Academic integrity guidance for computer science and software engineering courses

Overview

Programming assignments are intended to develop skills that enable success in future courses and after graduation from MSOE. As such, the guidance in this document is designed to support the development of skills and honesty regarding ideas and inspiration in computing assignments. Collaboration in software development is an industry expectation, and MSOE encourages appropriate, professional collaboration. This document is intended to ensure collaboration and attribution are appropriate, and it provides guidance for several common scenarios in which students may find themselves.

MSOE Integrity Policy

This document is intended to augment and clarify applications in software courses of the official MSOE Student Integrity Policy https://my.msoe.edu/ICS/icsfs/4.0.001_Student_Integrity.pdf?target=9a1ea74a-9ca3-45c4-b7a8-a966b4432004

The relevant statements from the student integrity policy are as follows:

"Assignments prepared outside of class must include appropriate documentation of all borrowed ideas and expressions. The absence of such documentation constitutes "plagiarism," which is the knowing or negligent use of the ideas, expressions or work of another with intent to pass such materials off as one's own. It is an act of plagiarism if a student purchases a paper or submits a paper, computer program, or drawing claiming it to be his/hers when he/she did not write it."

Scenarios

The following scenarios describe common situations that students may encounter when solving software problems. **Any scenarios that require citations may be specifically disallowed by some faculty,** and this will be indicated in their syllabi or in assignment instructions. Asking the instructor is always better than assuming something is allowable.

Legend:

This is potentially a violation of the academic integrity policy, and you likely should ask the instructor if it is allowable

This likely requires a citation to not violate the academic integrity policy


This does not require a citation and likely does not violate the academic integrity policy

Scenario 1: Peer Whiteboard Discussion - You are working on a programming assignment and are discussing it with a friend in another section of the class (or someone who has taken the class previously) and drawing out diagrams and/or pseudocode on a whiteboard related to solving the problem.


Implementing your code based on ideas discussed or very high-level pseudocode likely does not require a citation


Implementing your code based on detailed discussions of code structures may require a citation


Implementing the pseudocode may require a citation if the pseudocode is sufficiently detailed that it does not require much adaptation to get it to work


If the code from two individuals only differs in variable names or other minor variations, the coordination is too detailed and is likely a violation of the academic integrity policy

Scenario 2: Peer Debug - You are wrestling with a tricky bug in your code, and you ask a friend to help you debug your code. You walk through your implementation, and they point out a situation that leads to the error.


Implementing a personally-inspired solution to the error does not require a citation


Implementing a solution your peer describes does require a citation


Implementing a re-write of someone else's solution into your code that gets around the issue in a similar way to your peer may violate the academic integrity policy

Scenario 3: Stack Overflow - You are working on a programming assignment and are stumped by how to implement a tricky part. You discover a post on Stack Overflow (or a similar site) that describes a potential solution in a few lines of code.


Fixing a bug in your code based on the solution found in the post would be okay if you write the solution yourself and it is identifiably different

Directly copying the code must include a citation of the specific website used if it is longer than 1 line

Implementing your solution based on a substantial (large) idea gained from the post should include a citation of the specific website used

Scenario 4: GitHub Assignment - You are working on a programming assignment and discover a GitHub repository (or a similar site) that includes code that implements part or all of the assignment.

Using a Github repository that contains a complete implementation of a very similar assignment is likely a violation of the policy, even if you borrow only ideas from the repository. You are obligated to report the existence of the repository to the instructor.

Giving others access (e.g., through public access or adding them) to a GitHub repository that implements an individual assignment is likely a violation of the academic integrity policy

Scenario 5: GitHub Project - You are working on a programming assignment and discover a GitHub repository (or a similar site) that includes code that could be adapted to solve an assignment but is substantially different from the assignment.


Fixing a bug in your code based on the GitHub code would be okay if you write the solution yourself based on inspiration from the repository.

Copying parts of a file longer than one line must include a citation of the specific repository and branch

Implementing your solution based on a substantial (large) idea gained from the repository must include a citation of the repository and branch

Forking the repository and making substantial modifications is allowed in some upper-level courses assuming the copyright and attribution is appropriate

Copying entire files from the repository without appropriate attribution is a violation of the academic integrity policy


Copying a file from the repository and changing variable names, comments, or other minor details is likely a violation of the academic integrity policy

Scenario 6: Peer Code Comparison - You are struggling to get your code working and a friend brings up their working solution on their laptop to show you. You sit next to each other, and they bring up their code.


Looking at the overall structure briefly (less than 30 seconds) would likely not be considered a violation to the academic integrity policy


Restructuring your code to match theirs would likely violate the academic integrity policy


Looking at their code more than one time after looking at your code is likely a violation of the academic integrity policy


Side-by-side comparison of code would violate the academic integrity policy

Scenario 7: Test Cases - You have a completed assignment you are ready to turn in and you discuss with a peer what types of tests they used on their assignment. They describe a few tests they ran that you didn't run.


Implementing and running tests inspired by the discussion and then discovering an error is not a violation of the academic integrity policy and does not require any citation


Running a shared list or file with executable tests developed by another student for an individual assignment should include a citation and potentially could be a violation of the academic integrity policy in some courses

Scenario 8: Office Hours - You are working on a programming assignment and come to a professor's office hours for help with a tricky part of the assignment. The professor describes a related problem and how a solution to that related problem would work. Some of that solution can be directly used to solve your problem.


Implementing your solution based on the ideas gained from the meeting with any instructor (not just the person teaching your section) does not require a citation

Scenario 9: Assignment Description - You are working on a programming assignment and use code provided by the professor in your implementation.


You do not need to cite code provided by the professor, but any header or copyright information should be retained

Scenario 10: Pair Programming – Your instructor has assigned a specific pair programming exercise, and you discuss the solution with your partner as they implement it, but they implement the entire solution. Both of your names are on the solution and in the comments.


This does not require any specific citations because you both contributed to the work

Scenario 11: Friend Request - You finished working on your programming assignment and a peer asks you how you "did it".


Describing the general approach in a few sentences would not require any citation


Describing detailed nuances of your approach (taking more than 30 seconds) would require your peer to cite the description in their code


Sharing code from your implementation with another student would be a violation of the academic integrity policy by both individuals


Typing on a peer's keyboard to fix issues with their code would likely be a violation of the academic integrity policy by both individuals.

Scenario 12: ChatGPT Code Generation - You are working on a programming assignment and decide to ask ChatGPT or another chat agent for help.


Asking a question about a related concept that provides inspiration for how to solve the problem does not require a citation unless the output is only minorly adapted or directly used

Using any non-trivial portion or adaptation from the output must include a citation describing or including the specific query used, website, and the date

Using or minorly adapting a response that solves a non-trivial part of an assignment may be considered a violation of the academic integrity policy

Requesting that the chat agent solve all or a difficult part of the assignment is likely considered a violation of the academic integrity policy, even if you don't use the answer directly

Scenario 13: ChatGPT Code Debug- You are working on a programming assignment and decide to ask ChatGPT or another chat agent to debug your code for you.

Any modifications to your code inspired from the chat agent response must include a citation

Substantial modifications to your code based on the output from chat agent may be considered a violation of the academic integrity policy

Scenario 14: Tutors - You are working on a programming assignment and go in for your regular tutoring session. During the session, when you ask a question about your solution, the tutor identifies that they completed a similar assignment last year


Implementing your code based on inspiration of solving a similar but different problem shared by the tutor does not require a citation

Implementing your code based on a specific example developed and shared by a tutor must include a citation

Copying any code from a tutor is a violation of the student integrity policy

Scenario 15: Modeling - You are working on a deep learning project, and you discover a model architecture that could be used to solve the problem you are working on.

Implementing a simple machine learning model that can be found in a textbook does not require a citation.

Implementing a model found in a repository or research paper (or a close adaptation of it) requires a citation

Scenario 16: Reusing an assignment - You are given an assignment that could be solved by code similar or identical to code you developed for an assignment you have individually developed for another course (either at MSOE or another school).

If you did not previously submit your code for the assignment, you can submit the code as your own work (assuming it is an individual assignment).

If you have submitted the code previously, you can discuss the situation with your instructor and work together to develop a plan for how to enhance your knowledge and skills related to the assignment.

If you previously submitted your code for the same or equivalent course taken previously, you may submit code you developed from the previous submission with an appropriate citation.

If you submitted the code for a different course, you must obtain permission from your current instructor prior to reusing previous work, or it is a violation of the student integrity policy.

If the code you previously developed was created by multiple individuals (are part of group work), submitting it for an individual or group assignment without permission from the instructor would be a violation of the student integrity policy.

Citations

Citations of borrowed code and ideas should appear BOTH in the header comment at the top of any file that includes borrowed code or ideas AS WELL AS in the specific section of the code that represents the borrowed content. Citations of one line or less of borrowed code do not need to be repeated at the top of the file. In-line comments before and after the sections that include the borrowed code are appropriate to clearly demarcate the borrowed content.

Header Example:

```
/*
 * Course: CSC 1110 - 011
 * Fall 2023
 * Lab 10 - Something Exciting
 * Name: Ada Lovelace
 * Created: 10/31/2023
 *
 * This was adapted from a post found on Stack
 * Overflow on 3/14/2023:
 * https://...
 */
```

Javadoc method Example:

```
/**
 * This method prints "hello" to the person given and
 * returns the number of letters in the person's name.
 *
 * @param name The person to whom to say hello.
 * @return The number of characters in the person's name.
 *
 * This was adapted from a post found on Stack Overflow on 3/14/2023:
 * https://...
 */
```

In-method Example:

```
/*
 * The following 11 lines of code were implemented based
 * on ideas gained from a discussion with the tutor,
 * Grace Hopper on 3/14/2023.
 */
```

ChatGPT Example:

```
/*
 * The following code was generated on 3/14/2023 using:
 * https://openai.com/blog/chatgpt
 * The prompt used was:
 * "Write a java program to calculate the square root of a number"
 */
```

Monitoring

Academic Integrity will be monitored using the instructor's judgement and may include automated tools.

Violations

Violations of the academic integrity policy will be handled following the guidance of the official MSOE policy. https://my.msoe.edu/ICS/icsfs/4.0.001_Student_Integrity.pdf?target=9a1ea74a-9ca3-45c4-b7a8-a966b4432004