MATH 075 - Intermediate Algebra for Statistics
Last Revision or Approval Date - 9/9/2011

SECTION A

1. Division: Mathematics and Science
2. Department: Mathematics
3. Subject Code: MATH
4. Course Number: 075
5. Course Title: Intermediate Algebra for Statistics
6. Discipline: Mathematics - Masters

7. Rationale for adding this course to the curriculum:
   a. What is the rationale for offering this course? How will this course meet student and community needs and improve the college curriculum?

   Math 060 and Math 070 are designed for Science, Technology and Engineering majors (STEM for short). We designed a class for non-STEM and non-business majors that would better prepare them for Statistics and analyzing data.

   b. How does this course differ from other courses with similar content?

   The class would take necessary Algebra topics from Math 060 and Math 070 and put it together with Data Analysis and other pre-statistics topics. The course will replace Math 060 and Math 070 in the math sequence, but only for non-STEM and non-business majors.

SECTION B

1. Program Information:
   a. Is course in a current associate degree or certificate?

   □ Yes   ✔ No

   b. Requesting course to be added to an associate degree or certificate?

   ✔ Yes   □ No

2. TOPS code information:
   Program title - TOPS Code: Mathematics, General- 170100

3. SAM Code:

   □ A: Apprenticeship  □ D: Possibly Occupational
   □ B: Advanced Occupational  ✔ E: Non-Occupational
   □ C: Clearly Occupational
SECTION C

General Education Information:
1. College Associate Degree GE Applicability:

Language and Rationality

2. CSU GE Applicability (Recommended-requires CSU approval):

3. IGETC Applicability (Recommended-requires CSU/UC approval):

SECTION D

Articulation Information:
1. I am requesting this course be articulated. Mark all that apply:
   - [ ] CSU Transferable.
   - [ ] UC Transferable.
   - [ ] CSU/UC major requirement.
     If CSU/UC major requirement, list campus and major.

2. List one community college and its comparable course. If requesting CSU and/or UC transferability also list a CSU/UC campus and comparable lower division course.
   - Mt. Sac Math 55 StatWay I
   - Los Medanos Math 27 Algebra for Statistics

SECTION E

Resources:

Please consider the identified concerns below:

1. Library: Please identify the implications to the library

   None

2. Computer Support Services: Please identify the implications to Computer Support Services:

   Since the course will include exploratory data analysis topics, the classes will need to meet in a computer lab daily throughout the semester. Since more students will be using statistical software on campus, we will need approximately $1200 more per year to update the statistical software licenses.
3. **TLC Lab**: What are the implications to the TLC lab of this course being offered?

Students may voluntarily seek tutoring. Tutors may need to receive more training in basic exploratory data analysis and the appropriate statistical software.

### SECTION F

1. Maximum Class Size (recommended): 35
2. If recommended class size is not standard, then provide rationale:

### SECTION G

**Department Planning:**
Explain how this course meets the goals of the department and/or fits into the overall curriculum and program(s) of this department.

1. **Facilities:**
   Briefly describe teaching facilities needed including classroom, lab, multi-media, etc. Include detailed information on any new facilities that this course will require.

   The class will need to meet in computer lab with at least 35 computers, powerpoint, instructor's computer and a document camera.

2. **Equipment:**
   List new equipment, teaching aids, etc., that will be required for this course. Estimate costs and provide information on funding sources.

   The course will include exploratory data analysis topics, and we will be using statistical software. Since more students will be using statistical software on campus, we will need approximately $1200 more per year to update the statistical software licenses. Initially this money will be funded by Basic Skills but will eventually have to be built into the program review.

3. **Expendable Supplies:**
   Will additional funding sources be needed to provide supplies for this course?

   None

### SECTION H

**General Course Information**

1. **Units**: 5.0 Variable units n/a
   (*Units of credit are based on: 1 unit of credit per one hour of lecture (plus 2 hours of outside class independent study); 1 unit of credit per three hours of activity or lab.)

2. **This Course is**:
   Associate Degree Applicable - non-transferable

3. **Is this course cross listed with another course? If yes, include course name and title:**
### Course Format and Duration

**4. Maximum Contact Hrs per Term**

<table>
<thead>
<tr>
<th>Lecture/Discussion:</th>
<th>90</th>
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<tr>
<td>Lab:</td>
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<tr>
<td>Activity:</td>
<td></td>
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<tr>
<td>By Arrangement:</td>
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</tbody>
</table>

**Total Maximum Contact Hrs per Term** 90 - 0

### Methods of Instruction

**5. Check all instructional methods used to present course content.**

- Lecture
- Distance Ed (requires supplemental form)
- Lab
- Work Experience
- Activity
- Other:

### Course Preparation - (Supplemental forms required)

**6a. Prerequisite(s):** (Course and/or other preparation/experience that is **REQUIRED** to be completed previous to enrollment in this course.)

Satisfactory completion of MATH-058 or MATH-059 or appropriate placement into MATH-060 as determined by the COC assessment process.

**6b. Co-requisite(s):** (Courses and/or other preparation that is **REQUIRED** to be taken concurrently with this course.)

None

**6c. Recommended:** (Minimum preparation **RECOMMENDED** in order to be successful in this course. Also known as “Course Advisory”.)

None

### Catalog Description and Other Catalog Information

**7. Repeatability:** **Not Repeatable**

Please Note: 7. (Repeatability) does not refer to repeating courses because of substandard grades or a lapse of time since the student took the course. A course may be repeated only if the course content differs each time it is offered and the student who repeats it is gaining an expanded educational experience as stipulated in Title V.

- Skills or proficiencies are enhanced by supervised repetition and practice within class periods.
Active participatory experience in individual study or group assignments is the basic means by which learning objectives are attained. 

Course content differs each time it is offered.

Explanation for above repeatability selection:

8a. Catalog Description:
Introduces intermediate algebra topics and the basic elements of exploratory data analysis. (Advisory: This class is not intended as preparation for calculus. It is only a prerequisite for those students wanting to take Math 140 or Math 130. Those students needing Math 103, Math 104 or Math 111 need to take both Math 060 and Math 070.)

8b. Class Schedule Description: (One or two sentences describing course content for the prospective student. Does not require as much detail as the Catalog description.)
Introduces intermediate algebra topics and the basic elements of exploratory data analysis. (Advisory: This class is not intended as preparation for calculus. It is only a prerequisite for those students wanting to take Math 140 or Math 130. Those students needing Math 103, Math 104 or Math 111 need to take both Math 060 and Math 070.)

8c. Grading Option: LR - Letter Grade Only

Course Outline Information

9. Student Learning Outcomes: (List 1-3 overarching goals. Outcomes must be related to Catalog Description, Course Content, and Objectives.

The student will be able to:
1. Construct, evaluate, and analyze mathematical models, specifically linear and exponential functions, to represent relationships in quantitative data.

Objectives:
1. Solve linear equations and inequalities in one variable
2. Construct linear equations to solve various application problems
3. Analyze simple data sets by using appropriate exploratory data analysis techniques
4. Calculate the slope and equation of a line in two variables and graph
5. Distinguish linear correlation and analyze a data set using basic regression analysis techniques
6. Solve problems involving ratios, proportions and percents
7. Solve absolute value equations and inequalities
8. Graph and evaluate various functions including linear, exponential, inverse, composite and logarithmic
9. Solve basic probability problems
10. Distinguish patterns in data sets including sequences and calculate quantities using summation notation
11. Analyze relationships between variables including direct and indirect
variation
12. Assess feasible solutions and errors by using estimation effectively
13. Calculate numerical values including scientific notation
14. Construct and analyze various graphs including bar graphs, pie charts, histograms, stem and leaf plots, boxplots and scatterplots
15. Present statistical results verbally and in written form by analyzing data and solving applied problems
16. Analyze published articles by applying design of experiments principles
17. Calculate measures of central tendency and measures of dispersion and distinguish when to apply them appropriately

10. Course Content Outline: (Provides a comprehensive, sequential outline of the course content, including all major subject matter and the specific body of knowledge covered.)

A. Formulas and Algebraic expressions
   1. Evaluating formulas using real numbers and the order of operations
   2. Using formulas in applied problems
   3. Simplifying algebraic expressions using like terms, the properties of exponents and the distributive and associative properties

B. Linear Equations and inequalities in one variable
   1. Addition and multiplication properties of equality with application problems
   2. Solving general linear equations with application problems
   3. Solving formulas with application problems
   4. Solving problems involving ratios and proportions with application problems
   5. Solving absolute value equations and inequalities including application problems

C. Analyzing and producing data
   1. Samples and sample statistics vs. population and population parameters
   2. Observation vs. experiments
   3. Principles of responsible survey and experimental design
   4. Purpose of randomization and random sampling
   5. Simple random samples and other sampling design
   6. Rival Hypothesis and cautions about sample surveys, experimentation, and population claims
   7. Application-Producing your own data
   8. Correlation verses causation

D. Sample Statistics and Graphs
   1. Measures of center-Mean, Median, Mode, Midrange
   2. Measures of position-Quartiles, Percentiles and Boxplots
   3. Measures of spread-Range, Interquartile Range
   4. Discovering and understanding standard deviation
   5. Appropriate use of sample statistics
   6. Constructing and reading bar charts, pie charts, stem and leaf plots and
histograms
7. Application—Use sample statistics and graphs to analyze real data sets

E. Linear Equations and Inequalities in two variables
1. The Rectangular Coordinate System and plotting ordered pairs
2. Graphs of linear equations
3. Slopes of linear equations, average rate of change and other applications
4. Finding the equation of a line
6. Constructing and analyzing scatterplots
7. Linear and non-linear correlation
8. Constructing the regression line

F. Functions
1. Relations, functions and function notation
2. Linear functions and applications
3. Graphing various functions
4. Composite and Inverse functions
5. Exponents, Scientific Notation and exponential functions with applications
6. Logarithms and Logarithmic functions with application
7. Exponential equations, Logarithmic equations with applications
8. Direct and indirect variation

G. Probability
1. Sequences and Series
2. Basic probability with application

11. Methods of Evaluating Student Achievement: (All courses must provide for measurement of student performance in terms of stated student performance objects, Area 10, and culminate in a formal recorded grade based on uniform standards.)

Exams
Problem sets
Written assignments

12. Typical Assignments: (Credit courses require two hours of independent work outside of class per unit of credit for each lecture hour. List types of assignments, including library assignments.)

a. Reading Assignments: (Submit at least 2 examples)
Reading from various sources and books including algebra and statistics topics. Supplemental sources will include Consumer Reports and publications that contain data and analysis.

b. Writing, Problem Solving or Performance: (Submit at least 2 examples)
1. A nursing magazine stated that an excess of salt in your diet tends to raise your blood pressure. The data shown below was collected from 35 randomly selected adults. The average amount of salt the person consumed
in one week and their corresponding systolic blood pressure was collected. Create a scatterplot for the data. Is there a linear correlation between the two variables? Find the slope and equation of the line that approximates the data. What does the slope of the line mean in this context? Based on your equation of the line, estimate the blood pressure of someone who uses an average of 100 mg of salt per week? Do you think there were any problems with the way this data was collected? Does our data really imply that an excess of salt increases someone’s blood pressure?

Weekly Salt Intake (grams)  Systolic Blood Pressure (mmHg)
112  170
105  165
105  160
  98  146
  98  150
  91  142
  91  145
  91  136
  84  142
  84  136
  84  129
  77  136
  77  140
  77  138
  77  135
  70  129
  70  131
  70  139
  70  132
  70  136
  70  130
  70  134
  63  126
  63  129
  63  128
  63  124
  63  125
  56  122
  56  119
  56  120
  49  123
  42  118
  42  115
  35  110
  28  112
2. How fast is the population of Santa Clarita increasing? Here are the population values of Santa Clarita from the year 2000 to the year 2010. Use the data and logarithmic equations to find an exponential population function that approximates this data. Graph your function. Use your function to estimate what the Santa Clarita population will be in the year 2020? Do you think your exponential function is very accurate? Why or why not?

<table>
<thead>
<tr>
<th>year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>176,300</td>
</tr>
<tr>
<td>2009</td>
<td>173,600</td>
</tr>
<tr>
<td>2008</td>
<td>170,900</td>
</tr>
<tr>
<td>2007</td>
<td>168,300</td>
</tr>
<tr>
<td>2006</td>
<td>165,800</td>
</tr>
<tr>
<td>2005</td>
<td>163,200</td>
</tr>
<tr>
<td>2004</td>
<td>160,700</td>
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<tr>
<td>2003</td>
<td>158,300</td>
</tr>
<tr>
<td>2002</td>
<td>155,800</td>
</tr>
<tr>
<td>2001</td>
<td>153,400</td>
</tr>
<tr>
<td>2000</td>
<td>151,100</td>
</tr>
</tbody>
</table>

c. Other (Terms projects, research papers, portfolios, etc.)
Group projects: Analyze cereals in supermarkets in terms of health vs. shelf level.
Oral presentations.

13. Required Materials:
a. EXAMPLES of typical college-level textbooks (for degree-applicable courses) or other print materials.
Book 1:
Author:           multiple authors
Title:            Intermediate Algebra for Statistics
Publisher:        Pearson
Date of Publication:    2011
Edition:          Custom COC edition
Book 2:
Author:           Barbara Illowsky, Susan Dean
Title:            Collaborative Statistics
Publisher:        cnx.org (College Open Text Books)
Date of Publication:    Present
Edition:          most recent version
Book 3:
Author:           Elayn Martin-Gay
Title:            Beginning and Intermediate Algebra
**SECTION I – Required of All Courses**

### SCANS COMPETENCIES AND FOUNDATION SKILLS

Indicate which components of the SCANS competencies and Foundation Skills are addressed by this course. Check all that apply.

<table>
<thead>
<tr>
<th>1. SCANS Competency</th>
<th>2. Foundation Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td>Basic Skills</td>
</tr>
<tr>
<td>Time</td>
<td>Reading</td>
</tr>
<tr>
<td>Money</td>
<td>Writing</td>
</tr>
<tr>
<td>Material &amp; Facilities</td>
<td>Arithmetic/Math</td>
</tr>
<tr>
<td>Human Resources</td>
<td>Listening</td>
</tr>
<tr>
<td><strong>Interpersonal-Team</strong></td>
<td>Speaking</td>
</tr>
<tr>
<td>Participates as team member</td>
<td>✔</td>
</tr>
<tr>
<td>Teaches others new skills</td>
<td>✔</td>
</tr>
<tr>
<td>Serves clients/customers</td>
<td>✔</td>
</tr>
<tr>
<td>Exercises leadership</td>
<td>✔</td>
</tr>
<tr>
<td>Negotiates</td>
<td>✔</td>
</tr>
<tr>
<td>Works with diversity</td>
<td>✔</td>
</tr>
<tr>
<td><strong>Information</strong></td>
<td>Thinking Skills</td>
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<tr>
<td>Acquires and evaluates</td>
<td>✔</td>
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<tr>
<td>Organizes and maintains</td>
<td>✔</td>
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<tr>
<td>Interprets and communicates</td>
<td>✔</td>
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<tr>
<td>Uses computers to process</td>
<td>✔</td>
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<tr>
<td><strong>Personal Qualities</strong></td>
<td>✔</td>
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<tr>
<td>Acquires and evaluates</td>
<td>✔</td>
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<tr>
<td>Organizes and maintains</td>
<td>✔</td>
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<tr>
<td>Interprets and communicates</td>
<td>✔</td>
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<tr>
<td>Uses computers to process</td>
<td>✔</td>
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<tr>
<td><strong>Systems</strong></td>
<td>✔</td>
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<tr>
<td>Understands systems</td>
<td>✔</td>
</tr>
<tr>
<td>Monitors/corrects performance</td>
<td>✔</td>
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<tr>
<td>Improves or designs</td>
<td>✔</td>
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**b. Other materials and/or supplies required of students:**

Access to MyMathLab

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http://webcms.canyons.edu/admin/formdisplay.asp?outline_id=5777&sFormId... 9/9/2011
Form A (Enrollment Limitation)

CONDITION ON ENROLLMENT FOR COURSE: MATH 075

1. What is the condition on enrollment? (add a separate form if more than one condition applies):
   - ☑ Course:
   - ☑ Assessment test
   - ☐ Audition
   - ☐ Health and Safety requirement
   - ☐ Team tryout
   - ☐ Honors
   - ☐ Cohort
   - ☐ Other

   Appropriate placement as determined by the COC assessment process.

Use this area to provide additional information if necessary:

2. The condition on enrollment is a:
   - ☑ Prerequisite
   - ☐ Co-requisite
   - ☐ Recommended Preparation

3. The condition of enrollment is being:
   - ☑ Limitation of Enrollment
   - ☐ Established
   - ☐ Revised
   - ☐ Renewed
   - ☐ Deleted

4. Scrutiny used:
   - ☑ English or Math course used as a prerequisite for a course in another discipline – Complete #6 Basic Content Review and #9 Data Collection and Analysis
   - ☑ Equivalent UC/CSU requirement – Complete #6 Basic Content Review and # 6a Equivalent CSU/UC Review
5. LIST FACULTY INVOLVED IN REVIEW PROCESS:

Matt Teachout
Joseph Gerda
Kathy Kubo
Michael Sherry

6. BASIC CONTENT REVIEW:
List the Entrance skills (skills, knowledge, and/or abilities) which are deemed necessary at entry or concurrent

Students need good reading comprehension and writing skills. Students must be able to use arithmetic and the order of operations to evaluate algebraic expressions. Students must be able to simplify algebraic expressions. Students must be able to solve linear equations in one variable and use linear equations to solve application problems. Students must be able to find the slope and equation of a line in two variables and be able to graph that line.

6A Equivalent UC/CSU Course Review – List 3 CSU or UC campuses

<table>
<thead>
<tr>
<th>UC or CSU Campus</th>
<th>Equivalent Course at UC/CSU</th>
<th>Requisite Course at UC/CSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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</table>

Please bring copies of the catalog descriptions for courses listed above to the curriculum committee meeting.

7. Documented Content Review:

Target Course Skills
### Prerequisite Skills

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</table>

Review the data reflected in the matrix and draw conclusions regarding:
1) the relevance of the prerequisite, co-requisite, or advisory skills, and
2) overlaps or gaps in skills or body of knowledge required for the course. List your conclusions below regarding the necessity and appropriateness of the proposed prerequisite, co-requisite or advisory.

Since Math 075 combines Beginning and Intermediate Algebra, students will need a good fundamental knowledge of pre-algebra (Math 058 or 059), specifically simplifying and evaluating algebraic expressions and solving linear equations. Math 075 will also have many application problems, so the students should have some experience with solving application problems with linear equations. Since math 075 also includes data analysis topics, students must also be able to read articles and understand their meaning, then communicate the results in verbal and written form. They will also need to be able to find the slope and equation of a line and graph it, since this will be needed in data analysis and regression.

8. **Health and Safety or Required Statute or Regulation Justification:**

9. **Data Collection and Analysis (Summarize the results of the research here and provide a location where a complete description of the study may be viewed):**

   The College of the Canyons assessment test has been approved for placement into math 075 by the Math department and by Chelley Maple. The data may be found at the Matriculation office.

10. **Limitation on Enrollment:**
   A. Linked or Honors Courses for Special Student Cohort
Describe the Special Student Cohort and identify the courses or sections to be linked:

Do any of these courses satisfy any certificate or associate degree requirements?
☐ Yes
☐ No

If "yes", list the courses and certificate/degree requirement it meets:

If "No", list other course(s) or section(s) of the same course being offered which satisfy the same requirement:

B. Performance Course:

Was a disproportionate impact study conducted for this course?
☐ Yes
☐ No

If "Yes", describe the results of the study:

If "No", explain when the study will be conducted. You may consult with Institutional Research for assistance:

Does this course satisfy any certificate or associate degree requirement?
☑ Yes
☐ No

If "yes", list the courses and the certificate and/or associate degree requirements it meets:
Math 075 will satisfy the Math requirement for an associates degree.
If "No", list other course(s) or section(s) of the same course which satisfy the same requirements:

Criteria for performance/audition:

Form A (Enrollment Limitation)
1. What is the condition on enrollment? (add a separate form if more than one condition applies):

- Course:
- Assessment test
- Audition
- Health and Safety requirement
- Team tryout
- Honors
- Cohort
- Other

Math 058

Use this area to provide additional information if necessary:

2. The condition on enrollment is a:

- Prerequisite
- Co-requisite
- Recommended Preparation

3. The condition of enrollment is being:

- Established
- Revised
- Renewed
- Deleted

4. Scrutiny used:

- English or Math course used as a prerequisite for a course in another discipline – Complete #6 Basic Content Review and #9 Data Collection and Analysis
- Linked Courses for a Special Student Cohort – Complete #10A, Limitation on Enrollment
- Honors Course – Complete #10.A, Limitation on Enrollment
- Performance Based – Complete #10.B, Limitation on Enrollment
- Co-requisite Course – Complete #6 Basic Content Review

Sequential Series of Courses – Complete #6 Basic Content Review and #7 Documented Content Review (the document content review must demonstrate an appropriate match between the courses)
- Health and Safety Requirements – Complete #6 Basic Content Review and #8 Health and Safety Justification
- Required Statute or Regulation – Complete #6 Basic Content Review and #8 Required Statute or Regulation
- Assessment Process – Complete #6 Basic Content Review and #9 Data Collection and Analysis
5. LIST FACULTY INVOLVED IN REVIEW PROCESS:

- Matt Teachout
- Joe Gerda
- Kathy Kubo
- Michael Sherry

6. BASIC CONTENT REVIEW:
List the Entrance skills (skills, knowledge, and/or abilities) which are deemed necessary at entry or concurrent.

Students need good reading comprehension and writing skills. Students must be able to use arithmetic and the order of operations to evaluate algebraic expressions. Students must be able to simplify algebraic expressions. Students must be able to solve linear equations in one variable and use linear equations to solve application problems. Students must be able to find the slope and equation of a line in two variables and be able to graph that line.

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7. Documented Content Review:

**Target Course Skills**
List the specific skills or body of knowledge that students achieve with the proposed prerequisite or co-requisite for enrollment.

**Prerequisite Skills**
List the entrance skills or body of knowledge needed for the target course.

- Analyze simple data sets by using appropriate exploratory data analysis techniques
- Graph and evaluate various functions including linear, exponential, inverse, composite
- Calculate numerical values including scientific notation
Review the data reflected in the matrix and draw conclusions regarding:
1) the relevance of the prerequisite, co-requisite, or advisory skills, and
2) overlaps or gaps in skills or body of knowledge required for the course. List your conclusions below regarding the necessity and appropriateness of the proposed prerequisite, co-requisite or advisory.

Since Math 075 combines Beginning and Intermediate Algebra, students will need a good fundamental knowledge of pre-algebra (Math 058 or 059), specifically simplifying and evaluating algebraic expressions and solving linear equations. Math 075 will also have many application problems, so the students should have some experience with solving application problems with linear equations. Since math 075 also includes data analysis topics, students must also be able to read articles and understand their meaning, then communicate the results in verbal and written form. They will also need to be able to find the slope and equation of a line and graph it, since this will be needed in data analysis and regression.

8. Health and Safety or Required Statute or Regulation Justification:
9. Data Collection and Analysis (Summarize the results of the research here and provide a location where a complete description of the study may be viewed):

10. Limitation on Enrollment:
   A. Linked or Honors Courses for Special Student Cohort
      Describe the Special Student Cohort and identify the courses or sections to be linked:

      Do any of these courses satisfy any certificate or associate degree requirements?
      □ Yes
      □ No

      If "yes", list the courses and certificate/degree requirement it meets:

      If "No", list other course(s) or section(s) of the same course being offered which satisfy the same requirement:

   B. Performance Course:

      Was a disproportionate impact study conducted for this course?
      □ Yes
      □ No

      If “Yes”, describe the results of the study:

      If “No”, explain when the study will be conducted. You may consult with Institutional Research for assistance:

      Does this course satisfy any certificate or associate degree requirement?
      ☑ Yes
      □ No

      If "yes", list the courses and the certificate and/or associate degree requirements it meets:
      Math 075 will satisfy the Math requirement for an associates degree.
      If "No", list other course(s) or section(s) of the same course which satisfy the same requirements:

      Criteria for performance/audition:
Form A (Enrollment Limitation)

CONDITION ON ENROLLMENT FOR COURSE:  MATH 075

1. What is the condition on enrollment? (add a separate form if more than one condition applies):
   - [ ] Course:
   - [ ] Assessment test
   - [ ] Audition
   - [ ] Health and Safety requirement
   - [ ] Team tryout
   - [ ] Honors
   - [ ] Cohort
   - [x] Other

   Math 059

Use this area to provide additional information if necessary:

2. The condition on enrollment is a:  [x] Prerequisite
   - [ ] Co-requisite
   - [ ] Recommended Preparation
   - [ ] Limitation of Enrollment
   - [ ] Established
   - [ ] Revised
   - [ ] Renewed
   - [ ] Deleted

3. The condition of enrollment is being:
   - [x] Established
   - [ ] Revised
   - [ ] Renewed
   - [ ] Deleted

4. Scrutiny used:
   - [ ] English or Math course used as a prerequisite for a course in another discipline – Complete #6 Basic Content Review and #9 Data Collection and Analysis
   - [x] Linked Courses for a Special Student Cohort – Complete #10A, Limitation on Enrollment
   - [ ] Advisory – Complete #6 Basic Content Review
   - [ ] Equivalent UC/CSU requirement – Complete #6 Basic Content Review and #6a Equivalent CSU/UC Review
   - [x] Sequential Series of Courses – Complete #6 Basic Content Review and #7 Documented Content Review (the document content review must demonstrate an appropriate match between the courses)
5. LIST FACULTY INVOLVED IN REVIEW PROCESS:

Matt Teachout
Joe Gerda
Kathy Kubo
Michael Sherry

6. BASIC CONTENT REVIEW:
List the Entrance skills (skills, knowledge, and/or abilities) which are deemed necessary at entry or concurrent.

Students need good reading comprehension and writing skills. Students must be able to use arithmetic and the order of operations to evaluate algebraic expressions. Students must be able to simplify algebraic expressions. Students must be able to solve linear equations in one variable and use linear equations to solve application problems. Students must be able to find the slope and equation of a line in two variables and be able to graph that line.

6A Equivalent UC/CSU Course Review – List 3 CSU or UC campuses

<table>
<thead>
<tr>
<th>UC or CSU Campus</th>
<th>Equivalent Course at UC/CSU</th>
<th>Requisite Course at UC/CSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
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</tbody>
</table>

Please bring copies of the catalog descriptions for courses listed above to the curriculum committee meeting.

7. Documented Content Review:

Target Course Skills
List the specific skills or body of knowledge that students achieve with the proposed prerequisite or co-requisite for enrollment.

Prerequisite Skills
List the entrance skills or body of knowledge needed for the target course.

Graph  Calculate
Review the data reflected in the matrix and draw conclusions regarding:
1) the relevance of the prerequisite, co-requisite, or advisory skills, and
2) overlaps or gaps in skills or body of knowledge required for the course. List your conclusions below regarding the necessity and appropriateness of the proposed prerequisite, co-requisite or advisory.

Since Math 075 combines Beginning and Intermediate Algebra, students will need a good fundamental knowledge of pre-algebra (Math 058 or 059), specifically simplifying and evaluating algebraic expressions and solving linear equations. Math 075 will also have

<table>
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<tr>
<th></th>
<th>Analyze simple data sets by using appropriate exploratory data analysis techniques</th>
<th>and evaluate various functions including linear, exponential, inverse, composite and logarithmic</th>
<th>numerical values including scientific notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Comprehension</td>
<td>✔</td>
<td>✔</td>
<td>□</td>
</tr>
<tr>
<td>Written and Verbal Communication Skills</td>
<td>✔</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Real Number Arithmetic</td>
<td>✔</td>
<td>✔</td>
<td>□</td>
</tr>
<tr>
<td>Simplifying Algebraic Expressions</td>
<td>□</td>
<td>✔</td>
<td>□</td>
</tr>
<tr>
<td>Evaluating Algebraic Expressions</td>
<td>✔</td>
<td>✔</td>
<td>□</td>
</tr>
<tr>
<td>Solve Linear Equations with Applications</td>
<td>□</td>
<td>✔</td>
<td>□</td>
</tr>
<tr>
<td>Find Slope and Equation of a Line</td>
<td>✔</td>
<td>✔</td>
<td>□</td>
</tr>
<tr>
<td>Graph Two Variable Linear Equations</td>
<td>✔</td>
<td>✔</td>
<td>□</td>
</tr>
</tbody>
</table>
many application problems, so the students should have some experience with solving application problems with linear equations. Since math 075 also includes data analysis topics, students must also be able to read articles and understand their meaning, then communicate the results in verbal and written form. They will also need to be able to find the slope and equation of a line and graph it, since this will be needed in data analysis and regression.

8. Health and Safety or Required Statute or Regulation Justification:

9. Data Collection and Analysis (Summarize the results of the research here and provide a location where a complete description of the study may be viewed):

10. Limitation on Enrollment:

   A. Linked or Honors Courses for Special Student Cohort
   
   Describe the Special Student Cohort and identify the courses or sections to be linked:
   
   Do any of these courses satisfy any certificate or associate degree requirements?
   
   □ Yes
   □ No
   
   If "yes", list the courses and certificate/degree requirement it meets:
   
   If "No", list other course(s) or section(s) of the same course being offered which satisfy the same requirement:
   
   B. Performance Course:
   
   Was a disproportionate impact study conducted for this course?
   
   □ Yes
   □ No
   
   If “Yes”, describe the results of the study:
   
   If “No”, explain when the study will be conducted. You may consult with Institutional Research for assistance:
   
   Does this course satisfy any certificate or associate degree requirement?
   
   ✔ Yes
   □ No
   
   If "yes", list the courses and the certificate and/or associate degree requirements it meets:
Math 075 will satisfy the Math requirement for an associates degree.
If "No", list other course(s) or section(s) of the same course which satisfy the same requirements:

Criteria for performance/audition: