



## CPE 1101 SYLLABUS

Course Title:	CpE 1101 - Computer Engineering as a Discipline			Teacher:	Kenneth Carl A. Labarosa
Course Credit:	2	Course Tier:	T2	Email:	kcalabarosa@usc.edu.ph
Pre-requisite:	1st year standing			Phone:	+63 917 710 3951
Co-requisite:	None			Consultation Time:	F: 2pm – 5pm S: 11am – 12nn and 1pm – 2pm
Schedule:	G4: S 10:00AM – 11:00AM G5: S 3:00PM – 4:00PM G6: S 2:00PM – 3:00PM				

### COURSE DESCRIPTION

This course is developed to introduce the various engineering profession and to prepare the incoming freshmen in making an informed discipline-major choice. Undertaking this course, the students will learn about the discipline, skills and characteristics needed in the field thereby discovering what the engineering profession is all about.

### COURSE OUTCOMES

<p><i>Students will be able to:</i></p> <p><b>CO1:</b> Describe the different engineering disciplines through its relevance and contribution to the community/humanity.</p> <p><b>CO2:</b> Appreciate the computer engineering discipline based on the various skills and characteristics identified.</p>	<p style="text-align: center;"><b>Alignment to Program Outcomes</b></p> <p><u>The learning outcomes in this course are <b>enabling</b> to the achievement of:</u></p> <p><b>[PO F]</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.</p> <p><b>[PO F]</b> Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.</p>
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### COURSE LEARNING PLAN

Intended Learning Outcomes	Content	Teaching-Learning Activities		Assessment Tasks		Estimated Student Workload
		On Site	Online	Onsite	Online	
Week 1	Course Orientation and Introduction	<ul style="list-style-type: none"> <li>Active listening to Course Orientation</li> <li>Participating in open forum on course outline, grading system and class policies</li> </ul>		<i>Assigned Reading</i> •Reading on different engineering disciplines		1 Hour

Week 2-10  Explain fundamental concepts of engineering, its disciplines, and its purpose to society	<b>Engineering</b> <ul style="list-style-type: none"> <li>What is Engineering</li> <li>Branches of Engineering</li> <li>Contribution of Engineering to Society</li> </ul> <b>Computer Engineering</b> <ul style="list-style-type: none"> <li>What is Computer Engineering</li> <li>CMO 87 s. 2017 <ul style="list-style-type: none"> <li>PEOs and POs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Active listening to class lectures</li> <li>Participation in the open forum regarding engineering disciplines and concepts</li> <li>Video presentations of varying applications of engineering in solving real-world problems and scenarios</li> <li></li> </ul> <p><i>Reading List</i> Advance readings on contents of CMO 87 s. 2017</p>	<ul style="list-style-type: none"> <li>Film review/s</li> <li>Reading assignments</li> </ul> <p><i>Summative Assessment</i></p> <ul style="list-style-type: none"> <li>Research reports</li> <li>Reaction papers</li> </ul>	9 Hours
Week 11	USC Days			
Week 12-18  Explain what defines a Computer Engineer as a profession	<ul style="list-style-type: none"> <li><b>Skills and Characteristics of a Computer Engineer</b></li> <li><b>Careers and Opportunities</b></li> </ul>	<ul style="list-style-type: none"> <li>Active listening to class lectures</li> <li>Participation in the open forum regarding computer engineering disciplines and concepts</li> </ul> <p>Video presentations of varying applications of computer engineering in solving real-world problems and scenarios</p>	<ul style="list-style-type: none"> <li>Film review/s</li> <li>Reading assignments</li> </ul> <p><i>Summative Assessment</i></p> <ul style="list-style-type: none"> <li>Research reports</li> <li>Reaction papers</li> </ul>	9 Hours

## COURSE ASSESSMENT LEARNING AND GRADING

As evidence of having achieved the outcomes, students must produce quality outputs and/or carry out tasks successfully.

### Summative Assessments (Rubric-Based)

**For CO1:** Reaction paper / presentation outputs

**For CO2:** Reports (synthesis report in a form of video or written)

### **Grading System**

The student's grade for the course is computed based on both formative and summative assessment data. The computation is detailed below.

<u>Grade Component</u>	<u>Weight</u>
Reaction Paper / Presentation Outputs [CO1]	50%
Reports (Synthesis Report) [CO2]	50%
<b>TOTAL</b>	<b>100%</b>

## LEARNING RESOURCES

### USC Library Resources

- Moaveni, Saeed (2008). Engineering Fundamentals: An Introduction to Engineering, Australia: Thomson Learning, Cat. No. 620 M71
- Jenison, R.D. et al. (2008). Engineering Fundamentals and Problem Solving, 5th ed., Boston : McGraw-Hill Higher Education, Cat. No. 620 En32

## Online Resources

- Memon, Atif. (2015). Advances in Computers, Volume 99. Elsevier. Retrieved from <https://app.knovel.com/hotlink/toc/id:kpACV00015/advances-in-computers/advances-in-computers>
- Jaulin, Luc. (2019). Mobile Robotics (2nd Edition). John Wiley & Sons. Retrieved from <https://app.knovel.com/hotlink/toc/id:kpMRE00014/mobile-robotics-2nd-edition/mobile-robotics-2nd-edition>
- Patterson, David A. Hennessy, John L.. (2017). Computer Organization and Design - The Hardware/Software Interface (Arm® Edition). Elsevier. Retrieved from <https://app.knovel.com/hotlink/toc/id:kpCODTHS0F/computer-organization/computer-organization>
- CMO 87 s. 2017 – <https://ched.gov.ph/>
- Engineers Australia – <https://www.engineersaustralia.org.au>
- How to become a Computer Engineer: Computer Engineering Degrees and Careers – <https://www.learnhowtobecome.org/computer-engineer/>

## Others

- Raymond B. Landis (2013). Studying Engineering: A Road Map to a Rewarding Career, 4th ed., Discovery Press, Los Angeles, California

## COURSE POLICIES

## AUTHENTIC ASSESSMENT GUIDE

Course Outcome	Title of Assessment	Description	Assessment Tasks	Assessment Method
CO1	Written reports / reaction papers	Evaluation of the students' understanding of the fundamental topics involving engineering, knowledge of terminologies and concepts whether in theoretical topics or practical activities. This ability is linked to how well the student understands the fundamental course outline.	Define terminologies and explain varying situations where engineering is applied through written essays and reports.	<ul style="list-style-type: none"> <li>• Written reports</li> <li>• Reaction papers</li> <li>• Essays</li> </ul>

### Scoring Plan

#### Assessing and Grading of Reaction Papers and Written Reports (CO1, CO2)

Criteria	Level	Outstanding 10.0 pts	Competent 8.5 pts	Marginal 7.5 pts	Not Acceptable 5.0 pts
Intellectual Knowledge and thoughts		Outlines prior knowledge, impressions and misconceptions. Uses relevant skills, course knowledge, and specific quotations from industry's learning.	Describes prior knowledge and interests in specific terms or relates the content from the industry's practice.	Comments on prior knowledge and interest of the industry's practice. No specific related experiences or textual references provided.	Knew little to had not thought about the topic.
Organization		Introduces the topic clearly and creatively. Maintains clear focus on the topic. Effectively includes smooth transitions to connect key points. Ends with logical, effective and relevant conclusion.	Introduces the topic clearly. Maintains focus on the topic. Include transitions to connect key points. Ends with coherent conclusion based on evidence	Introduces the topic. Somewhat maintains focus on the topic. Includes some transitions to connect key points. Ends with a conclusion based on evidence.	Does not clearly introduce the topic. Does not establish or maintain focus on the topic. Uses ineffective transitions that rarely connect points. Ends without a conclusion.
Presentation		Has excellent and effective structure, uses appropriate fonts and font sizes, complies with assignment requirements, and is free from grammatical errors.	Has good and effective structure, uses appropriate fonts and font sizes, major compliance of the assignment requirement found less grammatical errors	Has less effective structure, uses appropriate font and font sizes, less compliance of the assignment requirements, found more grammatical errors.	Has effective structure, uses appropriate fonts and font sizes, no compliance of the assignment requirements, unacceptable grammatical errors.

Course Outcome	Title of Assessment	Description	Assessment Tasks	Assessment Method
CO2	Oral presentations	Evaluation of students' ability to learn, use and adapt technologies to present relevant topics involving engineering concepts.	Explain varying situations where engineering is applied through oral participation or video presentations.	• Video / oral presentations

Scoring Plan

Assessing and Grading of Oral/Video Presentations (CO1)

Level Criteria	Outstanding 10.0 pts	Competent 8.5 pts	Marginal 7.5 pts	Not Acceptable 5.0 pts
Presentation Content	Covers topic in-depth with details and examples. Subject knowledge is excellent.	Includes essential knowledge about the topic. Subject knowledge appears to be good.	Includes essential information about the topic but there are 1-2 factual errors.	Content is minimal OR there are several factual errors.
Presentation Proceedings	Interesting, well-rehearsed with smooth delivery that holds audience attention. Shows a full understanding of the topic. Speaks clearly all throughout the presentation.	Relatively interesting, rehearsed with a fairly smooth delivery that usually holds audience attention. Shows a good understanding of the topic. Speaks clearly and distinctly all the time.	Delivery not smooth, but able to hold audience attention most of the time. Shows a good understanding of parts of the topic. Speaks clearly enough but sometimes mumbles on certain parts of the presentation.	Acceptable Delivery not smooth and audience attention lost. Does not seem to understand the topic very well. Often mumbles or cannot be understood.
Organization of Presentation	Content is well organized using headings or bulleted lists to group related material.	Uses headings or bulleted lists to organize, but the overall organization of topics appears flawed.	Content is logically organized for the most part.	There was no clear or logical organizational structure, just lots of facts.

DOCUMENT REVIEW AND APPROVAL	
Prepared by:  <p style="text-align: center;"><b>KENNETH CARL A. LABAROSA</b> Faculty, Department of Computer Engineering</p>	Reviewed by:  <p style="text-align: center;"><b>ELLINE L. FABIAN, MECpE</b> Head, DCpE Curriculum Committee</p>
Date Submitted for Approval:	Date Reviewed:
Approved by:  <p style="text-align: center;"><b>ANTONIETTE M. CAÑETE, PhD.</b> Chair, Department of Computer Engineering</p>	
Date Approved:	

DOCUMENT REVISION HISTORY			
Version Number	Date	Revisions	Author
0.0	2021	Creation of OBTL syllabus	Thairell C. Imperial
1.0	2021	<ul style="list-style-type: none"> <li>- Adjustment on Grading System</li> <li>- Updated Alignment to Program Outcomes</li> <li>- Course Policies revised to meet the need for an online class</li> <li>- Revised Rubric for Canvas integration</li> </ul>	Thairell C. Imperial
2.0	2023	<ul style="list-style-type: none"> <li>- Adapted new template</li> <li>- Modified TLAs and ATs</li> <li>- Modified the course timeline</li> <li>- Modified grade component</li> <li>- Added authentic assessments</li> </ul>	Thairell C. Imperial

3.0	2024	Adapted the new Syllabus Format	Kenneth Carl A. Labarosa
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