

DepEd-National Capital Region

**DIVISION OF CITY SCHOOLS – VALENZUELA**

**Valenzuela City**

**VALENZUELA CITY SCIENCE HIGH SCHOOL**

A. Marcelo Street, Dalandanan Valenzuela City

**Subject Title:** Science IV - C

**Subject Code** Research II

**School Year:** S.Y. 2011 – 2012

**Faculty:** JAIME S. DE VERA JR.

**Department:** Science Department)

**Prerequisite subject:** English I-B (Research I)

(Technical writing with Basic Statistics)

**Course Description**

The main focus of the course is to provide essential information and skills on Scientific Research/Writing as a support to Science in answering questions, acquiring new concepts and expanding the frontiers of knowledge.

The study of this subject is accompanied by a companion website (www.valscisciencedepartment.weebly.com) constructed and prepared for the students, basically for uploading lecture notes, submission of research outputs and students’ on-line activities.

**Course Objectives:**

* Understand the step-by-step procedure in conducting experimental research and scientific writing.
* Appreciate the importance of research as a key foundation in acquiring new concepts and methods of providing answers to various questions and problems of the community.
* Present a Research Project that is feasible, applicable, valid, reliable and usable to the school and community.

**Grading System:**

Quarterly Exam 25%

Quizzes 10%

Participation & Performance 35%

1. Participation: 20%
2. Recitation/Seatwork 15%

Output 20%

Assignment 10%

100%

**Course Content:**

**1st Quarter**

1. **Introduction to Research**
   1. What is Research?
   2. Research Paper v.s. Term Paper
   3. Qualities of a Good Research Paper
   4. Aims of Research
   5. Types of Research
   6. Sources of Research Topics and Areas
2. **The Research Process**
   1. Steps in the Research Process
   2. Primary and Secondary Sources
   3. Basic Search Strategy
3. **The Library and I.T. as Research Tools**
   1. Using the Library Effectively and Efficiently
   2. Searching Through the Scientific Literature
   3. Library Classification Systems
   4. Use of Electronic Media
   5. Citing of Sources and Use of Footnotes / End Notes
   6. Evaluating a Research Paper and Sources

**Second Quarter**

1. **Research Design**
   1. What is a Research Design?
   2. Planning a Research Design
   3. Principles of a Research Design
   4. Types of Research Design
2. **Research Variables**
   1. What are Variables?
   2. Types of Variables
   3. Levels of Measurement of Variables
3. **Sampling**
   1. What is sampling?
   2. Types of Sample
   3. Sampling Methods
4. **Statistics in Experimental Research**
   1. What is Statistics?
   2. Descriptive Statistics
5. **Hypothesis Testing**
   1. What is a hypothesis?
   2. Common Statistical Tests Used in Experimental Research

**3rd Quarter**

1. **Introduction to Scientific Writing**
   1. What is Scientific Writing?
   2. Guidelines for Style in Scientific Writing
   3. Writing the Research Paper
   4. Guideline for Tables and Graphs
   5. Guideline in the Discussion of Results
2. **Presentation of a Research Project**
   1. Sharing your Study
   2. Preparing a Visual Display
   3. Giving an Oral Presentation
   4. Writing a Research Article
   5. Revising, Editing and Proofreading

**4th Quarter**

Research Making and Oral Defense

**Course References:**

* Helen E. Caintic, Ph.D. and Juanita M. Cruz, Ph.D. **Scientific Research Manual**. C&E Publishing Incorporation. 2008.
* Geoffrey Marczyk, David De Matteo, and David Festinger. **Essentials of Research Design and Methodology**. John Wiley and Sons, Inc. 2005.
* Laurie Rozakis, Ph. D. **Quick Guide to Writing Research Papers**. McGraw-Hill Companies. 1999.
* Kathryn L. Schwartz. **Step-by-Step Research and Writing**. Internet Public Library. 1997.

**Course Requirements and System of Grading**

1. Written outputs for Research for the Fourth Year level are by group (consist of 3 researchers) and shall be a requirement for graduation.
2. The grades for the 1st – 3rd Quarters of Research II shall be based on the following criteria:

Quarterly Exam 25%

Quizzes 10%

Participation & Performance 35%

Output 20%

Assignment 10%

100%

The grades for the 4th Quarter shall be based on the following criteria:

Quarterly Exam 30%

Written Output 30%

Content (20%)

Mechanics (10%)

Oral Defense 40%

100%

1. The mechanics for Oral Defense shall be determined by the school, particularly by the Science, Mathematics and English departments.
2. The students shall be properly informed of the mechanics at the opening of the school year.
3. If the student fails in the oral defense, he/she shall be given a mark of INCOMPLETE but shall be allowed to make up within two weeks before a final grade is given.
4. For graduating students, results of the Oral Defense shall be communicated to them 30 days before graduation. Failure to complete the requirement within the prescribed date shall render the student ineligible for graduation.
5. After the final defense, the research manuscript should be submitted to the office of the Research Coordinator in triplicate copy (1 for the Science Department, 1 for the Library and 1 for Researcher). It is understood that the final copies are all hard-bounded.