



This syllabus includes adjustments per WVU's COVID-19 response (see **redacted** portions for original version).

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, by Slack chat at reaser.slack.com, or as listed on his website at reaser.org. His office is **AER 251**. You can schedule an office or online meeting at calendly.com/reaser or meet by walk-in as available in his office or campus common areas.

The **lecture section 1** has CRN 12008 and meets TR 3:30 pm to 4:45 pm in AER 135.

The **honors lecture section H01** has CRN 18964 and meets in tandem with lecture section 1.

The following **learning outcomes** for the course are met by lectures and assessments during the semester. The **calendar** provided with this syllabus on eCampus details the lecture and assessment schedule to meet these outcomes.

Upon successful completion of this course (with around 30 days of spring lecture), students will be able to...

1. Explain the design and theory of **relational databases** (cumulative).
2. Utilize the **entity-relationship model** to diagram and iterate database **schemas** (4 days).
3. Employ the **relational model** with **normalization** up to 3NF (4 days), **relational algebra** (3 days), and **relational calculus** (2 days).
4. Write data definition and data manipulation queries using **Structured Query Language** (3 days).
5. Create and examine databases using industry-standard technologies, including...
 - a. ...**Oracle Database** with Java for desktop applications (4 days).
 - b. ...**MySQL** with PHP for **web servers** (2 days).
 - c. ...**MongoDB** with NodeJS for web applications, using the so-called **NoSQL model** and **JSON** data (2 days).
6. Write **stored programs** including functions, procedures, and **triggers** using Oracle PL/SQL (2 days).
7. Recognize database **file organization, access methods, indexing, and physical design** (4 days).

The **recommended** text is *Fundamentals of Database Systems* 7th Edition by Elmasri and Navathe (ISBN 9780133970777) for out-of-class reading and study. The older editions are acceptable.

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

The first table shows the **assessments** you are graded on and the points each is worth. The second table shows the minimum total points to earn for a given **final grade**. Opportunities for **bonus points** are announced during the semester. You are capped at 50 cumulative bonus points.

There are 12 **quizzes** given. For each, the date may be **unannounced**, and you earn up to 50 points based on your performance, or 0 points if you miss it for any reason. Your 2 lowest quiz grades are automatically **dropped** from your final grade. The 10 remaining quiz grades total 500 points.

If you miss 3 or more quizzes due to documented excusable absences, you may be given make-ups for your 3rd and subsequent missed quizzes only, because your 1st and 2nd can be dropped.

The **proposal, schema, queries, prototype, and release** are completed by **teams of two to three members** assembled at-will (or individually for honors). Each is a component of a cumulative term project including documentation and implementation, assessed by paper and electronic submissions and interviews. The instructor releases a specification for each component including its due date and grading rubric (including additional requirements for honors). Your team members are all given the same grade for a particular component if they all contributed equitably. Otherwise, the instructor has the discretion to adjust individual member grades, reorganize members among different teams, or eject members who are not contributing equitably, even retroactively. You can't submit term project components for a grade unless you belong to a team or the instructor grants you special permission.

Assessment	Points	Final Grade	Points
Quizzes (10)	500	A+ Exemplary	1000
Proposal	100	A Very Good	900
Schema	100	B Good	800
Queries	100	C Mediocre	700
Prototype	100	D Unsatisfactory	600
Release	100	F Failing	0
Bonus	50		
Total	1050		

There are **no make-ups or extensions** on any missed or late work except as permitted.

Your **grades are posted in eCampus** in a timely fashion. Students interested in approximating or predicting their final grades are expected to perform their own calculations. Graded out-of-class assessments and hand-written quizzes are returned as appropriate in a timely fashion, but fill-in-the-bubble quizzes may not be returned due to logistical constraints.

COURSE POLICIES

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

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

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

- > Working with another person without permission (you may only work with your team on term project components).
- > 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 points).
- > Your final grade for the course is reduced by up to 1 letter (up to 100 points).
- > 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.