Course Syllabus
Mathematics Division

Math 116: Intermediate Algebra
Fall 2020 (CRN: 81785)

INSTRUCTOR INFORMATION

Instructor: Dr. Melissa Weston
Email: mweston5@jccc.edu
Office: CLB 221

Phone: (913) 469-8500, ext. 4215
Division Fax: (913) 469-2537

Office Hours:
- I am available for ZOOM appointments for assistance. Please email me and we can set up a time. Also, you can schedule online at calendly.com/mweston_jccc
- I try my best to answer emails promptly. Emails received after 6 pm or on the weekend may not receive a reply until the next business day.

Website: http://www.jccc.edu/academics/math-science/mathematics/self-paced.html

Other Instructors:
Stacey McMillen
Email: smcmill9@jccc.edu
Office: CLB 221 ext.4959

Phil Veer
Email: pveer@jccc.edu
Office: CLB 235 ext. 4700

COURSE INFORMATION

- 3 credit hours

- Prerequisite
  Math 115 Elementary Algebra with a grade of C or higher or appropriate score on the mathematics placement exam.

- Required Technology
  Computer with webcam (an internal or external webcam)
  Internet Access
  Chrome browser

- Required Materials
  An active MyMathLab access code is required to complete homework assignments and utilize a full e-book.
  Site: https://www.pearson.com/mylab (Requires high speed internet)
  Course ID: weston28921
  A scientific and/or graphing calculator is required for this course. Students are NOT allowed to use calculators with computer algebra systems such as TI-89 and TI-92. Cell phones, tablets, smart watches are not appropriate substitutes for a calculator and are not allowed on exams.

- Textbook

- Course Description
  This course focuses on arithmetic and algebraic manipulation, equations and inequalities, graphs, and analysis of equations and graphs. Students will simplify arithmetic and algebraic expressions including those containing rational expressions, rational exponents, radicals, and complex numbers; solve equations including linear,
quadratic, quadratic in form, as well as those containing rational expressions or radicals; graph linear inequalities in two variables; and analyze functions and non-functions.

### Course Objectives
After completing this course, the student should be able to:

1. Factor algebraic expressions.
2. Simplify arithmetic and algebraic expressions including those containing rational expressions, rational exponents, radicals, or complex numbers.
3. Evaluate functions.
4. Use formulas and interpret results.
5. Solve equations in one variable including quadratic, quadratic in form, and those containing rational expressions, or radicals.
6. Solve equations in more than one variable including systems of linear equations and literal equations.
7. Solve equations developed from applications.
8. Graph quadratic functions and linear inequalities in two variables.
9. Construct equations of lines.
10. Identify characteristics of functions and non-functions.

### Content Outline and Competencies
Available on the JCCC web site at [http://catalog.jccc.edu/coursedescriptions/math/#MATH_116](http://catalog.jccc.edu/coursedescriptions/math/#MATH_116)

### GRADING AND EVALUATION

#### Attendance
There is no attendance requirement in a self-paced course. Students are required to set up a reasonable testing schedule with the instructor. Students are encouraged to not procrastinate and to begin the course immediately.

#### Homework
There are 40 online homework assignments required using MyMathLab software. There is no limit to how many times an assignment may be attempted. Practice is crucial to learning mathematics and the online homework may not be enough to master the material.

#### Unit Exams
There are 5 units exams each worth 100 points. These will be administered in MyMathLab. Formulas must be memorized and no books or notes are allowed. You will be required to show your work on paper and submit your work to the instructor in Canvas. Incorrect answers cannot receive partial credit without your accompanying work. Some questions may request a specific process, and no partial credit will be awarded without that particular process.

Each unit exam may be taken twice and the highest of the two scores will be counted toward the final grade. Requests for retaking an exam or for taking multiple exams in the same week must be sent to the instructor 48 hours in advance of desired testing date.

All unit exams will be proctored utilizing Yuja video software. Instructions for using this software are posted within the Canvas modules. Yuja does not work on Chromebooks or mobile devices. If you are using a Chromebook or tablet to complete the course, you must make arrangements with the instructor for alternate proctoring options. Exams are password protected and you must contact your instructor in advance via email to state your intention of taking test and receive the password. Usually within 48 hours, your graded exam will be posted online in MyMathLab and Canvas and your next exam will be available. Weekend and holidays will have a longer response time.

#### Final Exam
The self-paced course will conclude with a comprehensive final exam worth 150 points. The final exam may be taken only once and signifies completion of the course. All homework, unit exams, and their retakes must be completed before taking the final exam. The final exam will be proctored by your instructor and must be scheduled.
### Grading Scale
Your course grade will be determined by your exam scores and homework, as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Grade</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 Online Homework (My Math Lab)</td>
<td>100 points total</td>
<td>A</td>
<td>89.5% - 100%</td>
</tr>
<tr>
<td>5 Unit Exams</td>
<td>100 points each</td>
<td>B</td>
<td>79.5% - 89.4%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>150 points</td>
<td>C</td>
<td>69.5% - 79.4%</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>750 points</strong></td>
<td><strong>D</strong></td>
<td>59.5% - 69.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>F</strong></td>
<td>0% - 59.4%</td>
</tr>
</tbody>
</table>

### Academic Integrity
All JCCC Math students are expected to follow the Student Code of Conduct and the policies of the Division of Mathematics and Sciences. The student code of conduct may be found at [http://www.jccc.edu/about/leadership-governance/policies/students/student-code-of-conduct/index.html](http://www.jccc.edu/about/leadership-governance/policies/students/student-code-of-conduct/index.html). Grade penalties may be assessed for incidents of academic dishonesty. Further action may be taken based on the severity of the incident.

### ASSISTANCE & RESOURCES

- **Math Resource Center (MRC)**
The MRC (CLB 212) offers free tutoring to students enrolled in a math class at JCCC. They also offer extra assistance including online tutoring, calculator rentals, print textbooks, solution manuals, computers and group help sessions. More information along with their hours of service is available at [https://www.jccc.edu/student-resources/resource-centers-tutoring/math-resource-center/](https://www.jccc.edu/student-resources/resource-centers-tutoring/math-resource-center/).

- **Online Assistance**
The MyMathLab subscription includes the e-book along with a multitude of multimedia resources. Embedded in the MyMathLab homework is an “Ask Your Instructor” button to utilize for particular difficult problems.

- **Access Services**
JCCC provides a range of services to allow persons with disabilities to participate in educational programs and activities. If you are a student with a disability and if you are in need of accommodations or services, it is your responsibility to contact Access Services and make a formal request. To schedule an appointment with an Access Advisor or for additional information, you can contact Access Services at (913) 469-3521 or [accessservices@jccc.edu](mailto:accessservices@jccc.edu). Access Services office is located on the 2nd floor of the Student Center (SC 202).

### IMPORTANT DATES

- **August 18, 2020 by 6:00 pm:** Last day to pay without being dropped
  After this date, you must enroll and pay on the same day.

- **Waiver Date:** The official start of a self-paced course.
  This is the date the papers are signed.

- **2 weeks from Waiver Date:** Last day to drop with 100% refund.
  Student must request a refund from Bursar’s Office

- **6 weeks from Waiver Date:** Last day to withdraw with no grade on transcript

- **6 months from Waiver Date:** Last day to withdraw from the course with **W** on transcript.
  Last day to request Pass/Fail grade option.
- 9 months from Waiver Date: Last day to successfully complete self-paced math course. Extensions require extenuating circumstances, substantial complete of the course, and the approval of the Dean of Mathematics and Sciences.

- December 14, 2020 Last day to complete course without an incomplete grade. Caution: Incompletes can affect financial aid.

CAMPUS SAFETY

Classroom and campus safety are of paramount importance at Johnson County Community College and are the shared responsibility of the entire campus population. Please review the following:

- **Report Emergencies** to Campus Police (available 24 hours a day)
  - In person at the Carlsen Center (CC115)
  - Call 913-469-2500 (direct line) Tip: *program in your cell phone*
  - Phone app: download JCCC Guardian (the free campus safety app: [www.jccc.edu/guardian](http://www.jccc.edu/guardian)) which includes an instant panic button and texting capability to Campus Police
  - Anonymous reports to KOPS-Watch [www.jccc.edu/kops or 888-258-3230](http://www.jccc.edu/kops or 888-258-3230)

- **Be Alert**
  - You are an extra set of eyes and ears to help maintain campus safety
  - Trust your instincts
  - Report suspicious or unusual behavior/circumstances to Campus Police (see above)

- **Be Prepared**
  - Identify the red/white stripe Building Emergency Response posters throughout campus and online that show egress routes, shelter, and equipment
  - View A.L.I.C.E. training (armed intruder response training - Alert, Lockdown, Inform, Counter and/or Evacuate) – Student training video: [https://www.youtube.com/watch?v=kMcT4-nWSq0](https://www.youtube.com/watch?v=kMcT4-nWSq0)
  - Familiarize yourself with the [College Emergency Response Plan](http://www.jccc.edu/)

- **During an Emergency**
  Notifications/alerts (emergencies and inclement weather) are sent to all employees and students using email and text messaging. Students are automatically enrolled, see [JCCC Alert - Emergency Notification](http://www.jccc.edu/)

- **Weapons Policy**
  Effective July 1, 2017, concealed carry handguns are permitted in JCCC buildings subject to the restrictions set forth in the Weapons Policy. Handgun safety training is encouraged of all who choose to conceal carry. Suspected violations should be reported to JCCC Police Department 913-469-2500 or if an emergency, you can also call 911.

Self-Paced Intermediate Algebra Units and Exams

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<td>1.2</td>
<td>Sets and Structures of Algebra</td>
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<td>1.3</td>
<td>Operations with Real Numbers</td>
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<td>1.4</td>
<td>Exponents, Roots, and Order of Operations</td>
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<td>1.4</td>
<td>Evaluating and Rewriting Expressions</td>
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<td>2.1</td>
<td>Chapter 2: Linear Equations and Inequalities in One Variable</td>
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<td>Solving Linear Inequalities</td>
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<td>3.1</td>
<td>Graphing Linear Equations</td>
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<td>The Slope of a Line</td>
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<tr>
<td>3.3</td>
<td>The Equation of a Line</td>
</tr>
<tr>
<td>3.4</td>
<td>Graphing Linear Inequalities</td>
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<td>3.5</td>
<td>Introduction to Functions and Function Notation</td>
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**Review for Exam 1 posted in Canvas modules**

### Exam 1 ➔ Chapters 1, 2 & 3

**Chapter 4: System of Linear Equations and Inequalities**

**Chapter 5: Exponents, Polynomials, and Polynomial Functions**

| 4.1 | Solving Systems of Linear Equations in 2 Variables |
| 4.3 | Solving Applications Using Systems of Equations   |
| 5.1 | Exponents and Scientific Notation                |
| 5.2 | Polynomials and Polynomial functions             |
| 5.3 | Multiplying Polynomials                          |
| 5.4 | Dividing Polynomials                             |

**Review for Exam 2 posted in Canvas modules**

### Exam 2 ➔ Chapters 4 & 5

**Chapter 6: Factoring**

**Chapter 7: Rational Expressions and Equations**

| 6.1 | Greatest Common Factor and Factoring by Grouping |
| 6.2 | Factoring Trinomials                           |
| 6.3 | Factoring Special Products and Strategies      |
| 6.4 | Solving Equations by Factoring                 |
| 7.1 | Simplifying, Multiplying, & Dividing Rational Expressions |
| 7.2 | Adding and Subtracting Rational Expressions    |
| 7.3 | Simplifying Complex Rational Expressions       |
| 7.4 | Solving Equations Containing Rational Expressions |
| 7.5 | Applications with Rational Expressions         |

**Review for Exam 3 posted in Canvas modules**

### Exam 3 ➔ Chapters 6 & 7

**Chapter 8: Rational Exponents, Radicals, and Complex Numbers**

| 8.1 | Radical Expressions and Functions          |
| 8.2 | Rational Exponents                         |
| 8.3 | Multiplying, Dividing, and Simplifying Radicals |
| 8.4 | Adding, Subtracting, and Multiplying Radical Expressions |
| 8.5 | Rationalizing Numerators and Denominators of Radical Expressions |
| 8.6 | Radical Equations and Problem Solving      |
| 8.7 | Complex Numbers                            |

**Review for Exam 4 posted in Canvas modules**

### Exam 4 ➔ Chapter 8

**Chapter 9: Quadratic Equations and Functions**

**Chapter 11: Conic Sections**

| 9.1 | The Square Root Principle and Completing the Square |
| 9.2 | Solving Quadratic Equations with Quadratic Formula |
| 9.3 | Solving Equations that are Quadratic-in-Form     |
| 9.4 | Graphing Quadratic Functions                    |
| 9.5 | Solving Nonlinear Inequalities                   |
| 11.1| Parabolas and Circles                           |

**Review for Exam 5 posted in Canvas modules**

### Exam 5 ➔ Chapters 9 & 11

**Final Exam: COMPREHENSIVE (Complete departmental review for the final available in Canvas)**

Privacy Notice: You will record your exams in this course for instructor use in assessing an exam. These videos will be viewed only by the instructor on record and will not be further copied, distributed, published or otherwise used for any other purpose.