



De La Salle University – Dasmariñas

GRADUATE PROGRAM

INSTRUCTIONAL BUSINESS CALCULUS MODULES  
FOR BUSINESS ADMINISTRATION  
STUDENTS

De La Salle University – Dasmariñas

Dasmariñas, Cavite

Instructional Business Calculus Modules

SS11 Business Administration Students

A Master's Thesis

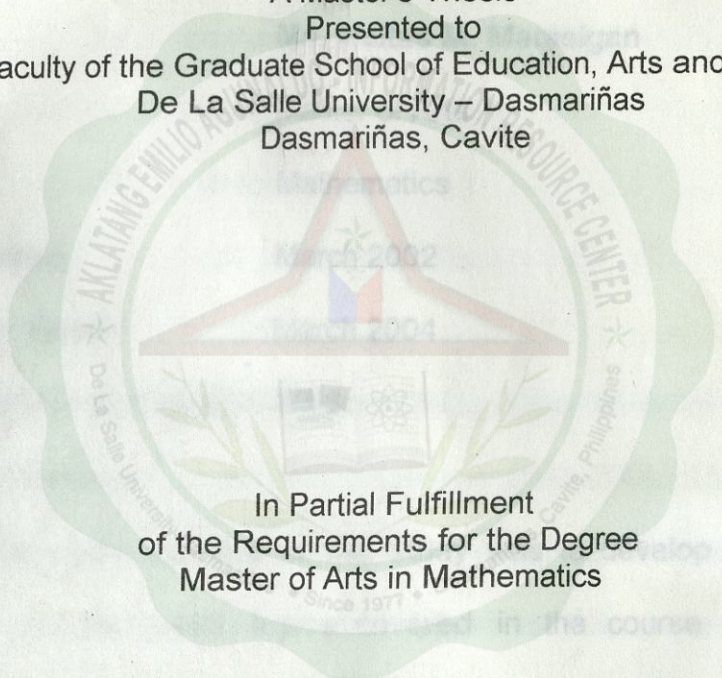
Presented to

the Faculty of the Graduate School of Education, Arts and Sciences  
De La Salle University – Dasmariñas  
Dasmariñas, Cavite

Mathematics

March 2004

March 2004



In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts in Mathematics

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March 2004

18 5 JAN 2005



### ABSTRACT

Name of the Institution: De La Salle University – Dasmariñas  
Address: Dasmariñas, Cavite  
Title: **Instructional Business Calculus Modules  
for Business Administration Students**  
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Degree: Master of Arts  
Major: Mathematics  
Date Started: March 2002  
Date Completed: March 2004

### STATEMENT OF OBJECTIVES:

#### General Objective:

The main objective of this study was to develop instructional modules on the major topics covered in the course syllabus on Business Calculus, namely: Equations of a Line, Functions, Supply and Demand Functions, Cost Analysis, Limits and Continuity, Derivative, Techniques of Differentiation, Derivatives of Exponential and Logarithmic Functions, Applications of Derivative, and Integration.

#### Specific Objectives:

1. Determine the assessment of the technical panel on the developed instructional modules in terms of the:



- 1.1. content;
  - 1.2. manner of presentation; and
  - 1.3. usefulness.
2. Determine the assessment of the business administration students on the developed instructional modules in terms of the:
- 2.1. content;
  - 2.2. manner of presentation;
  - 2.3. usefulness; and
  - 2.4. clarity and readability.

**SCOPE AND COVERAGE:**

The study was conducted at De La Salle University–Dasmariñas during the second semester of school year 2003–2004. The samples of the study consisted of 80 randomly selected business administration students of DLSU-D who have taken Business Calculus during the first semester of the school year 2003–2004.

**METHODOLOGY:**

This study has undergone the following phases:

1. Development of Instructional Modules
  - 1.1. Planning Stage
  - 1.2. Production Stage



2. Content Validation of the Instructional Modules

2.1. Done by the Technical Panel

2.2. Done by the Business Administration Students

3. Revision

The first phase was planning and production of the instructional modules. In planning, the researcher gathered pointers as to how the lessons in each topic listed in the syllabus should be sequenced, the time allotment for each lesson, the kind of sample exercises to be included and the learning activities that should be incorporated while on the production stage, the researcher made the pre-requisite concepts for each lesson based on the content to be covered, formulated the behavioral objectives, and wrote the learning and enrichment activities necessary to achieve the objectives of the lesson. For each module, the researcher also prepared the pre-tests and post-tests based on the content of the module.

The second phase was the content validation of the instructional modules done by the technical panel consisting of two experts in calculus who are currently teaching in De La Salle University - Dasmariñas and a CPA who is currently the dean of Metro Tagaytay College of Business and Arts (MTCBA). They were given an evaluation



questionnaire to assess the instructional modules regarding their content, manner of presentation and usefulness. The eighty business administration students were also given the same evaluation questionnaire. They were also requested to underline or encircle any word, phrase, sentence, paragraph, figure or illustrations that they found confusing or difficult to understand to determine the clarity and readability of the instructional modules.

The third phase was the major revision of the instructional modules. The final draft was made based on the suggestions and recommendations of the technical panel and the students' perceptions and assessment in the developed instructional modules.

The research method that was used in this study is the descriptive-developmental method of research. This was used in narrating the development, content validation and revision of the instructional modules. The analysis of data and interpretation of the results is presented in a descriptive manner.

The statistical tools used were the mean and the feedback-based readability formula.

#### **MAJOR FINDINGS:**

Based on the results of the technical panel and the business administration students' assessments, it is hereby summarized that the developed instructional business calculus modules for business



administration students were acceptable and were rated very satisfactory. Moreover, the students found the instructional modules useful since among the three criteria set in this study, *usefulness* received the highest rating. The instructional modules are clear and readable as far as the student assessments are concerned based on the computed communication indices (C.I.s). Furthermore, the C.I.s classified all modules as “quite clear” instructional modules.

**CONCLUSIONS:**

Based on the results and findings of the study, the following conclusions are hereby forwarded:

1. The seven developed instructional modules are all acceptable to the technical panel and to the business administration students since they were all assessed as a very satisfactory instructional materials.
2. The instructional modules are useful. The words and illustrations used in the development of the content of the instructional modules are suitable to the students' level of understanding based on the computed communication indices. Furthermore, the instructional modules can serve as an effective instructional material as regards content, manner of presentation, and usefulness.

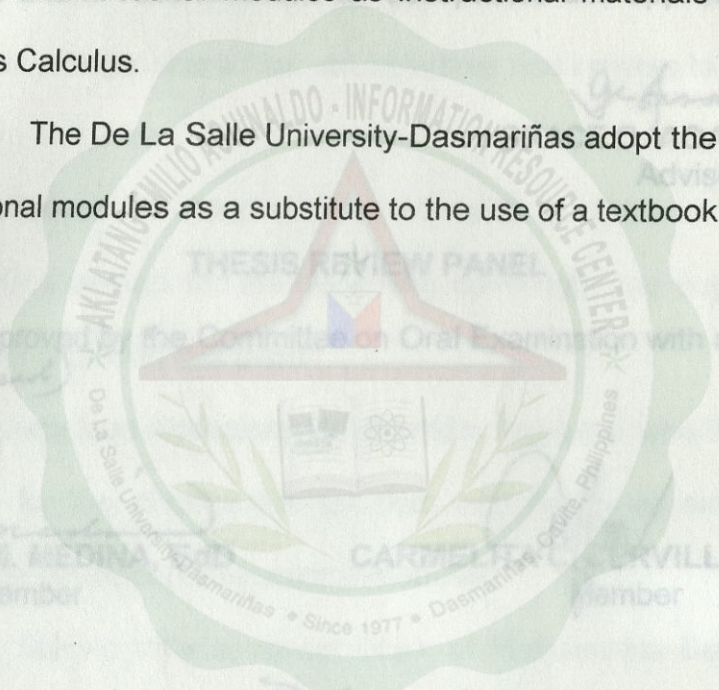


APPROVAL SHEET

Recommendations:

Based on the findings and conclusions of this study, the following are recommended:

1. The teachers teaching Business Calculus can use the developed instructional modules as instructional materials in teaching Business Calculus.
2. The De La Salle University-Dasmariñas adopt the developed instructional modules as a substitute to the use of a textbook.



Approved by the Committee on Oral Examination with a grade of 7.00 (Good)

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