



**Mission:** *To provide affordable, accessible, and exceptional education that fosters student success*

**Term:** Spring 2016

**Course:** MATH 1413 Survey of Contemporary Math

**Delivery Format:** Traditional

**Instructor Information:**

**Name:** Leslie Bain

**Email:** lbain@carlalbert.edu

**Office Location:** RC 105

**Preferred Contact Method:** email

**Office Phone:** (918)647-1405

**Office Hours:** As posted

**Alternate Phone:** (918)647-1200 x1405

**Textbook 1 Information:** Required

Thinking Mathematically, Blitzer, 4th Edition ISBN#9780131752047

**Textbook 2 Information:** Recommended

Student Solution Manual, Thinking Mathematically, 4th Edition ISBN#97800136155393

**Textbook 3 Information:** N/A

**Course Description:**

An overview of mathematics for the non-mathematics major is examined including an explanation of the basic nature of Algebra, Calculus, Number Theory, Geometry, and other areas of mathematics. This course also includes introduction logic, postulation systems, and other thought structures used in mathematics and practical applications of mathematics to everyday problems using calculators, arithmetic, simple algebra, and statistics. (May not be taken for major credit in mathematics.)

**Credit Hours:** 3.00

**Prerequisites:** Math 0123 or equivalent.

**Co-requisites:** None

**Student Learning Outcomes (SLO's):**

SLO 1. Upon completion of the course students will be able to demonstrate problem solving and critical thinking skills.

- Students will understand and use inductive and deductive reasoning.
- Students will use estimation techniques to arrive at an approximate answer to a problem.
- Students will apply estimation techniques to information given by graphs.
- Students will develop mathematical models that estimate relationships between variables.
- Students will solve word problems using four-step problem solving process.

SLO 2. Upon completion of the course students will be able to demonstrate knowledge of set theory.

- Students will apply set notation to sets of natural numbers.
- Students will recognize subsets and proper subsets.
- Students will determine the number of subsets of a set.
- Students will find the complement of a set and the intersection and union of two sets.
- Students will perform operations with two and three sets.
- Students will use Venn diagrams with two and three sets.

SLO 3. Upon completion of the course students will be able to demonstrate knowledge concerning rules of logic.

- Students will identify quantified statements and their negations.
- Students will identify conjunctions, disjunctions and conditional and biconditional statements.
- Students will express negations and compound statements using symbols.
- Students will construct truth tables to determine truth values.
- Students will identify the converse, inverse and contrapositive of conditional statements.

SLO 4. Upon completion of the course students will be able to demonstrate knowledge of number systems.

- Students will express numbers in expanded form using exponential notation.
- Students will change numerals in one number base to another number base.
- Students will understand and use the Hindu-Arabic and Baylonian numeration systems.
- Students will understand and use the Egyptian and Roman numeration systems.

SLO 5. Upon completion of the course students will be able to apply arithmetic operations on real numbers.

- Students will identify the greatest common factor and least common multiple of two numbers.
- Students will graph and compare numbers on the number line.
- Students will find the absolute value of an integer.
- Students will perform operations on integers, rational and irrational numbers.
- Students will recognize subsets and properties of real numbers.
- Students will apply the rules of exponents to simplify expressions.
- Students will convert expressions between standard and scientific notation.

SLO 6. Upon completion of the course students will be able to solve equations and inequalities.

- Students will evaluate and simplify algebraic expressions.
- Students will solve linear equations.

- Students will use linear equations to solve problems.
- Students will solve proportions using direct and inverse variations.
- Students will solve linear inequalities.
- Students will solve quadratic equations by factoring and quadratic formula.

SLO 7. Upon completion of the course students will be able to calculate measurements.

- Students will identify the metric units and its prefixes.
- Students will convert units within the metric system.
- Students will use dimensional analysis to change units of measurement, area, volume and weight.
- Students will use English and metric units to measure length, capacity, and weight.
- Students will calculate temperature using Celsius and Fahrenheit formulas.

SLO 8. Upon completion of the course students will be able to perform computations using geometric formulas.

- Students will identify points, lines and planes.
- Students will solve problems involving angle measures.
- Students will solve problems involving triangles and their angles.
- Students will solve problems involving Pythagorean Theorem.
- Students will recognize the characteristics of quadrilaterals and other polygons.
- Students will solve problems involving polygons and their angles.

### **Evaluation/Assessment Practices**

#### **Assignments and Course Format:**

This course will be presented from a lecture-demonstration point of view. The textbook will be the basis for material to be covered and the student will be responsible for reading all assigned material and working those problems selected by the instructor. Students will be expected to take notes and maintain a notebook for review by the instructor throughout the semester.

#### **Grade Scale:**

- A: 90-100%**
- B: 80-89%**
- C: 70-79%**
- D: 60-69%**
- F: Below 60%**

#### **Grading Policies:**

At least five-50 minute objective examinations will be given during the semester. The lowest test score prior to the final will be dropped. Students may not drop the final. These will determine 66 2/3% of a student's grade. Daily grades, which include homework and notebook grades, will be taken on a class period basis, and will determine the remaining 33 1/3% of the grade.

**Expectations:**

Homework is expected to be turned in the class period after assigned but can be turned no later than the test. Must show all work on homework to receive grade! Homework for the final can be turned in no later than the Friday prior to finals week. The student is expected to take all examinations at the specified time and date. No make-up tests will be given without prior approval of the instructor. If a student misses an exam without prior approval it will be dropped as the lowest test. If another test is missed, it will be recorded as a zero.

**Attendance:**

Punctual and regular class attendance is expected of all students enrolled at Carl Albert State College. A student is expected to attend every class and laboratory for which he or she has registered. Being prepared for class in advance and participating on a regular basis is a vitally important ingredient for academic success. Attendance in class is expected and will be recorded.

A student is responsible for all class work covered in absence. Absences for school-sponsored activities and legally required jury duty are deemed excusable. Failure to attend class regularly may result in a recommendation for the student to withdraw from class or from College. Students who cease attending a class but do not withdraw from that class will receive a grade of F for the course. Attendance will be taken in each class at Carl Albert State College each time that class meets.

ATTENDANCE REQUIREMENTS: (Maximum number of allowable unexcused absences.)

M-W-F course	M-W or T-Th course	
0-3 absences	0-2 absences	No grade change
4-6 absences	3-4 absences	Drop 1 letter grade
7-9 absences	5-6 absences	Drop 2 letter grades
10-12 absences	7-8 absences	Drop 3 letter grades
13 or more	9 or more	Automatic Failure "F" or Withdrawal "W"

**Additional Course Information:****CLASS CONDUCT:**

Treat everyone with respect. No name calling or disrespectful people will be allowed in my classroom. Please raise your hand when you have a question and do not call out the answers without permission.

**CELL PHONE POLICY:**

The use of cell phones for the duration of the class is not acceptable. Use of cellular phones or any other electronic communication devices such as headphones, iPods, Bluetooth, etc. for any purpose during a

MATH 1413 Survey of Contemporary Math class or exam session is strictly prohibited. A student may face a zero and/or failure in the class if an electronic device is used for cheating during an exam or quiz. All such devices must be turned off or put in a silent (vibrate) mode, put away, and ordinarily should not be taken out during class. This includes using a mobile phone for sending out text messages, connecting to the internet, or any other application. At the instructor's discretion, electronic devices utilized in a learning context, such as laptops and language interpreters, in class should be used by students for course specific work only, not for social networking or any other activities. The instructor reserves the right to ban the use of cell phones or any other electronic communication device at any time.

## **SERVICES, POLICY, and PROCEDURES:**

### **Student Email:**

IMPORTANT- All course information, billing, financial aid notices, housing information, scholarship awards, degree check results, and other mail will be sent to you via student email. Please remember to check your student email often for important information.

### **ADA statement:**

Carl Albert State College complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Students with disabilities who need special accommodations should make their request in the following way:

- \* Talk with your instructor after class about your disability or special needs related to work in class.

### **Poteau Campus**

- \* Complete the Request for Special Accommodations Form with the Student Disability Services Coordinator located in the Student Disability Services/Student Counseling Services office in the Ollie Center in office OC 1203 (second floor).

### **Sallisaw Campus**

- \* Complete the Request for Special Accommodations Form with the Assistant Student Disability Services Coordinator located in the Learning Resource Center in office SC 8025. .

### **FOR WEB COURSES**

- \* Call or e-mail your instructor about your disability or special needs related to work in web courses.
- \* Complete the Request for Special Accommodations Form with the Student Disability Services Coordinator. You may find information on our website under Student Affairs/Student Disability Services.

## **Services**

- **LRC:** The Learning Resource Center is located in the George Ollie Center for Academic Excellence on the third floor, in room 1301; Crissy Keeton, the LRC director, may be reached at [918-647-1319](tel:918-647-1319). The LRC offers tutoring in a variety of subjects including math and English: specific tutoring schedules are available. The LRC also offers notes and textbooks for many classes, as well as a computer lab and study

area. Hours of operation are Monday through Thursdays from 8 am to 6 p.m., and on Fridays from 8 am to 4 pm.

- **Counseling:** CASC Student Counseling Services provides free counseling to students who are struggling with school, home life, or a disability. Overseeing the CASC Student Counseling Center is Kerrie Blair, MS, LPC. She serves as counselor at Carl Albert State College and may be reached by phone (918) 647-1389, text (918) 658-5568, or email [kblair@carlalbert.edu](mailto:kblair@carlalbert.edu).

<https://carlalbert.edu/student-services/student-counseling-services>

- **Library:** Research for your class should be conducted at the CASC Libraries. College-level research requires college-level sources. CASC Libraries offer a number of appropriate sources in both print and electronic formats. Visit the library in person for research assistance or at <https://carlalbert.edu/student-services/library/>.

Phone: 918-647-1311 (Poteau) 918-775-6977 (Sallisaw)

Facebook: Library Friends @ Carl Albert State College

Twitter: @CASCLibrary

Instagram: casclibrary

#### **HEA-Required information:**

The National Postsecondary Education Cooperative (NPEC) issued Information Required to Be Disclosed Under the Higher Education Act of 1965: Suggestions for Dissemination (NPEC 2010-831). This publication is available at <http://nces.ed.gov>.

Additional Information including Student Handbook, FERPA, Financial Aid, Clery Report, and student consumer information are located at <https://carlalbert.edu/discover-us/student-consumer-reports/>

#### **Notification of class cancellation:**

In the event class must be cancelled by the instructor the student will be notified through various methods including, but not limited, to the following: text message, email, or written notification. Students should check their Carl Albert email accounts regularly for such notifications. When possible, instructors will provide notification in advance.

In instances of school closure the notification process occurs in the following ways: the alert system is used to send messages including phone calls, text messages, and emails to all names in the alert system as soon as a decision has been made regarding the status of CASC; an email is sent to all Carl Albert email addresses; closure information is posted to the CASC website as quickly as possible; the phone message for incoming calls at the CASC switchboard will indicate closed status; local radio stations and television stations are notified; however television may or may not post our information so please be sure to check other sources of information as listed above.

#### **Assessment Statement**

Assessment is the process that evaluates the learning experience with the purpose of **continual improvement** and has the objective of **assuring the accomplishment of the mission** of Carl Albert State

College.

**Academic Integrity/ Misconduct Policy:**

The following will apply in connection with academic dishonesty:

A. The instructor and his/her Division Chairperson have final authority over the grades given to students or the lowering of grades because of cheating or plagiarism.

B. The term “cheating” includes, but is not limited to:

1. The use of any unauthorized assistance in taking quizzes, tests, or examinations.
2. Dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments.
3. Acquisition, without permission, of tests or other academic material belonging to a member of the college faculty or staff. The term “plagiarism” includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.

If it is established that cheating or plagiarism has more than likely occurred:

A. The instructor may take appropriate disciplinary action, which may include the awarding of an “F” on the particular assignment or in the course.

B. The instructor will make a report of the incident and of action taken to the Vice President for Academic Affairs.

C. The student will receive a copy of the report if s/he desires and may appeal the decision of the instructor to the Academic Affairs Committee.

D. The student and instructor may meet individually with the Academic Affairs Committee to present documentation pertinent to the appeal. Once the Academic Affairs Committee renders its decision, the appeal process is concluded.

Carl Albert State College considers all forms of academic misconduct and dishonesty serious matters which warrant serious attention. Academic dishonesty includes, but is not limited to, cases of cheating and plagiarism, and is, at the very least, subject to disciplinary action by the instructor of record. More serious infractions will warrant disciplinary actions by the college.

Plagiarism is considered unacceptable and incompatible with the educational mission of Carl Albert State College. Since plagiarism always carries consequences, all students are expected to be familiar with the rules for avoiding plagiarism.

*Intentional plagiarism* is a deliberate act of academic dishonesty in which an individual knowingly represents the work or knowledge of another person as one’s own, knowingly incorporates into one’s work the words or ideas of another person without clear attribution, fails to acknowledge clearly the

partial or full authorship of someone else when submitting a work, and/or consistently fails to cite or quote textual resources properly.

Cheating is considered to be a serious infraction of academic integrity and as such is not tolerated at CASC. Specifically, cheating includes, but is not limited to, instances where work is turned in that is not one's own, copying others' answers in exams and/or papers, infiltration of grading systems, use of deception in acquisition of answers, and/or instances of forgery.

### **Grade Protest**

Students may challenge a final grade, provided a solution cannot be reached through proper academic channels. Students should first contact their instructor and then the Division Chair if resolution is not satisfactory. Appeals for the purpose of challenging a final grade must be made to the Academic Affairs Committee within 90 days after the grade in question appears on the permanent record. Information concerning procedures to be followed is available from the Office of Admissions and Records. (CASC Catalog, p. 74)

### **Faculty Complaints**

A student who feels he or she has serious grounds and evidence to demonstrate unfair treatment by a faculty member may file a formal written complaint with the division chair. First, however, the student is encouraged to visit with the faculty member on an informal basis to discuss the situation. If, after that visit, the student still wishes to file a formal complaint, the division chair will call a meeting between the student and the faculty member to discuss the complaint and any further action. If the issue still remains unresolved, the division chair, faculty member, and student will meet with the Associate Vice President of Instruction in the Academic Affairs Office.

### **Semester Regulations Concerning the Beginning and End of the Term**

Students should keep in mind that the semester begins with the first day of class, and ends with the last day of the designated final exam period. For that reason, and because final exams may be scheduled up to and through the last day of the final exam schedule, students should not plan to travel until the first day after the end of finals week, unless approval is granted by the division chair AND the Academic Affairs Office. Students may request changes in individual final exam times in writing and through completion of the Change in Final Exam form. Forms are located in the office of the registrar. Requests for change for personal convenience are generally not approved. Approvals are normally limited for the following reasons:

- a. Conflict with working hours on a job that has been held during the term, and for which working schedules cannot be readily adjusted.
- b. Religious reasons.
- c. Four finals in one day. Where amicable agreement cannot be reached by the student and the instructors, the division chair and/or Academic Affairs Office can grant accommodations.
- d. Military obligations verified in writing.
- e. Other exceptional hardship cases including health reasons concerning immediate members of the household and/or death of an immediate family member or attendance of a funeral of an immediate family member.



Additionally, with take-home final exams, instructors have the option and may choose to make those due on the last day of finals.

Students are required to:

1. complete the Change in Final Exam form;
2. request the signature and approval of the designated instructor;
3. submit the form to the appropriate division chair for approval;
4. The form will be forwarded to the Academic Affairs Office or designee (Vice President for Sallisaw campus).
5. The Academic Affairs office will then inform the student of the results of the request.

*\*Requests will be finalized within 72 hours of the formal request.*

### **Withdrawal Policy:**

Students withdrawing from courses should first consult instructors and refer to the current student handbook or website for withdrawal procedures. Additionally, the student should contact the offices of Financial Aid, Admissions, Business, and Retention. Students failing to attend initial class meetings will be dropped from the class without notification. Beyond that, failure to attend class is not equivalent to dropping the class; students who fail to formally drop the class will receive a grade in the course.

### **Online Etiquette Statement:**

Carl Albert State College expects online users to follow the same basic rules that apply in face-to-face communication. The following guidelines provide direction for students using Internet-based communication. Failure to follow appropriate communication rules may result in negative consequences.

1. Think before you write. What you say online is permanent. Review and edit before you post and take the feeling of others into consideration.
2. Be friendly and positive. Even if you disagree with an idea there are ways you can approach your criticism without being hurtful.
3. Use standard English. Avoid slang and jargon with which others in the class may be unfamiliar. Communication is only effective if the audience can relate to it.
4. Be professional. Avoid writing in all caps, using multiple exclamation or question marks, and emoticons.
5. Ask for help. If you feel lost, or need clarification, ask. If you don't ask the questions your instructor and other students won't be able to respond. Besides, you're probably not alone, but don't wait for someone else to ask for you.

### **Statement of Instructor Modification Right**

This syllabus is subject to alteration at the discretion of the instructor. Notification of alteration will be provided to students via class announcement, e-mail, blackboard posting, or similar reasonable method.

### **Student Financial Responsibility Statement:**

In addition to enrolling in classes, part of your enrollment responsibility is payment of your Business Office Account (tuition, fees, etc.)

If you have already paid your entire balance for the semester, and any past balances, thank you.

If you have not Carl Albert State College requires all students to either pay for their Business Office Account by the first day of class or enroll in the Nelnet Payment Plan located on the website by the first day of class.

Students who anticipate receiving financial aid must enroll in the Payment Plan as well. If the financial aid pays for all costs then the payment plan will not go into effect.

If you have questions, please feel free to call the Business Office at [918-647-1325](tel:918-647-1325)

### **Course Calendar.**

**CHAPTER 1 Section 1.1: 1-39 odd**

**Section 1.2: 3-51 multiples of 3**

**Section 1.3: 1-27 odd**

**CHAPTER 2 Section 2.1: 3-90 multiples of 3**

**Section 2.2: 3-60 multiples of 3**

**Section 2.3: 3-75 multiples of 3**

**Section 2.4: 3-75 multiples of 3**

**Section 2.5: 3-30 multiples of 3, 43, 45**

### **TEST ONE**

**CHAPTER 3 Section 3.1: 1-35 odd**

**Section 3.2: 3-57 multiples of 3**

**Section 3.3: 1-35 odd**

**Section 3.4: 1-15 odd, 65,68,69,70**

**Section 3.5: 19-29 odd**

**CHAPTER 4 Section 4.1: 3-39 multiples of 3**

**Section 4.2: 3-18 multiples of 3, 30-39 multiples of 3**

**Section 4.4: 3-36 multiples of 3**

### **TEST TWO**

**CHAPTER 5 Section 5.1: 3,7,9,27,33,35,41,45,53,55,57,65,67**

**Section 5.2: 3-102 multiples of 3**

**Section 5.3: 3-90 multiples of 3**

**Section 5.4: 3-63 multiples of 3**

**Section 5.5: 3-37 odd**

**Section 5.6: 3-78 multiples of 3**

### **TEST THREE**

**CHAPTER 6 Section 6.1: 3-63 multiples of 3**

**Section 6.2: 3 -42 multiples of 3, 43,47,55,63,69,73**

**Section 6.3: 3-23 odd**

**Section 6.4: 1-15 odd, 23,29,31**

**Section 6.5: 3-66 multiples of 3**

**Section 6.6: 3-66 multiples of 3**

**TEST FOUR**

**CHAPTER 9 Section 9.1: 3-60 multiples of 3**

**Section 9.2: 1-37 odd**

**Section 9.3: 3-48 multiples of 3**

**CHAPTER 10 Section 10.1: 1-35 odd**

**Section 10.2: 1-25 odd, 35,39**

**Section 10.3: 1-31 odd, 39,49**

**FINAL TEST**