



OUTCOMES-BASED EDUCATION (OBE) COURSE SYLLABUS

Chem 117 Inorganic Chemistry I

I. UNIVERSITY INFORMATION

1. Vision of the University

A globally competitive university for science, technology, and environmental conservation

2. Mission of the University

Development of a highly competitive human resource, cutting-edge scientific knowledge and innovative technologies for sustainable communities and environment.

3. VSU Quality Policy Statement

The Visayas State University (VSU), a globally competitive university of science and technology and environmental conservation, is created by law to develop highly competitive human resource, cutting-edge scientific knowledge and innovative technologies for sustainable communities and environment.

Towards this end, we, at the Visayas State University, commit to:

- Produce highly competent, quality and world-class manpower in science and technology, especially for agriculture, environmental management and industry who are proficient in communication skills, critical thinking and analytical abilities;
- Generate and disseminate relevant knowledge and technologies that lead to improved productivity, profitability and sustainability in agriculture, environment and industry; and
- Satisfy the needs and applicable requirements of the industry, the community and government sectors who are in need of quality graduates and technology ready for commercialization through the establishment, operation, maintenance and continual improvement of a Quality Management System (QMS) which is aligned with the requirements of ISO 9001:2015.

It shall be the policy of the university that the quality policies and procedures are communicated to and understood by all faculty, staff, students and other stakeholders and that the system be continually improved for its relevance and effectiveness.


EDGARDO E. TULIN
President
v0 07-16-2019

4. Quality Goals of the College of Arts and Sciences

1. To produce quality manpower and graduates in biology, biotechnology, chemistry, english, liberal arts and behavioral sciences, mathematics, physics, and statistics to serve the development needs of the region.
2. To uplift the economic well-being of the region through relevant R and D and extension programs.
3. Enhance regional development of the Visayas for regional competitiveness.

5. Quality Objectives of the Department of Pure and Applied Chemistry

1. Produce highly qualified and skilled Chemists and Chemical technicians for the industry and the academia.
2. Generate relevant knowledge and technologies through basic and applied multi- and inter-disciplinary researches.
3. Achieve strong linkages and cooperation with domestic and international institutions and agencies involved in the pursuit of sustainable development.

II. PROGRAM INFORMATION

1. Name of the Program	Bachelor of Science in Chemistry
2. CHED CMO Reference	CMO No. 47 s. 2017
3. BOR Approval	BOR Resolution No. 63 s. 2018

4. Program Educational Objectives and Relationship to Institution Mission

Program Educational Objectives	Mission*		
	a	b	c
1. Occupy supervisory and managerial position and in educational, research institution and industries both local and international.	√	√	√
2. Participate in multidisciplinary or cross-disciplinary research team.	√	√	√
3. Establish own chemical-based business industries.	√	√	√
4. Pursue graduate studies and specialized training program in chemistry and related field.	√	√	√
5. Pursue other degree program.	√	√	√

*a - development of a highly competitive human resource, b - cutting-edge scientific knowledge, c - innovative technologies for sustainable communities and environment

III. COURSE INFORMATION

1. Course Code	Chem 117
2. Course Title	Inorganic Chemistry I
3. Pre-requisite	Chem 115 – Principles of Chemistry; Chem 115.2 – Principles of Chemistry Laboratory
4. Co-requisite	Chem 117.1 – Inorganic Chemistry I Laboratory
5. Credit	3 units
6. Semester Offered	2 nd Semester
7. Number of hours	3 hours per week
8. Course Description	This course will be devoted to the study of the principles and trends in the chemistry of the elements. Topics also include acid-base chemistry, descriptive chemistry of metals and nonmetals, electrochemistry, and reduction-oxidation reactions.

9. Program Outcomes (POs) in relation to the Program Educational Objectives (PEOs)						
Program Outcomes (POs)		Program Educational Objectives				
		1	2	3	4	5
a	Demonstrate a broad and coherent knowledge and understanding in the core areas of chemistry: inorganic, organic, physical, biological, and analytical chemistry; and in addition, the necessary background in mathematics and physics.	√	√	√	√	√
b	Gather data using standard laboratory equipment, modern instrumentation and classical techniques.	√	√	√	√	√
c	Identify and solve problems involving chemistry, using current disciplinary and interdisciplinary principles.	√	√	√	√	√
d	Qualify for further study and/or for entry-level professional employment in the general workplace.	√	√	√	√	√
e	Work effectively and independently in multi-disciplinary and multi-cultural teams (PQF level 6 descriptor).	√	√	√	√	√
f	Act in recognition of professional, social, and ethical responsibility.	√	√	√	√	√
g	Effectively communicate orally and in writing using both English and Filipino.	√	√	√	√	√
h	Articulate and discuss the latest developments in the specific field of practice (PQF level 6 descriptor).	√	√	√	√	√
i	Interpret relevant scientific data and make judgments that include reflection on relevant scientific and ethical issues.	√	√	√	√	√
j	Preserve and promote “Filipino historical and cultural heritage” (based on RA 7722).	√	√	√	√	√

10. Course Outcomes (COs) and Relationship to Program Outcomes (POs)										
After completing this course, the student must be able to perform the following COs:	Program Outcomes Code									
	a	b	c	d	e	f	g	h	i	j
CO1 Draw generalization related to structure, properties and reactivity of main group elements and transition metals.	D		D	D			E	E	E	
CO2 Predict the acid and base properties of the elements in the periodic table based on current understanding of the atomic structure.	D		D	D			E	E	E	
CO3 Compare and contrast galvanic and electrolytic electrochemical cells; determine standard and non- standard cell potentials	D		D	D			E	E	E	

Legend: I – Introductory, E – Enabling, D – Demonstrative

Each letter indicates the expected level of competency that each CO should provide for each PO.

15. Course Assessment and Evaluation

The performance of students will be assessed and evaluated based on the following:

50% Midterm + 50% Final Term = 100% (Overall Final)

Item No,	Assessment Tasks	Percentage Contribution (1)	No. of Times in the Semester (2)	Individual Task % Contribution (1/2)
1	Quizzes (Q)	40	10	4.00%/Q
2	Learning Tasks (LT)	10	10	1.0%/LT
3	Exams (E)	50	4	12.5%/E
		100%		

COs	Assessment Tasks	Weight in Percent	Minimum Average for Satisfactory Rating	Target and Standards
CO 1	Learning Task (1-4)	4.00%	60%	At least 60% of the students have at least 60% score
	Quiz (1-4)	16.00%		
	Exam (1-2)	25.00%		
CO 2	Learning Task (5-7)	3.00%	60%	At least 60% of the students have at least 60% score
	Quiz (5-7)	12.00%		
	Exam 3	12.50%		
CO 3	Learning Task (8-10)	3.00%	60%	At least 60% of the students have at least 60% score
	Quiz (8-10)	12.00%		
	Exam 4	12.50%		
TOTAL		100%		

Grading System (% Passing: 60%)

Range	Grade	Range	Grade
97 – 100	1.00	75 – 79	2.25
93 – 96	1.25	70 – 74	2.50
89 – 92	1.50	65 – 69	2.75
85 – 88	1.75	60 – 64	3.00
80 – 84	2.00	below 60	5.00

16. Course Policies

A. Classroom Rules

a. Face-to-face (offline) Mode:

1. All students are required to maintain the cleanliness of the classroom at all times. Thus, all chairs, tables, and other items present in the classrooms must be returned to their proper places after every class.
2. Trashes are to be thrown in garbage bins near the classroom.
3. Students are to turn their cellular phones off or in silent mode for the class duration and are not allowed to use their cellular phones except for emergency purposes.
4. Students are encouraged to take down notes using pen and paper. Upon the approval of the instructor, notes written on the board or presented may be photographed.