ADEMIC DATE: September 1, 1998 Division: AC

NCE & MATHEMATICS New Course: B: Department: SCIE

Revision of Course Information Form: X

DATED: February 1993

D: PRECALCULUS C: MATH 110

Semester Credit | Subject & Course No. | Descriptive Title

mmary of Revisions: Sept. 1998

isions to items F, H and N

F: Calendar Description

This is a one semester course for students who wish to prepare for MATH 120. Emphasis is placed on the graphing and solution of equations involving polynomial, rational, circular (trigonometric, logarithmic and exponential functions. This course is taught using a graphing

g calculator.

/eek/ emester

H: Course Pre-requisites: MATH 101 with a B or equivalent

G: Type of Instruction: Hours Per W Per S

Lecture 6 Hrs.

oratory Hrs

minar Hrs

Clinical Experience Hrs.

Field Experience Hrs.

Practicum Hrs.

Shop Hrs.

Studio Hrs.

Student Directed Learning Hrs.

I: Course Co-requisites: None

s course

te

J: Course for which thi is a pre-requisi MATH 120 or

Class Size: 35

K: Maximum

Hrs. Other

RS

M: Transfer Credit: TOTAL 6 HOU

Requested

Granted Y

X

Specify Course Equivalents or Unassigned Credit as Appropriate:

College Credit Transfer

r

College Credit Non-Transfe

U.B.C. MATH 110/120=Math 111

S.F.U. Math 100(3)

U. Vic. Math 012(0)

OTHER:

COURSE DESIGNER(S)

STRAR

DEAN

REGI

N: Texthooks and materials to be purchased by students

(Use Bibliographic Form):

calculus -functions and graphs- 2nd Edition. Houghton Mif... arson, Hostetler, Edwards: Pre

so required. A graphing calculator is al

Course Objectives:

Upon completion of MA 110 the student should be able to:

FUNCTIONS

understand the concept of function and be able to determine which relations are functions

by an examination of the equation and/or the graph of the relation.

functions for which the inverse can be ... find the domain of any function and the range

easily sketched. determined or for which the graph can be e

blem'. - extract the functional rule from a 'word prol

nd understand the graphical implication of the - determine if a function is odd or even a

property.

phs of the following functions: - sketch the gra

$y = x^3$, $y = |x|$, $y = \sqrt{x}$, $y = \frac{1}{x}$, $y = \frac{1}{x^2}$, $y = \sqrt{a^2 - x}$ $y = x^2$,

s of the following variations of the above functions and the graphs

$+ c$, $y = f(x + c)$, $y = -f(x)$, $y = cf(x)$. $y = f(x)$

sketch the gra

sketch the graph of ... sketch the

the quadratic formula and by completing the square ... terex using

es: determine the equation of a quadratic form its graphical properti

function. - solve maximum-minimum 'word problems' involving a quadratic

... add, subtract, multiply and divide functions and be able to determine the domains of the

unctions. resulting f

Course Objectives (continued)

Course Content:

1. FUNCTIONS
   - definition
   - graphing
   - the quadratic function
   - combining functions
   - inverse functions

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2. POLYNOMIAL AND RATIONAL FUNCT
   - division of polynomials
   - the remainder theorem and factor theo
   - zeros of polynomials
   - graphing polynomial functions
   - graphing rational functions

3. EXPONENTIAL AND LOGARITHMIC FUNCTIONS
   - the exponential functions and their graphs
   - the logarithmic functions and their graphs
   - properties of the logarithmic functions
   - exponential and logarithmic equations
   - applications

THE TRIGONOMETRIC FUNCTIONS

c functions of angles and real numbers
aphs
oblems

4.
- the trigonometri
- trigonometric gr
- right triangle pro

NOMETRY AND APPLICATIONS
entities
quations
u substraction formulas
nole formulas

5. ANALYTIC TRIGO
- trigonometric ide
- trigonometric eq
- the addition a
- the multiple a
- the product-to-sum and sum-to-product formulas
- the inverse trigonometric functions
- the Law of Sines and the Law of Cosines

6. PARABOLAS, ELLIPSES AND HYPERBOLAS

7. SYSTEMS OF EQUATIONS
   - non-linear systems of equations
   - linear systems of equations in mo

re than two variables

- partial fractions

Q. Method of Instruction:

Lectures, problem sessions and assignments

R. Course Evaluation:

In accordance with Douglas College policy, the instructor will [illegible] Evaluation will be carried out [illegible] duties with specific evaluation criteria at the beginning of the [illegible] present a written course [illegible] based on some of the following: semester. Evaluation will be

(0 - 40%)		1	Weekly quizzes
(20 - 70%)		2	Tests
(0 - 15%)		3	Assignments
(0 - 5%)		4	Attendance
[illegible]	[illegible]	5	Class participation [illegible]
Final Examination	(30%)	6	F