



# CoE 164

## Computing Platforms

### Course Information

Academic Period: 2nd Semester AY 2020-2021

Units: 3

Workload:

- 3 hours laboratory per week

Instructors:

- Carl C. Dizon [carl.dizon at eeemail]
- Nestor Michael C. Tiglao [nestor at eeemail]

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 judgement in solving engineering problems.

Delivery Method: Digital materials and open-time laboratory sessions

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

### Course Outline

Week	Topics	Expected Academic Requirements
1	•	•
2	• CoE 163: Prefix code decoding	• Machine exercise
3	•	•
4	• CoE 163: Error detection	• Machine exercise
5	•	•
6	• CoE 163: Receiving data from a noisy channel	• Machine problem
7	•	•
8	• CoE 164: Linear algebra	• Machine exercise
9	•	•

10	<ul style="list-style-type: none"> <li>• CoE 164: Parallel programming</li> </ul>	<ul style="list-style-type: none"> <li>• Machine exercise</li> </ul>
11	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
12	<ul style="list-style-type: none"> <li>• CoE 164: Parallel computing on linear math algorithms</li> </ul>	<ul style="list-style-type: none"> <li>• Machine problem</li> </ul>

---

## Grading Rubric

55% Machine exercises (ME)

45% Machine problems (MP)

## Academic Requirements Submission Guidelines

- Machine exercises and problems will have a deadline at the earliest one week (7 days) after 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
  - Machine exercise and problem source codes should be submitted via UVLe
    - A submission bin will be provided to upload source codes, which instructors will give a grade to that at the earliest a week after submission
    - A real-time submission platform to check your own code may be imposed during the latter parts of the course
- Late submission of quizzes and machine exercises may be entertained, but will have deductions
  - Guidelines for late ME and MP 01 submission
    - 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 ME, you only get 90%.
    - If MEs are submitted at least one week (i.e. 7 days or more) late but before the last MP 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 ME and the last MP
      - One week is equivalent to seven (7) days, including weekends and holidays.
        - If the ME 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 MEs are submitted late but at the time or after the last MP is released, scores will be reduced by half.
    - For example, if you got a perfect score in an ME, 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 MP 02 (last MP) submission
  - If this MP is submitted after the deadline, scores will be reduced to 75%.
    - For example, if you got a perfect score in this MP, you only get 75%.
  - With the deadline for submission of grades scheduled on 26 June, 2021, we can only accept late submissions until Wednesday, 16 June, 2021. Any submissions after that date will not be entertained and factored in in your total grade.
- Academic dishonesty is strictly frowned upon.
  - This includes one-to-one copying of segments or whole source codes.
  - Allegedly dishonest students will be given a diagnostic test and interview.
  - 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.