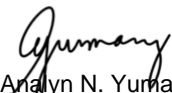

 SCHOOL OF ELECTRICAL, ELECTRONICS, AND COMPUTER ENGINEERING		Course Code and Title CPE174P-4 Security Architecture and Security Management	
		Curriculum: 2024	Page 1 of 6
Prepared by:  Analyn N. Yumang	Approved by:  Noel B. Linsangan	Revision Date: June 2024	Effectivity Date: T1 2024– 2025

VISION

Mapúa University, a global leader in education, shall foster sustainable socio-economic growth in society through innovation, digital transformation, and lifelong education.

MISSION

1. The University shall provide a learning environment in order for its students to acquire the attributes that will make them globally competitive.
2. The University shall engage in publishable and/or economically viable research, development, and innovation.
3. The University shall provide state-of-the-art solutions to problems of industries and communities.

COURSE SYLLABUS

1. Course Code: CPE174P-4
2. Course Title: Security Architecture and Security Management
3. Prerequisite: CPE173P-4
4. Co-Requisite: None
5. Credit: 3 units / 6.15 hours per week
6. Course Description: Introduces the methodologies and tools of modern software development, applied to the IT and Network operations. It covers a 360 view of the domain including micro services, testing, containers and DevOps, as well as securely automating infrastructures with Application Programming Interfaces (APIs). Students completing this course, gain practical, relevant, hands-on lab experience, including programming in Python, using GIT and common data formats (JSON, XML and YAML), deploying applications as containers, using Continuous Integration/Continuous Deployment (CI/CD) pipelines and automating infrastructure using code.
7. Course Outcomes (COs)
- After completing the course, the student must demonstrate the following outcomes:
1. Implement a development environment using DevNet resources and create REST API requests over HTTPS to securely integrate services.
 2. Use current technologies to deploy and secure applications and data in a cloud environment.
 3. Compare software testing and deployment methods in automation and simulation environments.
8. Design of Outcome-Based Modular Content

Course Title	Credit Units	Module Code	Module Title	Lec Hrs.	Lab Hrs.	Weeks
Security Architecture and Security Management	3	1	Cybersecurity and the Security Operations Center	11.5	17.25	5
		2	Network Infrastructure and Principles of Network Security	11.5	17.25	5
		3	Endpoint Security, Intrusion Data Analysis, Incident Response and Handling	9.2	13.8	4

9. Course Coverage

CO	Week	Topic	TLA	AT	Tech, Tools, and /or Micro-credentialing Requirements
CO1	1	Orientation and Introduction to the Course Basic Python programming	Lecture/Discussion		
	2	Linux Skills	Reading Tasks Supplementary Materials		
	3	The DevNet Developer Environment	Lecture/Discussion, Reading Tasks Supplementary Materials		
	4	Software Development	Lecture / Discussion	CW1	
	5	Software Design	Lecture/Discussion, Reading Tasks Supplementary Materials	LQ1 SE1	
CO2	6	Understanding and Using APIs	Lecture/Discussion, Reading Tasks Supplementary Materials		
	7	Network Fundamentals	Lecture/Discussion, Reading Tasks Supplementary Materials		
	8	Application Deployment and Automation	Lecture/Discussion, Reading Tasks Supplementary Materials		
	9	Networks for Application Deployment and Security	Lecture/Discussion, Reading Tasks Supplementary Materials	CW2	
	10	Infrastructure and Automation	Lecture/Discussion, Reading Tasks Supplementary Materials	LQ2 SE2	
CO3	11	Automation Tools	Lecture/Discussion, Reading Tasks Supplementary Materials		

CO	Week	Topic	TLA	AT	Tech, Tools, and /or Micro-credentialing Requirements
	12	Network Programmability	Lecture/Discussion		
	13	Cisco Platforms and Development	Lecture/Discussion	CW3 LQ3	
	14	Final Examination		SE3	

10. Lifelong Learning Opportunities

Explains the significance of the role of cyber criminals and their motivations and how to become a cybersecurity specialist who helps defeat the cyber criminals that threaten the cyber world.

11. Contribution of the Course to Meeting the Professional Component

Engineering Topics – 100%

12. Prescribed E-book and/or Courseware

- A. Cisco Networking Academy – NetAcad
CCNA DevNet Associate (DEVASC)

13. Other References and Educational Resources

- A. METIS (Mapua E-Text Infinity Solutions)
- B. Others

14. Course Evaluation

Student performance will be rated based on the following:

Assessment Tasks		Weight	Minimum Average for Satisfactory Performance
CO1	Course Work	30%	21%
CO2	Long Quiz	30%	21%
CO3	Final Exam	40%	28%
Total		100%	70%

The final grade will correspond to the weighted average scores shown below:

Average	Final Grade	Average	Final Grade
0.00 – 69.99	5.00	82.00 – 84.99	2.00
70.00 – 72.99	3.00	85.00 – 87.99	1.75
73.00 – 75.99	2.75	88.00 – 91.99	1.50
76.00 – 78.99	2.50	92.00 – 95.99	1.25
79.00 – 81.99	2.25	96.00 - 100.00	1.00
For approved medical reasons only		I	

15. Policy on the Use of AI Tools and Technologies

It is expected that students will adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, misrepresenting one’s work, and/or inappropriately collaborating. This includes the use of generative AI tools that have not been cited or documented or authorized. Students will also be expected to adhere to the prescribed professional and ethical standards of the profession/discipline for which the student is preparing. Any student who engages in academic dishonesty or who violates the professional and ethical standards for the profession/discipline for which the student is preparing, may be subject to academic sanctions as the University’s Academic Integrity Policy.

16. Other Course Policies

- a. Attendance.
According to CHED policy, the total number of absences by the students should not be more than 20% of the total number of meetings or 10.5 hours for a three-unit-course. Students incurring more than 10.5 hours of unexcused absences automatically get a failing grade regardless of class standing.
- b. Guided Learning Output.
Guided learning outputs through various worksheets in each cluster of topics are assigned to the students. Problems encountered in the worksheets will be discussed in class.
- c. Written Examination
Exams will be given face to face for Tri-X, Bio-X and Blended modes and online for UOX.
- d. Course Portfolio.
Selected guided learning outputs and examinations are to be compiled and collected before the end of the term. The selection is based on statistical data gathering (lowest, median, highest). Guided learning outputs and examinations with marks lowest, median, and highest must be photocopied and must be given back to the instructor for course portfolio keeping.
- e. Language of Instruction.
Lectures, discussion, and documentation will be in English. Written and spoken work may receive a lower mark if it is, in the opinion of the instructor, deficient in English.
- f. Dress and Grooming Codes.
All of us have been instructed on the Dress and Grooming Codes of the University.
- g. Academic Integrity Policy. It is the student’s responsibility to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Any of the following sanctions may be imposed to any student who is found guilty of committing online academic dishonesty:
 - 1. Failed mark in the course
 - 2. Suspension for a period of less than one term, with or without community service
 - 3. Suspension for a period of one term or more, with or without community service
 - 4. Non-readmission to the University
 - 5. Dismissal from the University
 - 6. Expulsion

The following are considered academic dishonesty:

- 1. Using another MyMapua email address to login to any platform (such as BlackBoard and Coursera) with or without permission. Asking or hiring someone else to do their exams, homework, Coursera course, papers, projects or other academic requirements.
- 2. Recording and saving copies of exam questions or answers, or answer keys for distribution.
- 3. Receiving copies of exam questions or answers, or answer keys to an exam from someone who has already taken it.
- 4. Plagiarizing or the unethical act of stealing the thoughts of another without proper citation or reference, acquiring information from the Internet without acknowledging the author, copying from another student’s work without permission and submitting it as own work.
- 5. Massive, pre-meditated, organized online cheating using instant messaging/email during a quiz or exam.
- 6. Any form of dishonesty in peer-reviewed assignments/submissions (e.g. Coursera peer-graded submissions).
- 7. Engaging in any activities that will dishonestly improve results, or dishonestly improve or damage the results of others.
- 8. Any other form of dishonesty or cheating in any assessment or course requirement.

All students who violate the Academic Integrity Policy of the university will be given zero mark for the exam or for the activity and will be given a failing grade for the course. He or she will also be referred to the Prefect of Discipline for appropriate sanction.

- h. Consultation Schedule.
Consultation schedules with the Professor are posted outside the EECE Faculty room and in the School of EECE microsite (<http://eece.mapua.edu.ph>). On blended and fully online terms, consultations may be done using any of the official communication platforms (Zoom or Microsoft Teams). It is recommended that the student first set an appointment to confirm the instructor’s availability
- i. Appeal system.
All appeals on student assessment must be made by the concerned student within one week after the return of the assessed student work. In case the student is not satisfied, no later than one week after the decision of the faculty has been made, he can elevate the appeal to the program chair or dean in case there is no program chair. The decision of the program chair or dean is final. The faculty must abide with the moderated decision of the program chair or dean.

17. Course Materials to be Provided to Students

- 17.1 Syllabus
- 17.2 Course Schedule
- 17.3 Lecture Materials

18. Committee Members

Caya, Meo Vincent C.
Cruz, John Paul T.
Lee, Marvin V.
Padilla, Dionis A.
Singson, Lowell B.
Sy, Jojo T.
Yumang, Analyn N.