NATIONAL UNIVERSITY OF ENGINEERING
COLLEGE OF MECHANICAL ENGINEERING
NAVAL ENGINEERING PROGRAM

MV643 – ORGANIZATION AND ADMINISTRATION OF NAVAL INDUSTRIES

I. GENERAL INFORMATION

COURSE	**:**	MV643 Organization and Administration of Naval Industries
GRADE	**:**	6
CREDITS	**:**	3
WEEKLY HOURS	**:**	4 (Theory–Practice)
REQUIREMENTS	**:**	MV615
CONDITION	**:**	Mandatory

II. SUMMARY

The course prepares the student in the knowledge of concepts used in the naval, maritime and port industry on administration and management. The concepts are directed to generalities on the general Theory of the administration, Theory of the Organizational Evolution, Strategies and the life cycle of the product, Organization of Projects, Techniques of planning of projects, Programming of projects, Organization of shipyards, Chain of Work And Operations Control. Examples and examples of successful companies are analyzed in order to understand their organization and strategies used to achieve their objectives.

III. STUDENT ACHIEVEMENTS

The student:

1. Knows basic principles of the fundamentals of business administration and organization.
2. Knows the characteristics, organization, environment and techniques of project management.
3. Develops techniques applied to the planning, programming, evaluation, organization and operations of engineering projects.
4. Develops interpretive activities on topics of discussion in dynamic groups.
5. Promotes throughout the semester the research about places the student in the professional concerns of the area of his training.

IV. LEARNING UNITS

1. INTRODUCTION TO THE GENERAL THEORY OF ADMINISTRATION / 4 HOURS

Management and its perspectives / Historical background of the Administration / Classic Approach of the Administration / Other Approaches of the Administration.

2. THEORY OF ORGANIZATION / 4 HOURS

Objectives / Origins of Organizations / Organizational Analysis / Organizational Typology / Organizational Objectives / Organizational Strategy / Global Organizational Environment.

3. STRATEGIES AND THE LIFE CYCLE OF THE PRODUCT / 4 HOURS
Concept / Stages and strategies / Cases in the naval sector.

4. PROJECT ORGANIZATION / 4 HOURS
General / Features of Project Management and Project Administration / Project Management Management Cycle / Project Related Entities / Project Management Techniques.

5. PROJECT PLANNING TECHNIQUES / 4 HOURS
Planning, programming, control and evaluation / Fundamentals of the graphical representation of the programming, Gantt Diagram / Network of activities / Construction of a network of sequential activities.

6. PROGRAMMING OF PROJECTS / 4 HOURS
Programming of projects PERT / CPM / Programming of projects with known times of activities / Concept of critical path; Determination of the critical path / Programming of projects with uncertain times / Uncertain times of activity / Variability in project completion time / Considerations of time and cost exchanges / Time of hasty activities.

7. SHIPYARD ORGANIZATION / 4 HOURS
Generalities / Evolution / Typical organizations / Materials / Organization and personnel / Quality control / Plant and general services / Production / Technique / Accounting.

8. CHAIN OF WORK: ORGANIZATION OF THE PRODUCTION OF CONSTRUCTION / 4 HOURS
Chain of work / Organization of construction production / Construction / Classification of construction objects / Classification of construction processes / Production resources / Construction process.

9. OPERATING CONTROL / 4 HOURS
Operations Logistics / Operations Control / Operational Cost Control / Maintenance Management.

V. PRACTICAL EXPERIENCE:

1. **Qualified practice 1:** Research to the business organization of companies related to the naval, maritime and port sector; National and international.
2. **Qualified Practice 2**: Research and analyze business cases based on your organization and business strategies.
3. **Qualified practice 3:** Research, performs fieldwork in shipyards, in the analysis of methods of planning works.
4. **Qualified Practice 4:** Research, conducts fieldwork in shipyards and production offices; It works to analyze the methods of costing, time control and quality of naval works.

VI. METHODOLOGY

The course is developed in sessions of theory and practice. In theory sessions, the teacher presents the concepts, history, national and international business experiences related to the naval, maritime and port industry. In all the sessions

the active participation of the student is promoted. The practice sections are held during class time and there are group research and exposure works.

VII. GRADING FORMULA

The Final Avarage (FA) is calculated as follow:

FA = (ME + PA + 2FE) / 4

ME: Midterm Exam FE: Final Exam
PA: Average of Practical Works

VIII. BIBLIOGRAPHY

- Idalberto Chiavenato. MC. Graw Hill Ed.; **Introduction to the general theory of administration**; Mexico 2007.
- B. J. Hodge, William P. Anthony and Lawrence M. Wales. Pearson Prentice Hall Ed.; **Theory of Organization**; Spain 2003.
- Philip Kotler. Pearson Prentice Hall Ed.; **Marketing direction**; Mexico 2001.
- Emilio Monterde Aparici. **Organization of naval factories**; ETSIN Ed.; Madrid, Spain.
- De los Ríos Cl. José. **Organization of production in the naval industry**. ETSIN Ed.; Madrid Spain.