DE LA SALLE UNIVERSITY
College of Science
Department of Mathematics

MATAPRE – *Mathematics Appreciation*
Prerequisite: *Prerequisite to:*

Instructor:_____   **Contact details:**_____
Consultation Hours:_____   **Class Schedule and Room:**_____

Course Description

This course covers topics in college algebra focusing on applications to solving problems that may be used by students in everyday living. The course is designed to provide students with opportunities to discover and appreciate the relevance of mathematics to industry, business, science, arts and architecture, music, games and recreation, and other areas of human endeavor.

Learning Outcomes

On completion of this course, the student is expected to present the following learning outcomes in line with the Expected Lasallian Graduate Attributes (ELGA)

ELGA	Learning Outcome
Critical and Creative Thinker Effective Communicator Lifelong Learner Service-Driven Citizen	At the end of the course, the student will apply appropriate mathematical concepts, processes, tools, and technologies in the solution to various conceptual and real-world problems.

Final Course Output

As evidence of attaining the above learning outcomes, the student is required to submit the following during the indicated dates of the term.

Learning Outcome	Required Output	Due Date
At the end of the course, the student will apply appropriate mathematical concepts, processes, tools, and technologies in the solution to various conceptual and real-world problems.	An inquiry-based group presentation highlighting the uses of mathematics in different problem situations encountered in business and industry, arts, humanities, social sciences, and other fields of endeavor	Week 13

Rubric for assessment

Written Group Report

CRITERIA	Excellent (4)	Good (3)	Satisfactory (2)	Needs Improvement (1)
Content and Organization (60%)	In-depth and insightful discussion in addition to score 3 performance	Logical sequencing of information throughout. Sufficient supporting details. Clear and effective concluding paragraph	Logical sequencing of information most of the time. Details are given but inadequate to support the topic. Clear concluding paragraph but lacks effectiveness	Information presented with little organization. Most of the details irrelevant. Concluding paragraph not clear
Grammar (30%)		No error	Between one and three errors	More than four errors
Bibliography (10%)		All resources cited	Some of the resources not cited	Majority of the resources not cited

Group Member Assessment

CRITERIA	EXCELLENT 4	VERY GOOD 3	SATISFACTORY 2	NEEDS IMPROVEMENT 1
Content and Organization (30%)	Creative and insightful presentation in addition to score 3 performance	All points presented with depth and clarity. Logical and interesting sequencing of ideas	Majority of points covered with depth and clarity; some tackled lightly Logical sequencing of ideas	Majority of points tackled lightly Less logical sequencing of ideas

Knowledge of Topic (20%)	All questions answered with insights in addition to score 3 performance	All questions answered correctly with explanation	All questions answered but with little explanation	Majority of the questions not answered correctly
Delivery (20%)	Techniques make the presentation interesting in addition to score 3 performance	techniques make the presentation highly convincing, audience attentive throughout	techniques make the presentation convincing, audience attentive most of the time	techniques make the presentation not understandable; audience could no follow
Group Effort and Participation (20%)	All members contributed significantly in addition to score 3 performance	All members actively involved in presentation; all of them contribute	Majority of members involved in presentation; some do not contribute	Majority of members not involved in presentation and do not contribute
Bibliography (10%)	With insightful comments on resources in addition to score 3 performance	All resources cited	Some of the resources not cited	Majority of the resources not cited

Additional Requirements

Aside from the learning output, the student will be assessed at other times during the term by the following:
- Skills Check (Seatwork/Quizzes/Boardwork)
- Individual/Group Report
- Individual/Group Problem Set

Grading System

		Scale:	
Learning Output:	20%	95-100%	4.0
Skills Checks:	50%	89-94%	3.5
Reaction/Critique/Term Paper:	10%	83-88%	3.0
Final Exam:	20%	78-82%	2.5
TOTAL:	**100%**	72-77%	2.0
Passing Grade: 60%		66-71%	1.5
		60-65%	1.0
		<60%	0.0

Learning Plan

LEARNING OUTCOME	TOPIC	WEEK NO.	LEARNING ACTIVITIES
At the end of the course, the student will apply appropriate mathematical concepts, processes, tools, and technologies in the solution to various conceptual and real-world problems.	**I. Functions** 1. Definition of a function and function notation 2. Representations of functions (equation, set of ordered pairs, graph) 3. Linear functions and system of linear equations 4. Quadratic functions 5. Exponential functions	Week 1-6	Prior knowledge and beliefs survey Concept mapping Library work Group/class discussion Computer laboratory activity Skills exercises Problem solving
	II. Sequences and Patterns 1. Definition of a sequence 2. Arithmetic sequences 3. Geometric sequences 4. Other sequences and patterns (Fibonacci sequences, Pascal's triangle, figurate numbers, etc.)	Week 7-10	

	III. Mathematics in Business and Industry, Arts, Humanities, Social Sciences, and Other Fields of Endeavor	Week 11-13	Library work Group/class discussion Project presentation	

References

1. Kaufmann, J. and Schwitters, K, (2010), Succeeding with College Algebra, Cengage Learning Asia Pte. Ltd., Singapore.
2. Miller C., Heeren V., and Hornsby E. Jr., (2008), Mathematical Ideas, 9th edition, Harper Collins College Publishers.
3. Blitzer R., (2007), Algebra and Trigonometry, 3rd edition, Pearson Education (Asia) Ltd., New Jersey.
4. Redlin L., Stewart J., and Watson S. (2007), Algebra and Trigonometry, 2nd edition, Brooks/Cole, Thomson Learning (Asia).

Online Resources

Regents Prep Center Ingrated ALGEBRA in Oswego City School District Regents Exam Prep Center, Accessed October 11, 2012 from:
   http://www.regentsprep.org/Regents/math/ALGEBRA/math-ALGEBRA.htm

Spector. *TheMathPage: Math Lessons and Math Help* Accessed October 11, 2012 from:
   http://www.themathpage.com/index.html

Ask Dr. Math in *The Math Forum* Accessed October 11, 2012 from: http://mathforum.org/dr.math/

Class Policies

1. The required minimum number of quizzes for a 3-unit course is 3, and 4 for 4-unit course. No part of the final exam may be considered as one quiz.
2. Cancellation of the lowest quiz is not allowed even if the number of quizzes exceeds the required minimum number of quizzes.
3. As a general policy, no special or make-up tests for missed exams other than the final examination will be given. However, a faculty member may give special exams for
   A. approved absences (where the student concerned officially represented the University at some function or activity).
   B. absences due to serious illness which require hospitalization, death in the family and other reasons which the faculty member deems meritorious.
4. If a student missed two (2) examinations, then he/she will be required to take a make up for the second missed examination.
5. If the student has no valid reason for missing an exam (for example, the student was not prepared to take the exam) then the student receives 0% for the missed quiz.
6. Students who get at least 89% in every quiz are exempted from taking the final examination. Their final grade will be based on the average of their quizzes and other prefinal course requirements. The final grade of exempted students who opt to take the final examination will be based on the prescribed computation of final grades inclusive of a final examination. Students who missed and/or took any special/make-up quiz will not be eligible for exemption.
7. Learning outputs are required and not optional to pass the course.
8. Mobile phones and other forms of communication devices should be on silent mode or turned off during class.
9. Students are expected to be attentive and exhibit the behavior of a mature and responsible individual during class. They are also expected to come to class on time and prepared.
10. Sleeping, bringing in food and drinks, and wearing a cap and sunglasses in class are not allowed.
11. Students who wish to go to the washroom must politely ask permission and, if given such, they should be back in class within 5 minutes. Only one student at a time may be allowed to leave the classroom for this purpose.
12. Students who are absent from the class for more than 5 meetings will get a final grade of 0.0 in the course.
13. Only students who are officially enrolled in the course are allowed to attend the class meetings.

Approved by:

**   Dr. Arturo Y. Pacificador, Jr.   **
Chair, Department of Mathematics

_____

February 2013 /RBPonsones