

Instructor:	Dr. Dan Clark
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	E-mail is by far the best way to reach me. If you email me by 12pm on a weekday, I'll respond by 5pm that same day. If you email after that, it may be the next weekday. Exceptions to this policy will be communicated to you in advance of their occurrence.
Course Hours:	Online – At your leisure – but be careful!
Office Hours:	1) Tuesdays and Thursdays from 11:00am-12:00pm CT; 2) by appointment; 3) by capture; 4) via Discussion Board and email on a very regular basis! I really only post the office hours listed in #1 because my department makes me post something. In reality, I'm available at *a lot* of times. Just email we and we'll find something that works!

Course Description: This course integrates concepts developed in algebra, geometry, logic, statistics, probability, and elementary number theory. Students are encouraged to use problem-solving strategies, models, and technologies to solve problems as well as create problems of their own. *****Please note***** If you took Math 411 (or its equivalent at another university) as an undergraduate, you cannot repeat the course for graduate credit. **It is your responsibility to find out if you can count this course towards your degree.**

Learning Outcomes:

Upon completion of this course, successful students will be able to:

- Employ both inductive and deductive reasoning appropriately.
- Choose appropriate strategies to solve problems and recognize when multiple strategies will work to reach a solution.
- Recognize and find multiple solutions when appropriate.
- Construct visual representations as needed and then analyze those constructs to reach a solution.
- Identify patterns and predict other outcomes using the patterns they identified.
- Employ logic in solving a problem to arrive at a conclusion.
- Analyze and evaluate the mathematical thinking and strategies of others.
- Communicate their mathematical thinking orally and in writing to peers, faculty, and others.

Prerequisites: MATH 206, 302, and 308 all with a grade of C or better, or permission of instructor.

Textbook: Johnson, K., Herr, T., & Kysh, J. (2018). *Crossing the River with Dogs: Problem Solving for College Students*. (3rd Edition). Hoboken, NJ: John Wiley & Sons. **You must get the third edition!**

Internet Access: You **must** have regular access to the internet to access your WKU email and the course website – Blackboard (BB). This will help ensure that you do not fall behind. My primary forms of communication with you will be your WKU email and the discussion boards. Please check your email regularly and save class emails for future reference.

Attendance: We will not have a set meeting time when everyone will be online; however, you are expected to be online **frequently** each week to check your WKU email and the discussion board – this is <u>VITAL</u>. In a face-to-face class, we would meet in person just shy of 3 hours each week. In addition to this, you are expected to put in additional time outside of class for reading, completing assignments, and studying – this is typically figured as 1-3 hours per credit hour per week. So, in a face-to-face class that can range from 6 to 12 hours a week for one class. I will expect you to do the same amount work as if this course was meeting in person – I will not compromise the integrity of the course. Since we are not meeting in person, some students will find that

they need to put in additional time to understand the material. Make sure you do not get behind! As you read the rest of the course documents and become familiar with the structure of the course, I encourage you to put deadlines and times where you will work on this class in your calendar, just like you would for class meetings in a face-to-face class.

Assessment and Grading: Your grade in the course will be based on the following assessments:

- Exams (60%): There will be 2 tests throughout the semester that will be announced in advance. Tests will be handwritten and taken at a testing center (of your choice) near where you live/work. Just know that some testing centers have a fee that you may be required to pay. There will be a "window of opportunity" to take each test. These "windows of opportunity" will be short (usually about a week), so it will be very important for to you to schedule your test as soon as you they are announced. I will send a detailed email about this once the first test is scheduled. Each student will schedule their testing time with the appropriate testing center and then take the test at the scheduled time and place. You will receive **one** email from the DL Testing Center that will instruct you on how to register for your tests please **do not delete** this email, as they only send it out once. The only exceptions for testing outside of the DL Testing Centers will be for students who have written permission from the Student Accessibility Resource Center. There will be no planned make-up tests and missing a test will result in a zero. Only under the most **extenuating** circumstances will a make-up test be considered if the instructor is aware of an issue in **advance**. Not scheduling a test in advance is not a reason to test outside of the testing window.
- Assignments (30%): It will be very advantageous for you to read every chapter that we cover in this course. Problems will be assigned on a weekly basis and should be taken seriously. You will find that doing the homework and corresponding with classmates or with the instructor will increase your chances for success on exams. Also, keep in mind that this is a problem-solving class do not expect to sit down and get one assignment done in an hour or two sometimes you get stuck and need to take a break. DO NOT wait until the last minute to start an assignment instead, budget your time and work when you can.

Do NOT email a homework assignment to me unless I request that you do so. **ALL** assignments should be turned in via the links on Blackboard (BB). Any assignment uploaded on BB for me to grade should be in one of the following formats: 1) a scanned PDF that was from a handwritten homework assignment (please write very neatly), or 2) an uploaded Word Document (you must use the Math Equation Editor when appropriate). All uploaded assignments should be turned in as **one file**. To summarize – any assignment uploaded to BB **MUST** be **ONE** Word Document or **ONE** PDF file – no other file type is acceptable. Once solutions are posted, late assignments will not be accepted for any reason! You will find a detailed Grading Rubric and a General Structure document posted on BB.

• Discussion Boards – Participation – Professionalism (10%): Discussion is a very important part of the learning process. While we cannot replicate in-class discussions in an online class, we can come close. Keeping in mind that this is an online course that utilizes an asynchronous environment, your participation is **expected** and **required**.

All homework questions and comments about the reading should be posted on the discussion board (DB) located on BB so that the entire class can benefit from both the question and the discussion relating to the process and solution. You are expected to post comments and/or questions that relate to classmates' questions – just as you would participate in conversations during group work in a classroom. Of course, this "conversation" is not immediate, so it is in your best interest not to wait until the last minute to work on your assignments. In addition, I may occasionally post DB prompts, and I expect you to participate fully in that discussion as well. You should plan to spend time on the computer monitoring these discussions several times throughout the week. Please **do not** email homework questions. If you do, I will ask you to post that question to the DB. The rationale for this policy is that I want all students to benefit from all questions/comments, just as students would in a face-to-face class. The only exceptions to this rule are questions of a personal nature – those should always be communicated privately.

Online discussions are a way for you to be "present" in class, like attendance in a face-to-face class. For each assigned DB, you will receive a fixed number of points. If you meet all the requirements (number of posts and posting by due date), you will receive all the points. If you do not meet all the requirements, you will receive a zero.

Graduate Credit: As indicated in the WKU Graduate Catalog

(<u>http://www.wku.edu/graduate/prospective_students/catalog.php</u>), any student enrolled in a 400-level course for graduate credit is expected to complete additional course requirements. This additional work assigned to graduate students is expected to bring the course to a level of rigor commensurate with a graduate level course. Therefore, any student taking this course for graduate credit will be required to complete an additional assignment. This additional assignment <u>must be satisfactorily completed</u> before a grade will be awarded in the class; however, it will not be part of the course grade. The details of these assignments will be posted on Blackboard. If you fail to satisfactorily complete this assignment you will earn an F in the course.

Determination of Final Course Grade: Final course grades will be determined using the following scale:

Percentage	0% - 59%	60% - 69%	70% - 79%	80% - 89%	90% - 100%
Letter Grade	F	D	С	В	Α

Understanding Course Grades:

- A Pre-service teacher consistently demonstrates competencies that signal that they are proficient in the mathematical topics covered in the course. This qualification includes a deeper level of understanding than that expected of the students they are preparing to teach. Pre-service teacher demonstrates this level of understanding by consistently going beyond the information explicitly presented by the course instructor to completing new kinds of tasks. This ability to apply one's knowledge to new contexts and to put together various ideas is *essential* for effective classroom teaching because good teachers are able to respond to children's questions, to support and assess children's mathematical proficiency, and to interpret new curricula.
- **B** Pre-service teacher occasionally demonstrates the competencies and the knowledge transfer abilities that characterize the mathematical proficiency of A-level students, but at times is limited to learning well just the information explicitly presented by the course instructor. Pre-service teacher shows evidence of better-than-acceptable level of mathematical proficiency in the topics studied and a deeper level of understanding than that expected of the students they are preparing to teach.
- C Pre-service teacher consistently demonstrates good levels of performance on tasks measuring straightforward learning of course content, but rarely completes knowledge transfer tasks successfully. Shows evidence of an acceptable level of mathematical proficiency of the topics studied and shows evidence, although inconsistent, of a deeper level of understanding than that expected of the students they are preparing to teach.
- **D** Pre-service teacher does not consistently show acceptable levels of performance, even on tasks measuring content explicitly presented by the course instructor. Although the pre-service teacher may have mastered some of the course content, and they show signs of considerable effort, serious questions persist about their mathematical proficiency and whether they have developed a deeper level of understanding than that expected of the students they are preparing to teach.
- **F** Pre-service teacher shows a profile similar to that of the D student but, in addition, appears to be unprepared to teach others at this time. Pre-service teacher consistently exhibits lack of effort, profound and persistent misconceptions, and/or the failure to master some of the course topics.

Gradebook: Please consider the online gradebook as a courtesy to you, subject to errors given various upgrades and shifts in the software. I reserve the right to make gradebook corrections to keep it consistent with the syllabus so that your grade reflects true performance, not software or user error. If you see something that doesn't make sense, please alert me.

Withdrawal Dates: The last day to withdraw from this course without a grade and without paying a fee is Tuesday, September 3, 2019. The last day to withdraw from this course with a W, or change from credit to audit, is Monday, November 4, 2019.

Academic Dishonesty: Students who commit any act of academic dishonesty will receive, from the instructor, a failing grade in the course without possibility of withdrawal. The instructor will also present the case to the Office of Student Conduct for disciplinary sanctions.

Disclaimer: The instructor reserves the right to change, alter, modify, or tweak anything in this document at any time and for any reason.

ADA Statement: In compliance with University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, 1074. SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at <u>sarc.connect@wku.edu</u>. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center. For further information please visit: <u>https://www.wku.edu/syllabusinfo/</u>.

Title IX Discrimination/Harassment Statement: Western Kentucky University (WKU) is committed to supporting faculty, staff, and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at https://www.wku.edu/policies/docs/182.pdf and Discrimination and Harassment Policy (#0.2040) at https://www.wku.edu/policies/docs/182.pdf and Discrimination and Harassment Policy (#0.2040) at https://www.wku.edu/policies/docs/251.pdf. Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159. For further information please visit: https://www.wku.edu/emergency/.