

GES 673: Processing Geographic Data – Fall 2025

Professor Ronald E. Wilson

Office Hours: By appointment.

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Meeting Days: Thursday 6:00 pm – 8:30 p.m.

Session Dates: August 25 – December 19, 2025

Course Description & Coverage

Geo-processing is about the cleaning and preparation of geographic data for analytical purposes. Numerous geo-processing tools are available in any GIS, with this course covering –in detail– the use of several tools in ESRI ArcGIS Toolbox. An emphasis in this course is on developing process methods to (i) modify data and make them available for use by a broad range of users and (ii) create new data to answer analytical questions. As such, the geo-processing tools are presented in a task-oriented manner that involves following a methodical process to results in standardized data sets and basic statistical information.

While geo-processing is commonly thought of as the application of a specific set of tools to manipulate geographic data, it is often the case that several tools are used in a systematic manner to prepare existing data or create new data to solve analytical problems. As such, students will gain an understanding of how to develop a geo-processing method that uses several tools to meet an objective. GIS operation theories will be covered to give students a framework for understanding how a GIS is used to store and manipulate geographic data. Students will also learn how to document their methods for the purpose of (i) allowing replication of the method and (ii) providing transparency for data quality assessment.

The intent is to transform students into GIS “power users” who have a broad knowledge range of geo-processing tools, including the development of a flexible intellect to assemble tools into a coherent and systematic method that produces quality results.

The course is divided into three sections, with classes in each section covering a stage of an overall geo-processing method. After a method is presented in full across a series of classes, students will replicate that method with a new data set to produce a final professional product as an assessment of their abilities and knowledge. Replication of the method using the geo-processing tools covered will reinforce the understanding of the tools by requiring students to critically assess how to assemble a method that produces quality data for use by others or in their own analyses.

Section I: Geo-processing to Prepare Data for Analysis introduces basic techniques and tools that are part of a geo-processing method to clean and/or prepare data for spatial analysis. Students will use vehicle crash data from the Commonwealth of Massachusetts to select crash types, standardize areal

geographies, spatially combine (aggregate) observations with the areal and line geographies, and summarize spatial relationships. Basic statistics will also be calculated to record crash information by areal geography for the purpose of user reporting. Generative AI will be used as an “assistant” in determining the best way to geo-process the geographic data and make sense of the method.

Section II: Geo-processing Tabular Records to Summarize and Connect with Geography covers how to process tabular record data, with the objective to demonstrate the processing geocoded data that is not connected with a GIS layer (geography). Students will process tabular data that contains geographic data by summarizing records by time and geography with California mortality data. Students will also learn how to connect these results to geography for map visualization. Generative AI will be used as a “consultant” in determining the best way to geo-process the tabular data.

Section III: Geo-processing for Descriptive Statistics covers the use of several proximity analysis techniques to geo-process data for spatial analysis. Using Subsidence Incident Reports (reported sink holes) for the state of Florida, students will create a set of distance analysis statistics, summarize the results into a table, and interpret the results. Students will gain experience in creating statistics about geographic data from geo-processing, including how to evaluate the spatial relationships identified in the results. Generative AI will be used as a “collaborator” in evaluating the statistical results generated from the assignment.

Required Articles

Textbooks are not required for this course. Instead, professional articles and book chapters are used to give students a deeper understanding of what geo-processing tools do, how they work, and how to think about using those tools in a methodical manner. All reading materials are provided and listed under their respective classes in the outline below. Most readings are for the next class on the date listed. However, some readings are more associated with the class they date they are assigned. The instructor will indicate in each class what readings are due for current and upcoming classes.

Assignments & Assessments

Assignments

Students are given data sets though out the class and are expected to follow the geo-processing method from the lectures and demonstrate an ability to carry out the tasks by replication, including describing why the tasks are carried out in the procession. As an applied course, the emphasis of the assignments is on comprehension of the geo-processing tools and the reasoning that contribute to a methodological approach in preparing data for use by others for individual work.

Assignment Ethos

UMBC guidelines state that for every credit, graduate students should spend about 3+ hours per credit hour. During outside class times, students are expected to do their own research about the topics and materials presented in classroom. The instructor is always available for guidance, but graduate school is about students learning how to use their own devices in solving assignment problems that can aid in completing the assignments. This translates into about 9 to 12 hours a week beyond the work done in the classroom.

Replication Projects

There are **no** formal in-class exams for this course. As an applied course, the emphasis is on gaining a thorough understanding of the geo-processing tools by working directly with raw data as part of a series of replication projects. The replication projects are designed to reinforce not only the familiarity with tools, but in developing a methodological approach to preparing data. Note that there are short assessments that are periodically given throughout the class -the next sub-section below contains more details.

Three replication projects are given during the semester, one for each section of the class. The purpose of these projects is for students to repeat the method covered across the classes in each section. Students are expected to replicate the method presented using the geo-processing techniques/tools covered as an assessment of their understanding of the material presented. Students will also provide documentation their method to reveal insight into their critical thinking skills in completing the project. The documentation will also serve as an example of how to create a data processing guide so that other analysts can reproduce the results, thus providing transparency into the quality of the data.

Assessments

While there are no formal comprehensive in-class exams for this course, on-line assessments may be given periodically throughout the semester. These assessments are designed to check comprehension of the assigned readings and lecture material, with occasional reference to in-class exercises. They are intentionally brief and may occur at random intervals to encourage students to stay engaged with the course material on an ongoing basis. The goal of these assessments is not only to measure recall, but to reinforce the importance of steady preparation and familiarity with the key concepts and tools that underpin the replication projects.

Student Evaluation

To receive a letter grade of an 'A' a student must adequately demonstrate a full understanding of the (i) geo-processing techniques presented in class in a way that shows (ii) an understanding of their part in a method to meet a data processing objective. The letter grade of a 'B' will be earned if a student is only able to demonstrate a solid understanding of one of these aspects but lacks in the other. A letter grade of 'C' or lower will be given if the student is unable to demonstrate sufficient knowledge of either aspect. Letter grades of 'D' are rarely assigned. Anything less than an average performance of a 'C' in graduate school will receive an 'F.'

The following is the weighting rubric across the lab assignments and replication project:

Lab and Homework Assignments	15%
On-line Assessments	9%
Replication Assignment 1: Cleaning and Processing Geographic Data for Analysis	27%
Replication Assignment 2: Geo-processing Tabular Record Data for Use in a GIS	22%
<u>Replication Assignment 3: Analytical Geo-processing for Statistical Reporting</u>	<u>27%</u>
Total	100%

Grades are based on a weighted percentage: 94-100% = A; 90-93 = A-; 87-89% = B+; 84 to 86 = B; 80 to 83 = B-; 77-79% = C+; 74 to 76 = C; 70 to 73 = C-; less than 70% = F.

TW Rule: Just because a student tries, it does not guarantee a passing grade.

MP Rule: Just because a student does well in a technical class, does not translate into an expectation of doing well in an analytical class.

For any reason an assignment cannot be turned in on time **a student MUST do** two things. First, the student must notify the instructor with a full description of the reason before the date it is due. Second, the student must give a due date to turn in the assignment afterwards. That due date cannot be later than the start of the next class. If the assignment is not turned in by that date, then a letter grade will be deducted based off the grade the student received from initial review. If the assignment is not submitted two weeks after the due date, the student will receive no credit for the assignment.

Regardless, the student will still be responsible for ensuring that all assignments are completed and for any material that we cover in class. It is the student's responsibility to identify other students, the Teaching Assistant (TA), the instructor, or any outside source that will aid in completing the assignments.

Writing Quality Expectations for Assignments and Projects

This course is part of a curriculum that awards a Masters in Professional Studies (M.P.S.) degree. Because the course requires students to describe –in writing– their interpretations of statistical results it is expected that students will generate products that meet the professional standards of such a program. One of the main facets of an M.P.S. is to gain an ability to clearly communicate analytical results to audiences of all types. The following is a rubric for writing expectations:

<i>Grade</i>	<i>Style</i>	<i>Substance</i>
A	Clear and novel organization Accessible and concrete language Few mechanical errors Noteworthy graphics	Well-supported arguments Use of pertinent examples and facts Awareness of complexities Appropriate use of sources
B	Clear and competent organization Few sentence errors Well-prepared graphics	A few incorrect statements Adequately supported statements Appropriate secondary sources
C	Clear organization Adequate content Adequate graphics	Several incorrect statements Major arguments supported Inconsistent use of sources
D	Unclear organization Many mechanical errors Incomplete visual graphics	Many incorrect or unclear statements Unsupported arguments Irrelevant or misapplied examples

All assignment and project products for this course **will be evaluated** on the student's ability to write a high-quality report of findings. Exercises and projects are designed to train students on how to professionally report analytical results in documents or write software code that others will read or use. This is an important facet in demonstrating the value of geography and spatial analysis over other forms of analysis. All products, written or coded, must be thoroughly defined and polished. **Poorly written assignments may be downgraded one letter from achieved grade.**

UMBC offers two options for helping students improve their writing. The first is through the [USG Center for Academic Success](#), who directly help students improve their writing. The second option is through the UMBC [Writing Center](#), which offers online [tutoring](#) for ANY written assignment in ANY course during both summer sessions. Students may choose to chat synchronously online with a [tutor](#), or submit a paper and receive asynchronous feedback. All [appointments](#) must be made at least one day in advance of meeting for a session.

Using Generative AI for Assignments

Generative AI (GenAI) such as ChatGPT, Bard/Gemini, Windows CoPilot, or Bing may be used to help in completing assignments, projects, assessments, or in-class work. However, the results from using these tools must be in the context of the assignment's (i) objectives, (ii) subject matter, (iii) geographic context, and the (iv) data used in the analysis. GenAI is unable to provide an exact answer to the questions from an assignment because the tool can only provide a general answer from its stores of data about a subject that has broad application, not specific classroom encounters.

Successful use of the GenAI to meet the assignment objectives has students integrating AI-generated responses with their own writing for a more nuanced analysis that leverages the speed and processing power of tools but showcases a students' ability to apply their human skills of assembling and formulation specific responses. This process may even involve scrutinizing the GenAI's interpretations, possibly challenging or iteratively exploring responses further for deepening the insights about the subject or analysis with additional context-specific research or relevant theories. This process also may involve refining an integrated response by the student though a review by the GenAI tool.

When assessing assignments, projects, or in-class work, that used GenAI, students must revise the output to ensure that (i) the objective of the assignment is demonstrated, (ii) includes the subject being covered, (iii) uses the data from class, and (iv) depicts the geography being studied.

Plagiarism

Copying or using another's work in written or oral form –partial or complete– without giving credit to the other person is a serious academic offense and is taken **VERY** seriously in this class, by the Department and by the University. UMBC specifically defines plagiarism as anyone who:

"knowingly, or by carelessness or negligence, representing as one's own in any academic exercise the words, ideas, works of art or computer-generated information and images of someone else."

Any student who plagiarizes will be referred to the Program Directors and will be subject to the policies of the university. In general, the consequences of plagiarism include failing an assignment, receiving a lower course grade, and even failing a course. Examples of plagiarism are:

- Submit someone else's or AI's responses as your own.
- Buy a paper from a paper-mill, website or other source.
- Copy sentences, phrases, paragraphs, or ideas from someone else's work, published or unpublished, without giving the original author credit.
- Replace select words from a passage without giving the original author credit.
- Copy any type of graphics, tables, graphs, maps, or charts from someone else's work without giving the original author credit.
- Piece together phrases, ideas, and sentences from a variety of sources to write an essay.
- Build on someone else's idea or phrase without giving the original author credit.
- Using another person's maps as your own or using another's map as a foundation for making your own.
- Use Artificial Intelligence (AI) without reviewing and refining the output to ensure that it is correct and does not use another authors work that you are claiming to have produced.

Details about avoiding [plagiarism, examples, and disciplinary policies](#) should be reviewed to gain a clear understand prior to working on an assignment or exam. Resources are also available on campus to help students needing academic support on this subject at the [Center for Academic Success](#).

Communications

Course materials, grades, and official announcements will be distributed through **Blackboard**, as it serves as the official platform of the university. Students are expected to regularly check Blackboard to stay updated on course content and performance.

For **class discussions, questions, and informal communication**, we will use **Discord** as a more modern and efficient platform for collaboration. Discord will serve as the primary space for students to ask questions, share resources, and engage with both the instructor and classmates in real time.

E-mail will also be used for individual or sensitive matters, particularly those related to grades or personal issues. Students are encouraged to check their UMBC email regularly and to use it when contacting the instructor directly.

Discord Use

Discord will serve as the primary platform for class discussions, Q&A, and peer-to-peer support outside of scheduled class times. Its purpose is to create a collaborative and interactive learning environment where students can exchange ideas, troubleshoot assignment issues, and stay connected throughout the semester.

Expectations for Use:

- **Professionalism**: Treat Discord as an academic space. Be respectful, constructive, and courteous in all interactions... but have fun in doing so. Discord has a lot of communication options that can make conversations lively.

- **Channels & Organization**: Separate channels will be created for announcements, assignment discussions, general Q&A, and informal conversation. Students should post in the most appropriate channel to keep communication clear and organized.
- **Timeliness**: While Discord allows for real-time conversation, response times may vary. Students should not expect immediate replies from the instructor or peers, especially outside of normal working hours.
- **Privacy & Conduct**: The same UMBC policies on academic integrity, harassment, and appropriate conduct apply on Discord. Violations will be treated as they would in the classroom.

Participation in Discord discussions is strongly encouraged, as many clarifications, tips, and insights will be shared there that can support success in the course.

A Note About Mac Use

There are no versions of ArcGIS and ArcPro for Mac computers. As such, students must make arrangements to complete the assignments. There are three options for Mac users, which can be found here: [Install ArcGIS On A Mac](#). Using a virtual machine to run ArcGIS/ArcPro on a server from the Mac is an option. Please contact Charlie Kaylor ckaylor@umbc.edu at for help in getting set up.

QGIS can be used as an alternate GIS in this class for mapping and other geo-processing tasks. However, the assignments must be completed according to the requirements for the submitted products. This means, if an assignment comes up short in meeting the requirements or objectives because of a limitation in QGIS, then the complete points for that assignment cannot be awarded because the decision to use an alternate software than what is used in the class rests on the student's choice. The loss of points can be minor or significant depending on the assignment.

Finally!... that's over.



Course Structure & Outline:

Semi-Hybrid Course: This class is primarily in-person, with up to four classes being held virtually. There may be instances due to inclement weather or emergencies that will require the class to be virtual beyond the number listed above. When classes are held virtually, we will use Collaborate in the Blackboard Course Room. Any class meeting date that is scheduled to be virtual, students will be notified in advance so they can plan accordingly to be available on Collaborate. Otherwise, the class is in-person.

Class contents, topics, and coverage are subject to change during the semester based on the pace of learning in the class or as opportunities to enhance learning present themselves. First and foremost, the objective of the class is for all students to gain the maximum knowledge and experience on the topics covered in class. Comprehension will not be sacrificed to expediency just to check the box that something was covered and to achieve a completed checklist.

Readings listed in each class may or may not be assigned for that class when the date arrives. It may be decided that the readings that on that class date are no longer needed or relevant based on the material covered. As well, additional readings may be added or changed based on the material covered in the class. Students should check Blackboard for the “official” readings assigned for that class.

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Part I: Geo-processing to Prepare Data for Analysis

Thursday, August 28

- Lecture:** Introduction to Geo-processing and Techniques
Geo-database Construction and Layer Management
- Lab:** Setting up the Working Environment and Preparing Data
- Reading:** Battista, B., Garrett, M., & Pirmann, C. (2019). GeoDatabase (.gdb) Data Curation Primer. *Working Paper*, pp: 1-26.
- Martin, D. (1995). Chapter 4: Theories of GIS. In Martin, D., *Geographic Information Systems and their Socio-economic Applications*, pp. 44 – 64. Routledge, New York.

Thursday, September 04

- Lab:** Exploring Data and Basic Geometry Preparation
- Reading:** GeoBC & Regional Services. (2023). *Standards for Data Creation Publication, and Distribution, British Columbia Ministry of Land, Water, and Resource Stewardship*:
Chapter 3; Geodatabase Detailed File Geodatabase Standards, pp. 9 – 25.
- Sui, D. & Morrill, R. (2004). Chapter 5: Computers and Geography: From Automated Geography to Digital Earth. In Martin, D., *Geography and Technology*, pp. 81 – 108. Routledge, New York.

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Reference: Wilson, R. (2024). Geo-processing Guide Stage I - Cleaning and Preparing Geographic Data for Analysis, pp. 1 – 8.

Data: Commonwealth of Massachusetts: MassTRAC Vehicle Crashes – 2010

Thursday, September 11

Lab: Integrating Geometry to Create New Geographies, Part I

Reading: ESRI (2010) Understanding Geometric Processing in ArcGIS. *ESRI Technical Documentation*, 1 – 20.

Servigne, Sylvie, S., Ubeda, T, Puricelli, A, & Laurini, R. (2000). A Methodology for Spatial Consistency Improvement of Geographic Databases. *GeoInformatica*, 4(1): 7 – 34.

Reference: GeoBC & Regional Services. (2023). *Standards for Data Creation Publication, and Distribution, British Columbia Ministry of Land, Water, and Resource Stewardship*:
Chapter 5, Applying File Geodatabase Standards – Step by Step Directions, pp. 31 – 57.

Wilson, R. (2024). Geo-processing Guide Stage II - Integrating and Aggregating Geographic Data, pp. 1 – 8.

Data: Commonwealth of Massachusetts: MassTRAC Vehicle Crashes – 2010

Thursday, September 18

Lab: Integrating Geometry to Create New Geographies, Part II

Reading: ESRI (2010) Understanding Coordinate Management in the Geodatabase. *ESRI Technical Documentation*, 1 – 35.

Reference: Wilson, R. (2024). Geo-processing Guide Stage III - Spatially Aggregating Geographic Data. *Documentation*, pp. 1 – 16.

Data: Commonwealth of Massachusetts: MassTRAC Vehicle Crashes – 2010

Thursday, September 25

Lab: Aggregating Geography to Supplement Analysis

Reading: Milligram, R. J. & Wu, H. H. (2006). Ratios, Rates, Percents, and Proportions. 1 – 18.

Data: Commonwealth of Massachusetts: MassTRAC Vehicle Crashes – 2010

Thursday, October 02

Video:	Creating Basic Statistics from Geo-processing Data
Lab:	Calculating Ratios, Rates, Percents, Proportions, & Odds
Reading:	Wilson, R. and Din, A. (2018). Analyzing and Enhancing the U.S. Department of Housing & Urban Development's ZIP Code Cross-walk Files. <i>Cityscape: A Journal of Policy Development and Research</i> . 20(2), 277 – 294.
Data:	Commonwealth of Massachusetts: MassTRAC Vehicle Crashes – 2010
Assessment:	Replication of Geo-processing Method for Data Preparation Florida Subsidence Incident Reports – 1980 to 2012

Part II: Geo-processing Records to Connect with Geography

Thursday, October 09

Lecture:	ZIP Codes and their Statistical Problems Introduction to the HUD Cross-walk Files
Lab:	None – Class is Virtual on Blackboard Collaborate
Video Review:	Wilson, R. E. (2023). The Modifiable Areal Unit Problem – Overview and Details.
Reading:	Wong, D.W.S. (2004). The Modifiable Areal Unit Problem. In B. Warf, D. Janelle, and K. Hansen (eds.) <i>World Minds: Geographical Perspectives on 100 Problems</i> , pp. 571 – 578.
Reference:	Brown, R. H., Barram, D. J., Ehrlich, E. M., & Scarr H. A. (1994). Chapter 2, Census Tracts and Block Numbering Areas. In <i>Geographic Areas Reference Manual</i> . pp. 2.1 – 2.19 and 2-25 – 2.34.
Data:	HUD 2016, Quarter 4 ZIP to County and ZIP to CBSA Cross-walk File

Monday, October 13

First Assessment Due: Replication of Geo-processing Method for Data Preparation

Thursday, October 16

Lab:	Processing and Connecting HUD Cross-walk Data to Census Tract Geography, with Interpretation of Results
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Reading:	Din, A. & Wilson, R. (2018). Cross-walking ZIP Codes to Census Geographies: Geoprocessing the U.S. Department of Housing & Urban Development's ZIP Code Crosswalk Files. <i>Cityscape: A Journal of Policy Development and Research</i> . 22(1), 293 – 314.
	Grubestic, T. H. & Matisziw, T. C. (2006). On the use of ZIP Codes and ZIP Code Tabulation Areas (ZCTAs) for the Spatial Analysis of Epidemiological Data. <i>International Journal of Health Geographics</i> , 5(58), pp: 1 – 15.
Reference:	Auffray, J. C., Renaud, S., & Claude, J. (2009). Rodent Biodiversity in Changing Environments. <i>Kasetart Journal</i> ; 43, 83 – 93.
	Brown, R. H., Barram, D. J., Ehrlich, E. M., & Scarr H. A. (1994). Chapter 11, Census Tracts and Block Numbering Areas. In <i>Geographic Areas Reference Manual</i> . pp. 10-1 – 10.17.
Data:	HUD 2017, Quarter 4 ZIP to Census Tract Cross-walk File New York City 311 Service Requests for Rat Sightings

Part III A: Geo-processing for Descriptive Statistics

Thursday, October 23

Lecture:	Introduction to Descriptive Statistics
Lab:	None – Class is Virtual on Blackboard Collaborate
Reading:	Abdi, A. (2007). Z-scores. pp. 1 – 4.
	Burt, J. E., Barber, G. M., & Rigby, D. L. (2009). Elementary Statistics for Geographers, 3 rd Edition. New Guilford Press. New York, NY. Chapter 1; Statistics and Geography, pp. 3 – 33.
Data:	California Department of Public Health: Death Profiles – 1989 to 2022
Assessment:	Replication of Cross-walking ZIP Codes to Census Tracts with the HUD Cross-walk Files with NYC COVID-19 Data – 2021

Thursday, October 30

Lab:	Disaggregating Overlapping Geographies and Generating Proximities, Part I
Reading:	Kwan, M-P. (2012). The Uncertain Geographic Context Problem. <i>Annals of the American Association of Geographers</i> . 102(5) pp: 958 – 968.
Data:	California Department of Public Health: Death Profiles – 1989 to 2022

Monday, November 03

Second Assessment Due: Replication of Processing and Connecting the HUD Cross-walk File

Thursday, November 06

Lab: Disaggregating Overlapping Geographies and Generating Proximities, Part II

Reading: Grossbart, S. L., Mittelstaedt, R. A., & Murdock, G. W. (1978). Nearest Neighbor Analysis: Inferring Behavioral Processes.

Data: California Department of Public Health: Death Profiles – 1989 to 2022

Part III B: Geo-processing for Descriptive Statistics

Thursday, November 13

Lab: Proximity Analyses with Nearest Neighbor Techniques

Reading: Pun-Cheng, L. S. C. (2014) Distance Decay. *Working Paper*. The Hong Kong Polytechnic University, pp. 1 – 5.

Data: Florida Department of Environmental Protection: Florida Subsidence Incident Reports – 1943 to 2023

Thursday, November 20

Lab: Proximity Analyses with Buffer & Aggregation Techniques

Reading: Burt, J. E., Barber, G. M., & Rigby, D. L. (2009). Elementary Statistics for Geographers, 3rd Edition. New Guilford Press. New York, NY.
Chapter 3; Describing Data with Statistics, pp: 119 – 155.

Wilson, R. E. & Din, A. (2017). Measuring Distances to Resources. *Cityscape: A Journal of Policy Development and Research*. 19(2), 323-325,

Data: Florida Department of Environmental Protection: Florida Subsidence Incident Reports – 1943 to 2023

Thursday, December 04

No Class –Thanksgiving Break

Thursday, December 11

- Lecture:** Interpreting Distance Analysis Statistics
- Lab:** Calculating Descriptive Ratios and Creating a Distance Table.
- Reading:** Burt, J. E., Barber, G. M., & Rigby, D. L. (2009). Elementary Statistics for Geographers, 3rd Edition. New Guilford Press. New York, NY.
Chapter 3; Describing Data with Statistics, pp: 119 – 155.
- Data:** Florida Department of Environmental Protection: Florida Subsidence Incident Reports – 1943 to 2023
- Assessment:** Replication of Proximity Geo-processing to Create Distance Statistics
MassTRAC Vehicle Crashes – 2010

Thursday, December 11

No Class – Final Replication Assessment Work Day

Thursday, December 18

Third Assessment Due: Geo-processing to Create Statistical Results

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Appendix – University Addendums:

Students with Disabilities:

Accommodations for students with disabilities are provided for all students with a qualified disability under the Americans with Disabilities Act (ADA & ADAAA) and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that creates equal access for students when barriers to participation exist in University courses, programs, or activities.

If you have a documented disability and need to request academic accommodations in your courses, please refer to the SDS website at sds.umbc.edu for registration information and office procedures.

SDS email: disAbility@umbc.edu

SDS phone: [410-455-2459](tel:410-455-2459)

If you will be using SDS approved accommodations in this class, please contact the instructor to discuss implementation of the accommodations. During remote instruction requirements due to COVID, communication and flexibility will be essential for success.

Sexual Assault, Sexual Harassment, and Gender Based Violence & Discrimination

[UMBC Policy](#) in addition to federal and state law (to include Title IX) prohibits discrimination and harassment on the basis of sex, sexual orientation, and gender identity in University programs and activities. Any student who is impacted by sexual harassment, sexual assault, domestic violence, dating violence, stalking, sexual exploitation, gender discrimination, pregnancy discrimination, gender-based harassment, or related retaliation should contact the University's Title IX Coordinator to make a report and/or access support and resources. The Title IX Coordinator can be reached at titleixcoordinator@umbc.edu or 410-455-1717.

You can access support and resources even if you do not want to take any further action. You will not be forced to file a formal complaint or police report. Please be aware that the University may take action on its own if essential to protect the safety of the community.

If you are interested in making a report, please use the [Online Reporting/Referral Form](#). Please note that, if you report anonymously, the University's ability to respond will be limited.