



## OVERVIEW

The instructor is **Mr. Reaser**, M.S. C.S, Teaching Instructor for LCSEE. You can contact him by email at [ron.reaser@mail.wvu.edu](mailto:ron.reaser@mail.wvu.edu), by Slack chat at [reaser.slack.com](https://reaser.slack.com), or as listed on his website at [reaser.org](https://reaser.org). His office is **AER 251**. You can schedule an office or online meeting at [calendly.com/reaser](https://calendly.com/reaser) or meet by walk-in as available in his office or campus common areas.

The **lecture section 10** has CRN 13053 and meets MWF 12:00 pm to 12:50 pm in AER 137.

The **honors lecture section H01** has CRN 18915 and meets in tandem with lecture section 10.

The **lab section 11** has CRN 13054 and meets F 1:00 pm to 2:50 pm in AER 137.

The following **learning outcomes** for the course are met by lectures and assessments over the semester. The **project document** provided with this syllabus on [eCampus](#) details the lecture and assessment schedule to meet these outcomes.

*Upon successful completion of this course (with around 15 weeks of fall lecture), students will be able to...*

1. Write programs using Java source code at an experienced level (cumulative).
2. Employ **version control systems** in software development (1 week).
3. Employ **unit testing** and **test-driven development** in software development (1 week).
4. Prepare **regular expressions** to interpret user inputs (1 week).
5. Employ **analysis of algorithms** to design efficient solutions to nontrivial problems (cumulative).
6. Create a **database management system** as a data structure:
  - a. Prepare **Structured Query Language** queries:
    - i. Prepare **data definition language** queries to define the **schemas** of tables (1.5 weeks).
    - ii. Prepare **data manipulation language** queries to modify the **states** of tables (1.5 weeks).
  - b. Apply the **relational model** to translate databases between tables of rows and maps of lists (1 week).
  - c. Employ **serialization** and **deserialization** techniques on databases using **XML** and **JSON** encoding (2 weeks).
7. Create a **hash map** both as a data structure and as a file structure:
  - a. Employ **hashing** and **primary indexing** using both **arrays** and **random access files** (2 weeks).
  - b. Employ **collision resolution techniques** such as **open addressing** and **chaining** (2 weeks).
  - c. Employ **deep and shallow copying** and **secondary indexing** to access and mutate data efficiently (2 weeks).

There is **no assigned textbook**. The instructor may occasionally recommend online materials for reference.

All **software and accounts** for the course are free for use on personal computers or are available in campus labs. Not having a usable computer, correct software configuration, reliable internet connection, or access to the labs do not excuse you from course requirements. Other software requirements are announced as needed and the resources are posted in eCampus.

## GRADING

You are assessed on the **8 modules** of the **term project** defined in the project document (plus 4 additional modules with advanced learning outcomes for honors). For each module, the project document gives a due date, instructions for your work, a grading rubric, a manner of assessment, and a late credit policy. You earn a grade of **up to 4 credits for each module** based on the rubric.

Your average number of credits over all 8 modules (or 12 modules for honors) rounded to the nearest whole credit determines your **final grade** according to the table (\*a final grade of A is promoted to a final grade of A+ if you already have an average of 4 credits before rounding).

	<b>Final Grade</b>	<b>Average</b>
<b>A+</b>	Exemplary	4 credits*
<b>A</b>	Very Good	4 credits
<b>B</b>	Good	3 credits
<b>C</b>	Mediocre	2 credits
<b>D</b>	Unsatisfactory	1 credit
<b>F</b>	Failing	0 credits

There are **no make-ups or extensions** on any missed or late work except as permitted. There are **no bonus opportunities** because most modules can be improved for a higher grade under their late credit policies.

Your **grades are posted in eCampus** in a timely fashion, including your running average credits over all modules due to date. Students interested in approximating or predicting their final grades are expected to perform their own calculations.

## COURSE POLICIES

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Regular **attendance** is important but is not required. You are responsible for any work you miss due to absence.

Your **deliverables** must be submitted in the expected formats by the given due dates, and any late work may be rejected without a grade except when a policy indicates otherwise. You should keep secure copies of your work in case of data loss.

Ensure that your **conduct** in this course is appropriate. Be attentive to the instructor and work only on assigned material. Do not arrive late or leave early without notice. Do not converse disruptively. Treat all staff and students in a courteous and professional manner. Do not harass or be disruptive to the common morale. Do not vandalize or compromise course resources or technology. Do not foster a hostile or distracting environment. Violators are subject to similar sanctions as those for academic fraud.

Studies show that students who use **electronic devices** during lectures and even those students who sit near them do not learn or perform as well as students who take handwritten notes free of such distractions. Therefore, electronic devices are prohibited in lecture sessions except for accessibility accommodations or by special permission from the instructor. Laptops, tablets, and hybrid devices are allowed in lab sessions only for course work. Phones and wearable devices must be silenced.

## UNIVERSITY POLICIES

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Under the Family Educational Rights and Privacy Act of 1974, students have the **right to privacy** of their academic information. Without a waiver on file with the instructor or the registrar, no such information can be released to parents or third parties.

To receive **accessibility accommodations** from the instructor, the Office of Accessibility Services must officially authorize and notify the instructor of them, and you must allow 7 days of notice for the instructor to implement them.

West Virginia University and the instructor are committed to **social justice** and intend to foster a quality learning environment based upon open communication, mutual respect, and non-discrimination. Discrimination on the basis of race, color, ethnicity, nationality, sex, sexual orientation, gender, gender identity, age, disability, veteran status, or religion are prohibited.

## ACADEMIC INTEGRITY POLICY

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You must exemplify **academic integrity** in your work. The following acts of **academic fraud** violate this integrity:

- › Working with another person without permission (there are no team assessments in this course).
- › Enabling another person to access your work, with or without your knowledge or intent, or vice versa.
- › Authoring or submitting work for another person, with or without compensation, or vice versa.
- › Reusing work from another semester, course, or section without permission.
- › Distributing your graded assessment to another person, or possessing a graded assessment from another person.
- › Misrepresenting your identity, the authorship of your work, or your activities in the course.
- › Plagiarism, which is using the work of another person without proper attribution.

If you commit an act of fraud, you are notified by email, the act is reported to the university by mandatory policy, and the instructor applies one or more of the following **academic fraud sanctions** based on the severity of the fraud:

- › Your fraudulent work is assigned a grade of F (0 credits).
- › Your final grade for the course is reduced by up to 1 letter (average reduced by 1 credit).
- › You are immediately assigned a final grade of F or unforgiveable F for the course.
- › You are immediately and permanently expelled from the course.

The instructor may audit any work at any time to confirm its integrity. If you believe you or another person has committed an act of academic fraud, contact the instructor immediately.