CoE 164

Computing Platforms

Course Information

Academic Period: 2nd Semester AY 2021-2022

Units: 1

Workload:

- 3 hours laboratory per week

Instructors:

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Synopsis: This course aims to 1) build and evaluate efficient computing platforms, 2) present algorithms, methods, and tools needed to solve challenging problems, and 3) practice sound engineering judgment in solving engineering problems.

Delivery Method: Digital materials and open-time laboratory sessions

Online Platforms: UVLe, Google Meet, Zoom, other quiz platforms, other code submission platforms.

Course Outline

Week	Topics	Expected Academic Requirements
1		
2		
3		
4	SE01: Run-length message decoding	SE01
5		
6		
7	SE02: Website priority queuing	SE03
8	Reading break	
9	Lenten break	

10		
11		
12	SE03: A faster matrix multiplication?	SE03
13		
14	Reading break	
15	CP: Faster flights with barcodes	CP
16		
17	Finals week	

Grading Rubric

60% Software exercises (SE)
40% Capstone problem (CP)

Students are required to submit 60% of the SEs and the CP for course completion. In addition, students should also have a total passing score.

Numerical Grading Scheme

Students who receive a failing grade or did not meet the requirements stated above may be marked with an INC or DRP instead. Additionally, it is a University policy to not give a failing (5.0) or conditional (4.0) grade this semester.

Min (inclusive)	Max (exclusive)	Numerical Grade
92	$+\infty$	1.00
88	92	1.25
84	88	1.50
80	84	1.75
76	80	2.00
72	76	2.25
68	72	2.50
64	68	2.75
60	64	3.00

0	60	INC/DRP

Academic Requirements Submission Guidelines

- Software exercises will have a deadline <u>at the earliest two weeks (14 days) after</u> the day of release. Weekends and holidays are included in the count.
    - Each of the requirements will have details when the deadline will be.
    - Deadlines will always be at 11:55 PM, GMT+8 (Philippine Standard Time) of that date.
    - Deadlines will *never* fall on weekends, holidays, or reading breaks.
    - All academic requirements should be submitted via UVLe unless otherwise stated in the specifications.
        - A submission bin will be provided to upload the requirements, which instructors will give a grade to that at the earliest a week after submission
        - A submission platform for a real-time judgment of your own code may be imposed during the latter parts of the course
- Late submissions may be entertained
    - Students should contact their instructor, who shall take note of the late submission and decide on what action to take. Valid excuses will merit full points regardless of submission date.
    - With the deadline for submission of grades scheduled on 13 June 2022, we can only accept late submissions until <u>Wednesday, 8 June, 2022</u>. Any submissions after that date <u>will not be entertained</u> and will not be factored into your total grade.
    - Under normal circumstances, instructors may impose the following deduction scheme for late submissions.
        - Guidelines for late SE submission
            - TL;DR: deductions increase every week a submission is not yet received, but is capped at 50%. Deductions work by multiplying the non-late grade with a "discount" factor.
            - If requirements are submitted shortly after the deadline (i.e. less than 7 days), scores will be reduced to 90%.
                - For example, if you got a perfect score in an SE, you only get 90%.
            - If SEs are submitted at least one week (i.e. 7 days or more) late but <u>before</u> the CP is released, your score will be computed as follows:
                - $g_{late} = s(1 - \frac{w}{2c})$, where s is your original score, w the number of weeks late, and c the number of weeks between the deadline of the said SE and CP
                - One week is equivalent to seven (7) days, including weekends and holidays.

- - - - If the SE was submitted 13 days after the deadline, it is counted as one (1) week late.
        - If it was submitted 14 days after (i.e. after 11:55PM of the 14th day), then it is two (2) weeks late.
      - A day is counted once 11:55 PM, GMT+8 (Philippine Standard Time) of that day has passed.
    - If SEs are submitted late but <u>at the time or after</u> the CP is released, scores will be reduced by half.
      - For example, if you got a perfect score in an SE, you only get 50%.
    - An equation best describes the score once late is as follows
      - $g_{late} = 0.9s\delta(w) + s(1 - \frac{w}{2c})[u(w - 1) - u(w - c)] + 0.5u(w - c$
      - $\delta(x)$ is the Dirac delta function (impulse) and $u(x)$ the right-continuous Heaviside step function ($u(0) = 1$)
  - Guidelines for late CP submission
    - If the CP is submitted <u>after the deadline</u>, scores will be reduced to 75%.
      - For example, if you got a perfect score in the CP, you only get 75%.
- Submission platforms usually have certain instructions, such as how to upload the files, which form the files should be, and how to fill-out the necessary forms. Failure to comply with the instructions will result in the final grade of the offending submission reduced by 5%.
  - For example, if you got a perfect score in an SE, you only get 95%.
- Multiple deductions in a submission add up. This means that each deduction is first computed against the no-deduction score. Then, all of these deductions are added and finally subtracted against the no-deduction score to yield the final score for the submission.
  - For example, if you got a 5% deduction for not following the submission instructions and a reduction of score to 90% due to a late submission, the total reduction would be to 85%.
- Academic dishonesty is strictly frowned upon.
  - This includes one-to-one copying of segments or whole source codes from other colleagues from the past, present, and future.
    - There is no problem with collaborating among colleagues, but note that it is different from outright copying.
    - Note that it is better to cite where you got your code snippets so that instructors may be informed. Up to 25% of the source code may be derived from outside sources.
  - By taking this course, you consent to the instructors having the right to upload your anonymized submissions to a third-party similarity checker.

- - Allegedly dishonest students will be subject to investigations and possible delay in upload of grades to CRS.
  - Guilty students will face a case with the Student Disciplinary Tribunal (SDT) if strong evidence has been collected.
- Students have the obligation to inform the instructors if they have any difficulties fulfilling the requirements due to material problems, overloaded academic work, and others.