Course Outline

Math 952B – Prealgebra (CAI)

I. Course Identification

A. Mathematics: Math 952B – Prealgebra (Fractions)

B. 1 – One unit: One-hour lecture

C. Catalog Course Description:

Math 952B is a self-paced, computer-assisted program of operations using fractions. Students will meet with faculty to discuss their progress and will work independently through a series of computer activities. In addition, supplementary materials may be used for further explanation and/or to help the student complete assignments at the level of the computer generated assignments that are typical for this type of course. The skills to be learned include addition, subtraction, multiplication, division and the Basic Property of Fractions.

D. Schedule Course Description:

Improve your fraction skills through a self-paced series of individualized computer-assisted assignments. This program is based on computerized assessment and prescription for overall basic math skill improvement using fractions.

II. Required and/or Recommended Background:

Corequisite: None
Perequisite: Successful completion of Math 952A or placement through assessment test.

III. Expected Outcome for Students:

Upon completion of the course the student will be able to:
a) Use Basic Property of Fractions to get equivalent fractions
b) Add fractions comprised of constants and variables
c) Subtract fractions comprised of constants and variables
d) Multiply fractions comprised of constants and variables
e) Divide fractions comprised of constants and variables
f) Raise a fraction to a power by expanding
g) Use Order of Operations on an expression containing fractions
h) Simplify complex fractions

IV. Course Content:

This course will include the following skills to meet the indicated objectives:
1) Use of the basic property of fractions
2) Addition, subtraction, multiplication and division of fractions
3) Order of operations using fractions
4) Conversion of mixed numbers to improper fractions
5) Simplification of complex fractions

V. Methods of instruction:

a) This course will be computer-assisted and primarily computer-managed and includes supplementary materials which may or may not be computer based. Students will work independently through a series of computer generated activities designed to increase prealgebra skills using fractions. Following a pre-test, students will be placed at appropriate individualized levels and proceed through the activities at their own pace. The instruction will begin upon enrollment in the course, under the supervision of the instructor of record. Periodic meetings between the students and the instructor of record will be arranged to discuss computer managed instruction data.

b) Sample of assignment(s)

Subtract:

1) $\frac{3}{x} - \frac{2}{5}$

Simplify the complex fraction:

2) $\dfrac{\frac{1}{2} + \frac{1}{3}}{\frac{1}{2} - \frac{1}{3}}$

VI. Methods of evaluation:

a) Student's progress reports from the computer is evaluated regularly (usually weekly).
b) Student may be asked to submit, to the instructor of record, completed worksheets or other written assignments.
c) All assignments will be completed in an independent study format. Upon completion of this practice, students will be required to demonstrate progress by means of a post test and/or other appropriate assessment measures.
d) Sample test questions:

Multiply:

1) $\frac{ab^2}{c} \cdot \frac{c^2}{a^2 b}$

Follow order of operations:

2) $2\frac{3}{8} + \frac{1}{2}\left(\frac{1}{3} + \frac{5}{3}\right)^2$

VII. Typical text(s):

No text would be required in this course as appropriate computer software would be the "text". Students may need to purchase supplemental workbooks designed or approved by mathematics department faculty covering the content of this course, through the bookstore.

For example: Invest software, and McKeague, Prealgebra, ITP

VIII. Other supplies required of students: None