged together by Continuum Analytics. Please install any of the versions (for Windows, OS X, or Linux). Ensure you use the 3.5 version of Python.
    - ■ Note that the Python book we are using for the introduction of Python references version 2.7. All examples of the book are reworked by the author in Python 3.5 and available at https://github.com/joelgrus/data-science-from-scratch/tree/master/code-python3
  - ○ There are many resources (free or paid) available on the web. Please review the "Resources for Python" above
  - ○ Many Python libraries may be used for exercises:
    - ■ Scientific package Numpy (http://www.numpy.org/)
    - ■ Data processing and visualization package Pandas (http://pandas.pydata.org/)
    - ■ Visualization and charting Matplotlib (http://matplotlib.org)
    - ■ Python 3 Cheatsheet: Pointal, L. (2012). Python 3 Cheat Sheet. Retrieved from http://www.cs.toronto.edu/~fpitt/CSC148/20131/tests/cheatsheet.pdf
  - ○ McKinney, W. (2012). Python for Data Analysis: Data Wrangling with Pandas, Numpy and iPython. Sebastopol, CA: O'Reilly.
    - ■ It's companion website is at https://github.com/wesm/pydata-book
  - ○ Google's Python Class: (2016, March 9). Retrieved from https://developers.google.com/edu/python/?csw=1
  - ○ Think Python: Downey, A. (2012). Think Python. Sebastopol, CA: O'Reilly Media.
  - ○ You may be able to access the book free online from http://greenteapress.com/wp/think-python/
  - ○ Free Python tutorial: (1990). Retrieved from https://docs.python.org/2/tutorial/index.html
- ● Data Sets:
  - ○ There are many freely available sites on the internet for datasets. You can review the list below and see if you can use it for your project. You can directly access the data (to download) or use the dataset's API to connect to the data.
  - ○ U.S. Government's Data.gov (http://www.data.gov)
  - ○ Yelp (http://www.yelp.com/developers/documentation)

- AWS datasets (http://aws.amazon.com/datasets/)
- Google (https://developers.google.com/apis-explorer/)
- Yahoo WebScope (http://webscope.sandbox.yahoo.com/)
- Microsoft (http://datamarket.azure.com/browse/data)
- UCI's datasets (http://archive.ics.uci.edu/ml/datasets.html )
- KDD Cup Archive (http://www.kdd.org/kdd-cup)
- Kdnuggets Index (http://www.kdnuggets.com/datasets/index.html)

## Course Structure

This course includes both on-campus and online sections. To attend synchronously online, log into ELMS-Canvas at the time of the Section 0101 class [Monday 7pm – 940pm] and select "Video Conference" from the left side menu. This will open a Zoom link to the live classroom.

For asynchronous online students, all lectures will be recorded and made available on ELMS-Canvas under "Panopto Recordings/Video Lectures" within 24 hours of the class time. Be sure to review the recorded lecture in a timely manner.

On-campus students come to class prepared to engage with the lecture and materials. Online students, be sure to log into Canvas regularly and participate in discussions and activities. Regardless of the section you are enrolled in, participation is expected.

**Please note** that F1 students enrolled in the on campus section are required to attend in person. If you have a conflict on a particular day, please reach out to me in advance to discuss.

The course is structured so that group efforts are used in the beginning of the course, followed by individual efforts.
The intent is that the group members work together to get up to speed on the tools and methodologies. In addition, group study is encouraged for the mid-term, which focuses on the presented algorithms.
The second half of the course focuses on ensuring that all students can utilize the base decision algorithm information and utilize the baseline understanding of the first half of the course to individually evaluate the data analysis tools for various
applications. In this way, students can utilize the course methods for data that is pertinent to each individual's needs and interests. Group study for the individual projects and final exam are also encouraged, but ALL work products marked as individual efforts are expected to be created individually.

This is a graduate course so there is an expectation that all group members will contribute equally to the group work products. Some will provide more help in coding aspects, some with the underlying math, and some with the
writing. The goal is for the groups to help all members become stronger in their less-effective areas so all students
can thrive in data analysis for the second part of the course, and beyond.

# Communication Guidelines

### Communicating with the Instructor

My goal is to be readily available to you throughout the semester. I can be reached by email at lcollier@umd.edu. Please DO NOT email me with questions that are easily found in the syllabus or on ELMS-Canvas (e.g., When is this assignment due? How much is it worth? etc.), but please DO reach out about personal, academic, and intellectual concerns/questions.

While I will do my best to respond to emails within 24 hours, you will more likely receive email responses from me on between 5pm and 9pm Monday through Thursday evenings.

When constructing an email to me please put "ENPM 808L (Section XXXX): Your Topic" in the subject line. This will draw my attention to your email and enable me to respond to you more quickly.

Additionally, please review [These tips for 'How to email a Professor'](). By following these guidelines, you will be ensured to receive a timely and courteous response.

Finally, if you need to discuss issues not appropriate for the classroom and/or an email, we can arrange to talk by phone, over Zoom, or in person. Send me an email asking for a meeting and we can set something up.

### Announcements

I will send IMPORTANT messages, announcements, and updates through ELMS-Canvas. To ensure you receive this information in a timely fashion, make sure your email and  announcement notifications (including changes in assignments and/or due dates) are enabled in ELMS-Canvas ([How to change notification settings in CANVAS]()).

Log into our ELMs-Canvas course site at least once every 24-hour period to check your inbox and the Announcements page.

### Names/Pronouns and Self-Identifications

The University of Maryland recognizes the importance of a diverse student body, and we are committed to fostering inclusive and equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to in this class, both in terms of your name and your pronouns (he/him, she/her, they/them, etc.). Keep in mind that the pronouns someone uses are not necessarily indicative of their gender identity. Visit trans.umd.edu to learn more.

Additionally, it is your choice whether to disclose how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity (e.g., should it come up in classroom conversation about our experiences and perspectives) and should be self-identified, not presumed or imposed.  I will do my best to address and refer to all students accordingly, and I ask you to do the same for all of your fellow Terps.

### Communicating with your Peers

With a diversity of perspectives and experience, we may find ourselves in disagreement and/or debate with one another. As such, it is important that we agree to conduct ourselves in a professional manner

and that we work together to foster and preserve a virtual classroom environment in which we can respectfully discuss and deliberate controversial questions. I encourage you to confidently exercise your right to free speech—bearing in mind, of course, that you will be expected to craft and defend arguments that support your position. Keep in mind, that free speech has its limit and this course is NOT the space for hate speech, harassment, and derogatory language. I will make every reasonable attempt to create an atmosphere in which each student feels comfortable voicing their argument without fear of being personally attacked, mocked, demeaned, or devalued.

Any behavior (including harassment, sexual harassment, and racially and/or culturally derogatory language) that threatens this atmosphere will not be tolerated. Please alert me immediately if you feel threatened, dismissed, or silenced at any point during our semester together and/or if your engagement in discussion has been in some way hindered by the learning environment.

### Netiquette Policy

Netiquette is the social code of online classes. Students share a responsibility for the course's learning environment. Creating a cohesive online learning community requires learners to support and assist each other. To craft an open and interactive online learning environment, communication has to be conducted in a professional and courteous manner at all times, guided by common sense, collegiality and basic rules of etiquette.

## Grading

### Grade Breakdown

| Assignment | Percentage % |
|---|---|
| Week 1-5 (Group) Assignments | 20% |
| Mid-Term Exam | 20% |
| Week 8-10 (Individual) Assignments | 15% |
| Final (Individual) Project | 25% |
| Final Exam | 20% |
| Total | 100% |

### Course Assignments

*Week 1-5 (Group) Assignments*
- These assignments provide examples of basic decision processing fundamentals.

*Mid-Term Exam*
- This will cover the fundamentals of decision support systems.

*Week 8-10 (Individual) Assignments*
- These assignments stress comparison of decision support systems and prepare for the final project.

*Final (Individual) Project*
- This project emulates what a formal decision support system development effort entails.

*Final Exam*
- This will cover the comparison of decision support systems and the final project.

**Grading Assignments**
All assignments will be graded according to a predetermined set of criteria (i.e., rubric) which will be communicated to students before the assignment is submitted.

To progress satisfactorily in this class, students need to receive timely feedback. To that end, it is my intention to grade all assignments within **a week from** their due date. If an assignment is taking longer than expected to grade, students will be informed of when they can expect to see their grade.

**Grade Computation**
All assessment scores will be posted on ELMS/Canvas page.  If you would like to review any of your grades (including the exams), or have questions about how something was scored, please email me to schedule a time for us to meet and discuss.

It is expected that you will submit work by the deadline listed in the syllabus and/or on ELMS-Canvas. Late work will be penalized according to the late work policy described in the **Course Policies and Procedures** section below.

**Grade Disputes:** I am happy to discuss any of your grades with you, and if I have made a mistake, I will immediately correct it.  Any formal grade disputes must be submitted in writing and within one week of receiving the grade.

Final letter grades are assigned based on the weighted percentage of total assessment points earned.  Final grades will be tabulated from the weighted averages, rounding upwards from fractional values. Thus, an average of 97.00 would equate to a letter grade of A and an average of 96.99 would equate to a letter grade of A-. To be fair to everyone I have to establish clear standards and apply them consistently, so please understand that being close to a cutoff is not the same this as making the cut ($97.49 \neq 97.50$).  It would be unethical to make exceptions for some and not others.

| Final Grade Cutoffs | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| + | >97.50% | + | >87.50% | + | >77.50% | + | >67.50% | + | |
| A | 92.50% to 97.50% | B | 82.50% to 87.5 | C | 72.50% to 77.50% | D | 62.50% to 67.50% | F | <60.0% |
| - | >=90.00% | - | >= 80.00% | - | >=70.00% | - | >=60.00% | - | |

# Course Schedule

| Part 1 – Understanding Data Analysis Tools | | |
|---|---|---|
| Week 01 | 27 Jan 2025 | Introduction to Analytics and Decision Support (DSfB Ch 1,2) |
| Week 02 | 03 Feb 2025 | Data Understanding and Visualization (DSfB Ch 3) |
| Week 03 | 10 Feb 2025 | Data Classification (DSfB Ch 4) |
| Week 04 | 17 Feb 2025 | Data Modelling and Decision-Making Support (DSfB Ch 5) |
| Week 05 | 24 Feb 2025 | Similarity, Neighbors, and Clustering (DSfB Ch 6) |
| Week 06 | 03 Mar 2025 | Midterm Review, Midterm Exam (Take-Home) [Due 7pm 10 Mar 2025] |
| Week 07 | 10 Mar 2025 | [Midterm due at 7pm] Hidden Markov Modeling |
| Week 08 | 17 Mar 2025 | Spring break (no class) |
| Part 2 – Evaluating Data Analysis Results | | |
| Week 09 | 24 Mar 2025 | Evaluating Classifiers (Basic) (DSfB Ch 7) |
| Week 10 | 31Mar 2025 | Evaluating Classifiers (Basic) (DSfB Ch 7) |
| Week 11 | 07 Apr 2025 | Evaluating Model Performance (DSfB Ch 8) |
| Week 12 | 14 Apr 2025 | Evaluating Classifiers (Advanced) (DSfB Ch 9) |
| Part 3 – Planning Data Analysis | | |
| Week 13 | 21 Apr 2025 | Data Science Solution Design (DSfB Ch 11), |
| Week 14 | 28 Apr 2025 | Data Revisited (DSfB Ch 12) |
| Week 15 | 05 May 2025 | Data Science, Business Strategy, & Conclusions (DSfB Ch 13, 14) |
| Part 4 – Presenting Data Analysis Results | | |
| Week 16 | 12 May 2025 | Final Projects Delivery and Presentations (ALL papers and presentations due on this date!) |
| Week 16 | 14 May 2025 | Reading Day |
| Week 17 | 19 May 2025 | Final Exam Due (no class) |

| Week # | Topic | To Do / Deliverable |
|---|---|---|
| **01** | Introduction to Analytics and Decision Support (DSfB Ch 1,2) | Before class <br> • Read all of Weapons of Math Destruction (expected reading time 4 to 6 hours) <br> • Read DSfB Chapters 1 & 2 : Introduction to data analytics <br> • Load Python on your computer <br> In class <br> • Introduction to data <br> • Course overview and syllabus review <br> • Intro to Python <br> • Questions <br> • Exercise discussion <br> After class <br> • Exercise 1 (work in a group is allowed, and encouraged) |

| 02 | Data Understanding and Visualization (DSfB Ch 3) | Before class<br>● Complete and turn in Exercise 1<br>● Read DSfB Chapter 3 : Introduction to data entropy and segmentation<br>In class<br>● Review and questions<br>● Data entropy<br>● Data segmentation<br>● Questions<br>● Exercise discussion<br>After class<br>● Exercise 2 (work in a group is allowed, and encouraged) |
|---|---|---|
| 03 | Data Classification (DSfB Ch 4) | Before class<br>● Complete and turn in Exercise 2<br>● Read DSfB Chapter 4 : Fitting a model to data<br>In class<br>● Review and questions<br>● Linear Discriminant Functions<br>● Logistic Regression<br>● Questions<br>● Exercise discussion<br>After class<br>● Exercise 3 (work in a group is allowed, and encouraged) |
| 04 | Data Modelling and Decision-Making Support (DSfB Ch 5) | Before class<br>● Complete and turn in Exercise 3<br>● Read DSfB Chapter 5 : Data overfitting<br>In class<br>● Review and questions<br>● Cross Validation<br>● Tree Pruning<br>● Questions<br>● Exercise discussion<br>After class<br>● Exercise 4 (work in a group is allowed, and encouraged) |
| 05 | Similarity, Neighbors, and Clustering (DSfB Ch 6) | Before class<br>● Complete and turn in Exercise 4<br>● Read DSfB Chapter 6 : Data similarity, neighbors, and clusters<br>In class<br>● Review and questions<br>● Similarity<br>● Neighbors<br>● Clusters<br>● Questions<br>● Mid-term review<br>● Exercise discussion<br>After class<br>● Exercise 5 (work in a group is allowed, and encouraged) |

| 06 | Midterm Exam (Take home) | Before class<br>   • Review material for Mid-term exam<br>In class<br>   • Mid-term Exam<br>After class<br>   • Write proposal for final project. |
|---|---|---|
| 07 | Hidden Markov Modeling, Midterm Review | Before class<br>   • Complete and turn in Exercise 5<br>   • Review seminal Rabiner paper: "A Tutorial on Hidden Markov Models and Selected Applications in<br>   • Speech Recognition"<br>   • Review Stamp paper: "A Revealing Intro to Hidden Markov Models"<br>In class<br>   • Review and questions<br>   • Hidden Markov modelling<br>      ○ Introduction to HMM Problems<br>      ○ Use of HMM for Language Processing<br>      ○ Use of HMMs for model-based 3-D Reconstruction of objects<br>   • Questions<br>After class<br>   • Study for mid-term exam (study in groups is allowed and encouraged) |
| 08 | <center>SPRING BREAK, No class meeting</center> ||
| 09,10 | Evaluating Classifiers (Basic) (DSfB Ch 7) | Before class<br>   • Complete and turn in proposal for final project.<br>   • Data Set to be used.<br>   • Decision to be supported.<br>   • Analysis to be performed to support the decision.<br>   • Expected use of results (if applicable).<br>   • Read DSfB Chapter 7 : Evaluating classifiers<br>In class<br>   • Review and questions<br>   • Evaluating classifiers<br>   • Confusion Matrix<br>   • Expected Values<br>   • Questions<br>   • Exercise discussion<br>After class<br>   • Exercise 6 (Individual effort, not in a group)<br>   • Receive comments on proposal |
| 11 | Evaluating Model Performance (DSfB Ch 8) | Before class<br>   • Review comments on final project proposal, revise, and resubmit<br>   • Complete and turn in Exercise 6<br>   • Read DSfB Chapter 8 : Visualizing Model Performance<br>In class<br>   • Review and questions |

| | | |
|---|---|---|
| | | • Visual Evaluation Methods<br>    ○ Rank vs. Classification<br>    ○ Receiver Operating Characteristic (ROC) Curve<br>    ○ Questions<br>    ○ Exercise discussion<br>After class<br>• Exercise 7 (Individual effort, not in a group)<br>• Resubmit project proposal, incorporating comments. |
| **12** | Evaluating Classifiers (Advanced) (DSfB Ch 9) | Before class<br>• Complete and turn in exercise 7<br>• Read DSfB Chapter 9 : Complex evaluation of classifiers<br>• Receive final approval on project proposal.<br>In class<br>• Review and questions<br>• Complex evaluation methods<br>• Questions<br>• Exercise discussion<br>After class<br>• Exercise 8 (Individual effort, not in a group)<br>• Begin work on final project |
| **13** | Data Science Solution Design (DSfB Ch 11),<br><br>Data Revisited (DSfB Ch 12) | Before class<br>• Complete and turn in exercise 8.<br>• Peruse DSfB Chapter 10 for context<br>• Read DSfB Chapters 11 & 12 : Data science solutions design & Other data science tasks and techniques<br>In class<br>• Review and questions<br>• Solving data analytics problems<br>• Questions<br>• Project discussion<br>After class<br>• Continue work on final project and presentation. |
| **14** | Data Science, Business Strategy, & Conclusions (DSfB Ch 13, 14) | Before class<br>• Continue work on final project and presentation.<br>• Read DSfB Chapters 13 & 14 : Data science and business strategies<br>• Submit draft slides for final presentation for review and comments.<br>In class<br>• Review and questions<br>• Co-occurrences and Associations<br>• Profiling<br>• Link Prediction and Social Recommendation<br>• Data Reduction and Latent Information<br>• Bias, Variance, and Ensembles |

| | | ● Intro to Support Vector Machines and Neural Networks<br>● Data Science and Business Strategies (as time permits)<br>● Questions<br>● Project discussion<br>After class<br>● Continue work on final project and presentation. |
|---|---|---|
| **15** | Final Projects Delivery and Presentations (First N/2) | Data Science, Business Strategy, & Conclusions (DSfB Ch 13, 14)<br>Before class<br>● Complete project, presentation, and paper. ALL FINAL PROJECTS DUE NOW!<br>In class<br>● First N/2 presentations (20-30 mins each)<br>● Review and questions<br>After class<br>● Complete review comments on today's presentations, due by Friday of that week. |
| **16** | Reserved for makeup material if a class is cancelled due to weather, etc. | |
| **16** | Reading Day | No class - Reading Day |
| **17** | Final Exam | Before class<br>● Review all material for final exam<br>In class<br>● Complete Final Exam (completed individually, in class)<br>After class<br>● Relax and await final grade |

Note: This is a tentative schedule, and subject to change as necessary – monitor ELMS-Canvas for current deadlines. In the unlikely event of a prolonged university closing, or an extended absence from the university, adjustments to the course schedule, deadlines, and assignments will be made based on the duration of the closing and the specific dates missed.

# Course Policies and Procedures

The University of Maryland's conduct policy indicates that course syllabi should refer to a webpage of course-related policies and procedures. For a complete list of graduate course related policies, visit the [Graduate School website](#). Below are course-specific policies and procedures which explain how these Graduate School policies will be implemented in this class.

**Classroom Technology**
I expect you to make the responsible and respectful decision to refrain from using your cellphone during class time. If you have critical communication to attend to, please excuse yourself and return when you are ready. For more information about the science behind the policy watch: http://youtu.be/WwPaw3Fx5Hk

Likewise, as I do not expect students to be buried in their computers, this will not be a PowerPoint presentation-

centric course. I will use slides to highlight topics, and data sets, but I will not be reading them to you. I expect students to have read the material before the class so that in depth discussions can be had during class (see note above about grading for class participation). As stated above, the overarching goal of this class is to provide an understanding of decision-making algorithms. Hands on practice will lead to a better understanding when real data is processed, but discussion beforehand will afford the base understanding that enables the deeper comprehension when data is processed and analyzed.

### Satisfactory Performance
The Graduate School expects students to take full responsibility for their academic work and academic progress. The student, to progress satisfactorily, must meet all the academic requirements of this course. Additionally, each student is expected to complete all readings and any preparatory work before each class session, come to class prepared to make substantive contributions to the learning experience, and to proactively communicate with the instructor when challenges or issues arise.

### Questions about Assignments
Please ask all questions you may have about an assignment by 9:00 PM the Sunday before the assignment due date (which is usually Monday at start of class). Any questions asked after that time may not be answered in time for you to make changes to your work.

### Late Work Policy
Assignments should be completed by the due date and time listed with the assignment, on the syllabus, and/or in the course calendar. If you are unable to complete an assignment by the stated due date, it is your responsibility to contact your instructor to discuss an extension, at least 24 hours BEFORE the assignment is due. Extensions are not guaranteed, but may be granted at the instructor's discretion.

**Assignments submitted late without an approved extension will receive a 10% deduction in total grade per each calendar day late up to a maximum of three days late (i.e., there is a maximum of a 30% grade reduction for assignments submitted late). Work submitted more than three days late will not receive feedback and will automatically earn a grade of zero.**

### Religious Observance
It is the student's responsibility to inform the instructor of any intended absences for religious observances in advance. Notice should be provided as soon as possible but no later than the end of the schedule adjustment period.

### Academic Integrity
For this course, some of your assignments will be collected via Turnitin on ELMS/Canvas.  I have chosen to use this tool because it can help you improve your scholarly writing and help me verify the integrity of student work.  For information about Turnitin, how it works, and the feedback reports you may have access to, visit Turnitin Originality Checker for Students

The University's Code of Academic Integrity is designed to ensure that the principles of academic honesty and integrity are upheld. In accordance with this code, the University of Maryland does not tolerate academic dishonesty. Please ensure that you fully understand this code and its implications because all acts of academic dishonesty will be dealt with in accordance with the provisions of this code. All students are expected to adhere to

this Code. It is your responsibility to read it and know what it says, so you can start your professional life on the right path. **As future professionals, your commitment to high ethical standards and honesty begins with your time at the University of Maryland.**

It is important to note that course assistance websites, such as CourseHero, or AI generated content are not permitted sources, unless the instructor explicitly gives permission. Material taken or copied from these sites can be deemed unauthorized material and a violation of academic integrity. These sites offer information that might be inaccurate or biased and most importantly, relying on restricted sources will hamper your learning process, particularly the critical thinking steps necessary for college-level assignments.

Additionally, students may naturally choose to use online forums for course-wide discussions (e.g., Group lists or chats) to discuss concepts in the course. However**, collaboration on graded assignments is strictly prohibited unless otherwise stated**. Examples of prohibited collaboration include: asking classmates for answers on quizzes or exams, asking for access codes to clicker polls, etc. Please visit the **Office of Graduate Studies' full list of campus-wide policies** and reach out if you have questions.

Finally, on each exam or assignment you must write out and sign the following pledge:   *"I pledge on my honor that I have not given or received any unauthorized assistance on this exam/assignment."*

If you ever feel pressured to comply with someone else's academic integrity violation, please reach out to me straight away. Also, *if you are ever unclear* about acceptable levels of collaboration, *please ask*!

To help you avoid unintentional violations, *the following table* lists levels of collaboration that are acceptable for each graded exercise.

| | OPEN NOTES | USE BOOK | LEARN ONLINE | GATHER CONTENT With AI | ASK FRIENDS | WORK IN GROUPS |
|---|---|---|---|---|---|---|
| Homework Assignments (1-5) | ✓ | ✓ | ✓ | X | ✓ | ✓ |
| Homework Assignments (6-8) | ✓ | ✓ | ✓ | X | ✓ | X |
| Midterm Exam | ✓ | ✓ | X | X | X | X |
| Final Exam | ✓ | ✓ | X | X | X | X |

## Course Evaluation

Please submit a course evaluation through Student Feedback on Course Experiences in order to help faculty and administrators improve teaching and learning at Maryland. All information submitted to Course Experiences is confidential. Campus will notify you when Student Feedback on Course Experiences is open for you to complete your evaluations at the end of the semester. Please go directly to the **Student Feedback on Course Experiences** to complete your evaluations. By completing all of your evaluations each semester, you will have the privilege of accessing through Testudo the evaluation reports for the thousands of courses for which 70% or more students submitted their evaluations.

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## Tips for Succeeding in this Course

1. **Participate.** I invite you to engage deeply, ask questions, and talk about the course content with your classmates. You can learn a great deal from discussing ideas and perspectives with your peers and professor. Participation can also help you articulate your thoughts and develop critical thinking skills.
2. **Manage your time.** Students are often very busy, and I understand that you have obligations outside of this class. However, students do best when they plan adequate time that is devoted to course work. Block your schedule and set aside plenty of time to complete assignments including extra time to handle any technology related problems.
3. **Login regularly.** I recommend that you log in to ELMS-Canvas several times a week to view announcements, discussion posts and replies to your posts. You may need to log in multiple times a day when group submissions are due.
4. **Do not fall behind.** This class moves at a quick pace and each week builds on the previous content. If you feel you are starting to fall behind, check in with the instructor as soon as possible so we can troubleshoot together. It will be hard to keep up with the course content if you fall behind in the pre-work or post-work.
5. **Use ELMS-Canvas notification settings.** Pro tip! Canvas ELMS-Canvas can ensure you receive timely notifications in your email or via text. Be sure to enable announcements to be sent instantly or daily.
6. **Ask for help if needed.** If you need help with ELMS-Canvas or other technology, IT Support. If you are struggling with a course concept, reach out to me and your classmates for support.

## Student Resources and Services

Taking personal responsibility for your learning means acknowledging when your performance does not match your goals and doing something about it. I hope you will come talk to me so that I can help you find the right approach to success in this course, and I encourage you to visit the Counseling Center's Academic Resources to learn more about the wide range of resources available to you. Below are some additional resources and services commonly used by graduate students. For a more comprehensive list, please visit the Graduate School's Campus Resources Page.

**Accessibility and Disability Services**
The University of Maryland is committed to creating and maintaining a welcoming and inclusive educational, working, and living environment for people of all abilities. The University of Maryland is also committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the University, or be subjected to discrimination. The Accessibility & Disability Service (ADS) provides reasonable accommodations to qualified individuals to provide equal access to services, programs and activities. ADS cannot assist retroactively, so it is generally best to request accommodations several weeks before the semester begins or as soon as a disability becomes known. Any student who needs accommodations should contact me as soon as possible so that I have sufficient time to make arrangements.

For assistance in obtaining an accommodation, contact Accessibility and Disability Service at 301-314-7682, or email them at adsfrontdesk@umd.edu. Information about sharing your accommodations with instructors, note taking assistance and more is available from the Counseling Center.

**Writing Center**
Everyone can use some help sharpening their communication skills (and improving their grade) by visiting The Graduate School's Writing Center and schedule an appointment with them. Additionally, international graduate students may want to take advantage of the Graduate School's free English Editing for International Graduate Students (EEIGS) program.

**Health Services**
The University offers a variety of physical and mental health services to students. If you are feeling ill or need non-emergency medical attention, please visit the University Health Center.

If you feel it would be helpful to have someone to talk to, visit UMD's Counseling Center or one of the many other mental health resources on campus.

**Notice of Mandatory Reporting**
Notice of mandatory reporting of sexual assault, sexual harassment, interpersonal violence, and stalking:  As a faculty member, I am designated as a "Responsible University Employee," and I must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to UMD's Title IX Coordinator per University Policy on Sexual Harassment and Other Sexual Misconduct.

If you wish to speak with someone confidentially, please contact one of UMD's confidential resources, such as CARE to Stop Violence  (located on the Ground Floor of the Health Center) at 301-741-3442 or the Counseling Center (located at the Shoemaker Building) at 301-314-7651.

You may also seek assistance or supportive measures from UMD's Title IX Coordinator, Angela Nastase, by calling 301-405-1142, or emailing titleIXcoordinator@umd.edu.
To view further information on the above, please visit the Office of Civil Rights and Sexual Misconduct's website at ocrsm.umd.edu.

**Basic Needs Security**
If you have difficulty affording groceries or accessing sufficient food to eat every day, or lack a safe and stable place to live, please visit UMD's Division of Student Affairs website for information about resources the campus offers you and let me know if I can help in any way.

**Veteran Resources**
UMD provides some additional supports to our student veterans. You can access those resources at the office of Veteran Student life and the Counseling Center. Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, disabilities) are welcome and encouraged to communicate these, in advance if possible, to the instructor.