Los Angeles Community College District

COURSE OUTLINE

☐ New Course
☐ Addition of Existing District Course
☐ Course Change
☒ Outline Update, Academic Year: 2004-2005

SECTION I: BASIC COURSE INFORMATION

1. COLLEGE: Los Angeles Southwest College

2. SUBJECT (DISCIPLINE) NAME\(^1\) (40 characters, no abbreviations): Mathematics

3. COURSE NUMBER: 115

4. COURSE TITLE: Elementary Algebra

5. UNITS: 5

6. CATALOG COURSE DESCRIPTION -- Provide a description of the course, including an overview of the topics covered:

   This course is an introduction to the concepts of algebra, including sets, whole numbers, integers, rational, irrational and real numbers, exponents, equations, linear graphs and applications of a wide variety of problems.

7. CLASS SCHEDULE COURSE DESCRIPTION -- Provide a brief description of the course, including an overview of the topics covered:

   N/A

8. COLLEGE COURSE APPROVAL DATE: 1971
   COLLEGE OUTLINE APPROVAL DATE: 11/16/04

9. UPDATES (check all applicable boxes):

   ☒ Content Previous Update: 1996
   ☒ Objectives Previous Update: 1996
   □ College Specific Course Attributes/Data Elements Previous Update:
   □ Districtwide Course Attributes/Data Elements Previous Update:
   ☒ Other (describe) Previous Update: 2/17/98

   Prerequisite validation

10. CLASS HOURS:

<table>
<thead>
<tr>
<th></th>
<th>Hours per week (based on 18 weeks)</th>
<th>Total Hours per term (hrs per week x 18)</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture:</td>
<td>5</td>
<td>90</td>
<td>5</td>
</tr>
<tr>
<td>Lab/activity (w/ homework):</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Lab/activity (w/o homework):</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>5</td>
<td>90</td>
<td>5</td>
</tr>
</tbody>
</table>

\(^1\) Underlined course attributes are the same for the course throughout the LACCD; all other course attributes are college specific.
Note: The Carnegie Rule and Title 5, section 55002 sets forth the following minimum standards: 1 unit = 1 hour lecture per week, 2 hours homework per week; OR 2 hours per week of lab with homework; OR 3 hours of lab per week without homework. The hours per week are based on a standard 18-week calendar. Lecture also includes discussion and/or demonstration hours, laboratory includes activity and/or studio hours.

11. PREREQUISITES, COREQUISITES, ADVISORIES ON RECOMMENDED PREPARATION, and LIMITATION ON ENROLLMENT (Add a list of entry skills for this course if it has a prerequisite, corequisite or advisory.)

Note: The LACCD’s Policy on Prerequisites, Corequisites and Advisories requires that the curriculum committee take a separate action verifying that a course’s prerequisite, corequisite or advisory is an “appropriate and rational measure of a student’s readiness to enter the course or program” and that the prerequisite, corequisite or advisory meets the level of scrutiny delineated in the policy.

ENTRY SKILLS FOR COURSES WITH PREREQUISITES (from Math 112):
1. Solve problems utilizing basic algebraic concepts and properties.
2. Solve first degree equations.
3. Apply preliminary concepts of polynomials.
4. Perform operations with real numbers.
5. Solve linear equations.

Prerequisites: Yes (If yes, complete information below) Or placement through assessment

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number</th>
<th>Course Title</th>
<th>Units</th>
<th>Validation Approval Date (for official use only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH</td>
<td>112</td>
<td>Pre-Algebra</td>
<td>3</td>
<td>11/16/2004 (previously 2/17/98)</td>
</tr>
</tbody>
</table>

Corequisite: None (If yes, complete information below)

Advisories: None (If yes, complete information below)

12. OTHER LIMITATIONS ON ENROLLMENT (see Title 5, section 58106 and Board Rule 6803 for policy on allowable limitations. Other appropriate statutory or regulatory requirements may also apply):

None
SECTION II: COURSE CONTENT AND OBJECTIVES

1. COURSE CONTENT AND OBJECTIVES:

<table>
<thead>
<tr>
<th>COURSE CONTENT AND SCOPE -- Lecture:</th>
<th>Hours per topic</th>
<th>COURSE OBJECTIVES - Lecture (if applicable):</th>
</tr>
</thead>
<tbody>
<tr>
<td>If applicable, outline the topics included in the lecture portion of the course (Outline reflects course description, all topics covered in class).</td>
<td></td>
<td>upon successful completion of this course, the student will be able to... (Use action verbs – see Bloom's Taxonomy below for &quot;action verbs requiring cognitive outcomes.&quot;)</td>
</tr>
<tr>
<td>- Simplification and evaluation of signed numbers or numbers;</td>
<td>10</td>
<td>1. Evaluate various mathematical relations including signed numbers and numbers.</td>
</tr>
<tr>
<td>- Operations on them</td>
<td></td>
<td>2. Solve polynomials, adding, subtracting, multiplying, dividing and factoring.</td>
</tr>
<tr>
<td>- Definition and classification of polynomials;</td>
<td>32</td>
<td>3. Set up and solve word problems.</td>
</tr>
<tr>
<td>- Operations for adding, subtracting, multiplying and dividing polynomials;</td>
<td></td>
<td>4. Operate with exponential properties.</td>
</tr>
<tr>
<td>- Methods for factoring of linear, quadratic, cubics and groups</td>
<td></td>
<td>5. Simplify radical expressions and solve radical equations.</td>
</tr>
<tr>
<td>- Set up and solution of word problems of various types including simple type and mixer type problems</td>
<td>10</td>
<td>6. Produce linear graphs, inequality graphs and double linear equations graphs.</td>
</tr>
<tr>
<td>- Basic concepts of exponents;</td>
<td></td>
<td>7. Solution of linear and quadratic equations, quadratics by factoring, completing the square, and by quadratic formula.</td>
</tr>
<tr>
<td>- Demonstration of basic properties</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>- Application of properties of exponents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Application of properties of radicals in solution of problems;</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>- Procedures for solving radical equations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Preparation of tables of values or sketching the graphs of linear equations, inequalities, and double linear equations.</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>- Development of techniques necessary to solve specific equations;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Solving quadratics by factoring</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>- Solving by completing the square</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Solving by quadratic formula</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total lecture hours* | 90 |

STUDENT LEARNING OUTCOME:
As a result of this learning experience a student can:

1. illustrate by graphing where lines intersect;
2. diagram integral powers of a set of variables.
3. apply discipline, reasoning, and organizational skills necessary for additional courses in Math and other disciplines.

---

2 In general “activity” courses or portions of courses are classified a “laboratory.”
Total lab hours* 0

*Total lecture and laboratory hours (which includes the final examination) must equal totals on page 1.

**Bloom’s Taxonomy**

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Comprehension</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>define</td>
<td>translate</td>
<td>interpret</td>
<td>distinguish</td>
<td>compose</td>
<td>judge</td>
</tr>
<tr>
<td>repeat</td>
<td>restate</td>
<td>apply</td>
<td>analyze</td>
<td>plan</td>
<td>appraise</td>
</tr>
<tr>
<td>record</td>
<td>discuss</td>
<td>employ</td>
<td>differentiate</td>
<td>propose</td>
<td>evaluate</td>
</tr>
<tr>
<td>list</td>
<td>describe</td>
<td>use</td>
<td>appraise</td>
<td>design</td>
<td>rate</td>
</tr>
<tr>
<td>recall</td>
<td>recognize</td>
<td>demonstrate</td>
<td>calculate</td>
<td>formulate</td>
<td>compare</td>
</tr>
<tr>
<td>name</td>
<td>explain</td>
<td>experiment</td>
<td>experiment</td>
<td>arrange</td>
<td>value</td>
</tr>
<tr>
<td>relate</td>
<td>express</td>
<td>test</td>
<td>compare</td>
<td>assemble</td>
<td>revise</td>
</tr>
<tr>
<td>underline</td>
<td>identify</td>
<td>contrast</td>
<td>contrast</td>
<td>collect</td>
<td>score</td>
</tr>
<tr>
<td></td>
<td>locate</td>
<td>criticize</td>
<td>criticize</td>
<td>construct</td>
<td>select</td>
</tr>
<tr>
<td></td>
<td>report</td>
<td>diagram</td>
<td>diagram</td>
<td>create</td>
<td>choose</td>
</tr>
<tr>
<td></td>
<td>review</td>
<td>inspect</td>
<td>inspect</td>
<td>set up</td>
<td>assess</td>
</tr>
<tr>
<td></td>
<td>tell</td>
<td>debate</td>
<td>debate</td>
<td>organize</td>
<td>estimate</td>
</tr>
</tbody>
</table>

**Simple Skills:**
- define
- repeat
- record
- list
- recall
- name
- relate
- underline

**Critical Thinking:**
- translate
- restate
- discuss
- describe
- recognize
- explain
- express
- identify
- locate
- report
- review
- tell
- interpret
- apply
- employ
- use
- demonstrate
- dramatize
- practice
- illustrate
- operate
- schedule
- shop
- sketch
- distinguish
- analyze
- differentiate
- appraise
- calculate
- experiment
- test
- compare
- contrast
- criticize
- diagram
- inspect
- debate
- inventory
- question
- relate
- solve
- examine
- categorize
- compose
- plan
- propose
- design
- formulate
- arrange
- assemble
- construct
- create
- set up
- organize
- prepare
- judge
- appraise
- evaluate
- rate
- compare
- value
- revise
- score
- select
- choose
- assess
- estimate
- measure
2. REQUIRED TEXTS:
Provide a representative list of textbooks and other required reading; include author, title and date of publication:

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lial</td>
<td>Beginning Algebra</td>
<td>2004</td>
</tr>
<tr>
<td>Academic Systems</td>
<td>Elementary Algebra Student Kit</td>
<td>2004</td>
</tr>
</tbody>
</table>

3. SUPPLEMENTARY READINGS:
Reading assignments may include, but are not limited to the following:

- Text as assigned

4. WRITING ASSIGNMENTS:
Title 5, section 55002 requires grades to be “based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.” Writing assignments in this course may include, but are not limited to the following:

- Problem solving in and out of class

5. REPRESENTATIVE OUTSIDE ASSIGNMENTS:
Out of class assignments may include, but are not limited to the following:

- Homework assigned weekly

6. REPRESENTATIVE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:
Title 5, section 55002(a) requires that a degree applicable course have a level of rigor that includes “critical thinking and the understanding and application of concepts determined by the curriculum committee to be at college level”. Critical thinking may include, but is not limited to analysis, synthesis, and evaluation. Provide examples of assignments that demonstrate critical thinking.

- All assignments in Mathematics require critical thinking. A sample assignment: Prepare graphs and examine how many times and why a figure is multiplied by itself.

7. METHODS OF EVALUATION:
Title 5, section 55002 requires grades to be “based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.” Methods of evaluation may include, but are not limited to the following (please note that evaluation should measure the outcomes detailed “Course Objectives” at the beginning of Section II):

- Problem solving, skills demonstrations, exams and quizzes and homework

8. METHODS OF INSTRUCTION:
Methods of instruction may include, but are not limited to the following:

- Lecture
- Discussion
- Laboratory
- Activity
- Field Experience
Independent Study

☐ Other (explain)

Computer aided instruction, in some cases

9. SUPPLIES:
List of supplies the student must provide.

Pencil and Scantrons
Interactive software disks and headphones for online classes

10. COMPUTER COMPETENCY:
If applicable, explain how computer competency is included in the course.

Basic computer literacy skills are required to operate courseware in online class

11. INFORMATION COMPETENCY:
If applicable, explain how information competency is included in the course.

Students will solve problems and find information using graphing calculators and computers.

12. DIVERSITY:
If applicable, explain how diversity (e.g., cultural, gender, etc.) is included in the course.

Math is a universal language.

13. SCANS COMPETENCIES (required for all courses with vocational TOP Codes; recommended for all courses):

SCANS (Secretary’s Commission on Necessary Skills) are skills the Department of Labor identified, in consultation with business and industry leaders, which reflect the skills necessary for success in the workplace. Check the appropriate boxes to indicate the areas where students will develop the following skills (please note that all SCANS competencies do not apply to all courses):

RESOURCES

☒ Managing Time: Selecting relevant goal-related activities, ranks them in order of importance, allocating time to activities, and understanding, preparing and following schedules.

☐ Managing Money: Using or preparing budgets, including making cost and revenue forecasts; keeping detailed records to track budget performance, and making appropriate adjustments.

☐ Managing Material and Facility Resources: Acquiring, storing, allocating, and distributing materials, supplies, parts, equipment, space or final products in order to make the best use of them.

INTERPERSONAL

☒ Participating as Member of a Team: Working cooperatively with others and contributing to group’s efforts with ideas, suggestions and effort.

☒ Teaching Others New Skills: Helping others learn needed knowledge and skills.

☒ Exercising Leadership: Communicating thoughts, feelings, and ideas to justify a position, encouraging, persuading, convincing or otherwise motivating an individual or group, including responsibly challenging existing procedures, policies or authority.
Negotiating: Working toward agreement that may involve exchanging specific resources or resolving divergent interests.

Working with Cultural Diversity: Working well with men and women and with people from a variety of ethnic, social, or educational backgrounds.

INFORMATION

Acquiring and Evaluating Information: Identifying a need for data, obtaining the data from existing sources or creating them, and evaluating their relevance and accuracy.

Organizing and Maintaining Information: Organizing, processing and maintaining written or computerized records and other forms of information in a systematic fashion.

Interpreting and Communicating Information: Selecting and analyzing information and communicating the results of others, using oral, written, graphic, pictorial, or multimedia methods.

Using Computers to Process Information: Employing computers to acquire, organize, analyze and communicate information.

SYSTEMS

Understanding Systems: Knowing how social, organizational and technological systems work and operating effectively with them.

Monitoring and Correcting Performance: Distinguishing trends, predicting impacts of actions on system operations, diagnosing deviations in the functioning of a system/organization, and taking necessary steps to correct performance.

Improving or Designs Systems: Making suggestions to modify existing systems in order to improve the quality of products or services and developing new or alternative systems.

TECHNOLOGY

Selecting Technology: Judging which sets of procedures, tools or machines, including computers and their programs, will produce the desired results.

Applying Technology to Tasks: Understanding overall intent and proper procedures for setting up and operating machines, including computers and their reprogramming systems.

Maintaining and Troubleshooting Equipment: Preventing, identifying, or solving problems with equipment, including computers and other technologies.
Section III: RELATIONSHIP TO COLLEGE PROGRAMS

1. THIS COURSE WILL BE AN APPROVED REQUIREMENT\(^3\) FOR AN APPROVED ASSOCIATE DEGREE OR CERTIFICATE PROGRAM: No

If yes, the course will be a Not applicable portion of the “approved program” listed on the State Chancellor’s Inventory of Approved Programs (approved programs can be found on the State Chancellor’s Office website at [http://misweb.cccco.edu/esed/webproginv/prod/invmenu.htm](http://misweb.cccco.edu/esed/webproginv/prod/invmenu.htm)).

Note: In order for a course to be approved as a requirement for an associate degree or certificate program, the program must be listed on the State Chancellor’s Office Inventory of Approved Programs AND the course must be listed in the college catalog as either a requirement or an elective for the program. If course is not part of an approved program at the college adopting the course, it will be considered to be a “stand-alone” course, and is subject to the State Chancellor’s approval criteria and the college must complete and submit the Chancellor’s Office “APPLICATION FOR APPROVAL OF CREDIT” form. Certain courses are granted “blanket approval” by the State Chancellor’s Office and do not require approval. See the Chancellor’s Office Program and Course Approval Handbook for details. LACCD Skills Certificates are not State approved programs listed on the Chancellor’s Office Inventory of Approved Programs.

2. GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE STATUS:

Area requested: d(2) Communications and Analytical Thinking Approval date: before 1980

If applicable, provide an explanation of how the course meets the General Education parameters for one of the five general education areas – Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education – contained in Board Rule 6201.14 -General Education Requirements [http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm](http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm)

2\(^{nd}\) Area requested: none Approval date:

If applicable, provide an explanation of how the course meets General Education parameters for an additional general education area – Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education – contained in Board Rule 6201.14 -General Education Requirements [http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm](http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm)
Section IV: ARTICULATION INFORMATION
(Complete in consultation with College Articulation Officer)

1. TRANSFER STATUS: NONE
University of California: California State University:
UC approval date: College approval date:

2. GENERAL EDUCATION FOR TRANSFER: NONE

IGETC Certification:
Area requested: none
Date requested: IGETC approval date:
If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in IGETC Certification Guidelines.

CSU Certification:
Area requested: none
Date requested: CSU approval date:
If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in CSU Certification Guidelines.

2nd Area requested: none
Date requested: IGETC approval date:
If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in IGETC Certification Guidelines.

2nd Area requested: none
Date requested: CSU approval date:
If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in CSU Certification Guidelines.

3. MAJOR REQUIREMENT FOR TRANSFER – Will this course be articulated to meet lower division major requirements? NO

CAN NUMBER: CAN SEQUENCE NUMBER:
CAN Approval -- Date requested: Date approved:
Section V: SUPPLEMENTAL COURSE INFORMATION

1. DEPARTMENT/DIVISION NAME: Mathematics

2. DEPARTMENT/DIVISION CODE: 8

3. SUBJECT CODE -- 3 characters, assigned by District Office: 589

4. SUBJECT ABBREVIATION -- 7 characters, assigned by District Office: MATH

5. SPC CODE -- 3 characters, assigned by District Office:

6. ABBREVIATION FOR TRANSCRIPTS -- 20 characters, assigned by District Office: MATH

7. DEGREE CREDIT: Degree Applicable

8. CREDIT/NO CREDIT GRADING: No

9. REPETITIONS -- Number of times course may be repeated for credit (three maximum): 0

   How does the repetition of this course meet Title 5, section 58161 requirements? A course may be repeatable when, “course content differs each time it is offered, and that the student who repeats it is gaining an expanded educational experience for one of the following reasons: (A) Skills or proficiencies are enhanced by supervised repetition and practice within class periods; or (B) Active participatory experience in individual study or group assignments is the basic means by which learning objectives are obtained.”

10. PRIOR TO TRANSFERABLE LEVEL – This course attribute applies to English, writing, ESL, reading and mathematics courses ONLY. If applicable, indicate how many levels below the transferable level this course should be placed:

   2 levels below

11. CREDIT BASIC SKILLS -- Title 5, section 55502(d) defines basic skills as “courses in reading, writing, computation, and English as a Second Language, which are designated as non-degree credit courses pursuant to Title 5, section 55002(b).”

   No If yes, course must be non-degree applicable

12. CROSS REFERENCE -- Is this course listed as equivalent in content to existing College/District courses in another discipline?

   No If yes, list courses: (documentation of cross-discipline agreement must be provided)

13. COURSE SPECIFICALLY DESIGNED FOR STUDENTS WITH DISABILITIES -- Title 5, section 56029 allows a course to be repeatable when continuing success of the students with disabilities is dependent on additional repetitions of a specific class. Is this course designated as an “approved special class” for students with disabilities?

   No

   If yes, provide an explanation of how this course meets the requirements of Title 5, section 56029.
14. COOPERATIVE EDUCATION STATUS -- Title 5, section 55252 allows for two types of Cooperative Education: 1) General Work Experience Education -- i.e., supervised employment, which is intended to assist students in acquiring desirable work habits, attitudes and career awareness, which need not be related to the students’ educational goals; or 2) Occupational Work Experience Education -- i.e., supervised employment, extending classroom based occupational learning at an on-the-job learning station, which is related to the students’ educational or occupational goal. Is this course part of the college’s approved cooperative work experience education program, according to?

No

15. COURSE CLASSIFICATION:

Liberal Arts and Sciences

Note: A course’s Classification, TOP Code and SAM code must be aligned – e.g., Courses with an “Occupational” Course Classification must have an “Occupational” TOP Code and a SAM Code of A, B, C, or D; courses that do not have an “Occupational” Course Classification cannot have an Occupational TOP Code and must have an “E” SAM Code.

16. TOP CODE – (6 digits XXXX.XX) 1701.00

Course content should match discipline description in Taxonomy of Programs found at www.cccco.edu/cccco/esed/curric/curriculum.htm.

17. SAM CODE (Student Accountability Model)

E – Non-Occupational

SAM Codes (see CCC Chancellor’s Office Student Accountability Model Operations Manual, 1984) should be assigned as follows:

Priority “A” – Apprenticeship: Courses designed for an indentured apprentice must have the approval of the State of California, Department of Industrial Relations Department, Division of Apprenticeship Standards.

Priority “B” – Advanced Occupational: Courses taken by students in the advanced stages of their occupational programs. Courses should be offered in one specific occupational area only. Priority letter “B” should be assigned sparingly; in most cases, no more than two courses in any one program should be labeled “B.” “B”-level courses must have Priority “C” prerequisites in the same program area.

Priority “C” – Clearly Occupational: Courses generally taken by students in the middle stages of their programs should have a difficulty level sufficient to detract “drop-ins.” Courses may be offered in several occupational programs within a broad area. The “C” priority, however, should also be used for courses within a specific program area when the criteria for “B” classification are not met. A “C”-level course should provide the student with entry-level job skills.

Priority “D” – Possibly Occupational: “D” courses are those taken by students in the beginning stages of their occupational programs. The “D” priority can also be used for service (or survey) courses for other occupational programs.

Priority “E” – Non-occupational.
SECTION VI: APPROVAL STATUS

1. APPROVAL STATUS:

- [ ] New Course
- [ ] Addition of Existing District Course
- [ ] Course Change*
- [x] Outline Update

Board Approval Date: ________________________________
Effective Semester: ________________________________
College Approval Date: ________________________________
Effective Semester: ________________________________
College Approval Date: ________________________________
11/16/2004

* Changes to a course require the completion of a “Course Change Request" form and approval by the Curriculum Committee. In some cases districtwide approval is also required; see, Administrative Regulation E-65, section 3(c) for details.

SECTION VII: APPROVAL INFORMATION FOR NEW OR ADDED COURSES
(Complete in consultation with Department Chair and the appropriate Academic Administrator)

N/A

1. APPROPRIATENESS TO MISSION—Describe how the objectives of the proposed course are consistent with the mission of the community colleges as established by the Legislature in the Education Code. The course should also be congruent with the mission statement of the local college and district.

2. NEED—Demonstrate the need for the course that meets the stated objectives, at this time, and in the region.

3. IF THIS IS A NEW COURSE, INDICATE HOW THE COLLEGE PLANS TO MEET THE EXPENSE OF THIS COURSE:

- [ ] By additional funds. Describe:

- [ ] By deleting courses from the college catalog and course database. List specific courses to be deleted:

- [ ] By deleting sections of existing courses: List courses and number of sections to be deleted:

  - First year: __________________
  - Second year: __________________
  - Third year: __________________

- [ ] By rotating sections of existing courses. List courses and number of sections to be rotated, as well as the semesters in which they will be offered:

4. IMPACT -- Will this course directly impact other course offerings and/or associate degree or certificate programs on campus?

  No (If yes, briefly explain how)
5. METHOD OF SUPPORT/FEASIBILITY -- Indicate how the college plans to support the proposed course:

Additional staff- List additional staff needed:

Classroom- List classroom type needed:

Equipment- List new equipment needed and indicate funding source for any new equipment:

Supplies- List supplies and indicate dollar value:

Library/Learning Resources- List Library and Learning Resources needed, including the cost and funding source for needed resources:
Using the Official Course Outline, please determine whether or not the above listed credit course meets the following standards and criteria required in Title V, Part VI of the California Administrative Code, and which has been designated as appropriate to the Associate Degree. Place a (X) in the appropriate box.

<table>
<thead>
<tr>
<th>CRITERIA AND STANDARDS</th>
<th>RATING CRITERION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is recommended by the responsible college officials, and the academic senate or other</td>
<td>X</td>
</tr>
<tr>
<td>appropriate faculty body as meeting the requirements of this subsection and has been</td>
<td></td>
</tr>
<tr>
<td>approved by the local district governing board as a course meeting the needs of the</td>
<td></td>
</tr>
<tr>
<td>students for admission.</td>
<td></td>
</tr>
<tr>
<td>Is taught by a credentialed instructor in the discipline.</td>
<td>X</td>
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<tr>
<td>Is offered as described in an outline in official college files. That the outline</td>
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<tr>
<td>shall specify the unit value, scope, objectives, content in terms of a specific body</td>
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<td>of knowledge, appropriate reading and writing assignments, outside of class assignments, instructional methodology and methods of evaluation for determining whether the stated objectives have been met by students.</td>
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<td>Is taught in accordance with a set of instructional objectives common to all students.</td>
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<td>Provides for measurement of students performance in terms of the stated course objectives and culminates in a formal recorded grade based upon uniform standards in accordance with Section 55578 of Title 5, which is permanently recorded as an evaluation of student performance; bases grades on demonstrated proficiency in subject matter determined by multiple measurement for evaluation; and has examinations, including essays and/or, where appropriate, uses appropriate symbol systems and/or skills demonstrations by students.</td>
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<td>Grants units of credit based upon a specified relationship between the number of lecture and/or laboratory hours or performance criteria specified in the course outline; and requires a minimum of three hours of work per week including class time for each unit of credit, prorated for short-term, lab and activity courses.</td>
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<td>Treats subject matter with a scope and intensity which requires students to study</td>
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<td>independently outside of class time.</td>
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<td>Requires, when appropriate, entrance skills and consequent prerequisites for the course before students are enrolled</td>
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<td>Requires the ability to think critically and to understand and apply concepts in order to participate in the course.</td>
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<td>Requires learning skills and a vocabulary appropriate for a college course.</td>
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<tr>
<td>Requires the use of college level educational materials.</td>
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</table>
CERTIFICATION AND RECOMMENDATION

☒ This course meets Title 5 requirements for Associate Degree applicable college credit towards an Associate of Arts or Science Degree.

☐ This course meets Title 5 requirements but does not satisfy the requirements for an Associate Degree applicable course.

We certify that the information and answers properly represent this course and that the design of the course is not in conflict with any law.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
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<tbody>
<tr>
<td>James King</td>
<td>01/14/05</td>
</tr>
<tr>
<td>Originator</td>
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<tr>
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<tr>
<td>Department/Cluster Chairperson</td>
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<tr>
<td>Linda Larson Singer</td>
<td>01/20/05</td>
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<td>Articulation Officer</td>
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<tr>
<td>Shelley Werts</td>
<td>01/27/05</td>
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<td>Librarian</td>
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<td>Earnestine Thomas-Robertson</td>
<td>01/26/05</td>
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<td>Glenn Yoshida</td>
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<td>Curriculum Committee Chairperson</td>
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<td>Academic Senate President</td>
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<td>Vice President, Academic Affairs</td>
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<td>Audre Levy</td>
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CONTENT REVIEW FOR PREREQUISITE VALIDATION

Target Course & Number, Title: MATH 115, Elementary Algebra
(Course to which pre/corequisite/advisory applies)

☐ Prerequisite: Course & Number, Title: MATH 112, Pre-Algebra
☐ Corequisite:
☐ Advisory:
☐ Assessment

A. Target Course Entry Skills: Course & Number, Title: MATH 115, Elementary Algebra
(For prerequisites/corequisites, list specific skills and/or knowledge necessary for students to succeed in the target class. For advisories, list skills/knowledge which will enrich or deepen the student's knowledge obtained from the course but without which the student may still succeed in the course. Attach additional sheet if necessary. NUMBER EACH SKILL.)

1. Solve problems utilizing basic algebraic concepts and properties.
2. Solve first degree equations.
3. Apply preliminary concepts of polynomials.
4. Perform operations with real numbers.
5. Solve linear equations.

B. Exit Skills Provided By Prerequisite/Corequisite/Advisory Course or Assessment: Course & Number, Title: MATH 112, Pre-Algebra
(List specific skills and/or knowledge that are the outcome of the prerequisite/corequisite/advisory course or assessment. For courses already in the curriculum, these should be present in the course objectives in the course outline. Attach additional sheet if necessary. NUMBER EACH SKILL.)

1. Solve or evaluate operations on real numbers.
2. Develop and apply techniques for operating on signed numbers including basic concepts and applications thereof.
3. Apply basic properties of algebra: commutative, associative and distributive.
4. Apply techniques to solve or simplify rational numbers, equivalent fractions, and order of operations.
5. Apply techniques to solve and check simple mathematical equations.
6. Apply techniques to translate verbal sentences into algebraic equations or expressions.
7. Solve simple word problems.
8. Present topics involving polynomials.
## CONTENT REVIEW SKILLS MATRIX FOR PREREQUISITE VALIDATION

**MATH 115, Elementary Algebra**  
Entering Skills of Target Course

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Validation requires at least one match of each exit skill with each entry skill.  
**Was validation achieved? YES**

**Comments:**  
(Include justification for assessments, health and safety, or non-course prerequisites)

**PARTICIPANTS IN CONTENT REVIEW:**  
(Signatories should include instructors for both exit and entering skills courses.)

<table>
<thead>
<tr>
<th>Name: James King</th>
<th>Title: Department Chair</th>
<th>Initial: JK</th>
<th>Date: 01/14/05</th>
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Name: ___________________________  Title: __________________________  Initial: ________  Date: ______
Name: ___________________________  Title: __________________________  Initial: ________  Date: ______

**CERTIFIED BY:**

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