# **MAT 1033**

# **Intermediate Algebra Course Syllabus**

The syllabus consists of the following headings: Instructor Text **Course Content** Math Prerequisites **Technical Prerequisites** Calculator **Primary Learning Goals Specific Course Objectives Final Exam Miscellaneous Policies Getting Help Grading Policy** SEMESTER SCHEDULE **Homework Assignments** ALEKS **Blackboard** 

### **Instructor:** Fran Hopf

### Office Hours: 7-9am M,W; 7-9:30am T,R; 12:15-12:45 T,R

# Email Address: fhopf@hccfl.edu

### **ALEKS Class Code:**

Intermediate Algebra MAT 1033 00000 TR 11:00am Hopf

GAMMU-6EAYY

#### Text:

- 1. Intermediate Algebra, Bello & Hopf
- 2. ALEKS Computer Tutorial student access code (Optional: Student Solutions Manual)

The USF Tampa Campus Bookstore has the textbook and ALEKS student access code. You must have both.

**Course Content:** Chapters 1-10 of the text will be covered.

- Chapter 1: The Real Numbers Chapter 2: Linear Equations & Inequalities Chapter 3: Graphs and Functions Solving Systems of Linear Equations & Inequalities Chapter 4: Chapter 5: Polynomials Chapter 6: **Rational Expressions** Chapter 7: Rational Exponents & Radicals Chapter 8: **Quadratic Equations & Inequalities** Quadratic Functions & the Conic Sections Chapter 9:
- Chapter 10: Functions, Inverse, Exponential, and Logarithmic

Math Prerequisites: MAT 0024C with a grade of "C" or better, or appropriate score on placement test.

# **Technical Prerequisites:**

Be able to work with the following hardware applications on a PC:

- Add plug-ins (AOL may not accept the regular download for the ALEKS plug-ins and you will have to do the manual download.)
- Contact and work with Technology help desk personnel (See Getting Help below)

Be familiar with the following types of software:

- Web browser (Internet Explorer 6 is recommended)
- Microsoft Word processor with Equation Editor
- Blackboard / Discussions Boards / Chat
- E-mail

# To forward your USF email to the email address that you normally check:

- 1. Go to the USF Web email log-in at <u>https://mailbox.acomp.usf.edu/</u> and enter your net ID username, password, and USF mail server (mail.usf.edu for example)
- 2. This should take you to the inbox of your assigned USF email account. Select the "Options" link at the top and then the "Email Forwarding" link. Enter your email forwarding address in the box and click the "change settings" link.

**Calculator:** A scientific calculator is required for this course. You should not need a graphing calculator, but you are allowed to use one.

**Primary Learning Goals:** Topics include sets, functions, polynomial operations, factoring, absolute value, rational expressions, equations (linear, quadratic, radical, rational), systems of equations, inequalities, exponents, radicals, graphs of linear equations and inequalities in two variables, complex numbers and applications. Elective credit only. No credit given if student has prior credit for any MAC course.

# **Specific Course Objectives:** In the respective topics below, the student will:

# **Equations and Inequalities**

- 1. solve linear equations and inequalities
- 2. solve applications involving linear equations and inequalities
- 3. solve absolute value equations and inequalities
- 4. quadratic equations and applications involving quadratic equations
- 5. solve equations with rational expressions and applications involving rational expressions
- 6. solve equations with radicals and applications involving radical expressions.
- 7. solve systems of linear equations and applications involving systems of equations

### Polynomials

8. perform operations involving polynomials

### 9. factor polynomials

# **Rational Expressions**

- 10. perform operations involving rational expressions.
- 11. simply a complex rational expression

# Exponents and Radicals

- 12. simplify expressions with rational exponents and radicals
- 13. perform operations with expressions containing exponents and radicals

### Complex Numbers

- 14. simplify complex numbers
- 15. perform operations with complex numbers

### **Graphs and Functions**

- 16. graph a linear equation and inequality
- 17. graph a parabola
- 18. graph a circle

- 19. graph a system of equations or inequalities
- 20. identify a function, domain, and range
- 21. find the inverse function and graph it
- 22. perform operations with functions
- 23. find composite functions

# **Exponential and Logarithmic Functions**

- 24. graph an exponential function
- 25. graph a logarithmic function
- 26. write logarithmic expressions in exponential form
- 27. write exponential expressions in logarithmic form
- 28. use their calculator to find common and natural logarithms

**Final Exam:** There will be a 2-hour **common final exam** (see the USF exam matrix at <u>http://www.registrar.usf.edu/ssearch/search.php</u>). This will be a cumulative departmental exam and *all* questions will be multiple choice. The common final exam counts as 10% of your grade. The remaining 90% of your grade will be specified in the grading policy (below).

# Time Conflicts with the scheduled Final Exam time

- Students who normally work during the scheduled time of the final exam are expected to make arrangements with their employer to get time off.
- Students who have another final exam scheduled during this same time period will be permitted to take a makeup. You must submit proof that a conflict exists.
- Students who miss the exam for other reasons (serious illness, death in family, etc) will be considered on a case-by-case basis. In all cases verification of the student's excuse will be required; makeup's will be permitted only for circumstances deemed beyond the student's control. Students should contact their instructor *immediately* upon realizing they will miss the exam.

# **Miscellaneous Policies:**

- Cheating will not be tolerated. The HCC College policy on Academic Integrity is explained in the Student Handbook at the following website
  <u>http://www.thezonelive.com/zone/02\_SchoolStructure/FL\_HillsboroughCommunityCollege/</u>
  <u>Handbook.pdf</u>
- Any student with a disability is encouraged to meet privately with the instructor during the first week of classes to discuss accommodations. The student must bring a current Memorandum of Accommodations from the Office of Student Disability Services (SVC 1133). This is a prerequisite for receiving accommodations. Exam accommodations through the Office of Student Disability Services require two weeks advance notice. All course handouts are available in alternate format if requested in the student's Memorandum of Accommodations.
- The last day to withdraw from this course and receive a tuition refund is Sept 2 (by 5 p.m.)
- The last day to withdraw from this course and receive a grade of "W" is **Nov 4** (by 5 p.m.).
- A grade of "I" indicates incomplete work and will only be assigned when most of the coursework has already been completed with a passing grade. See the Student Handbook website mentioned above for further information.

# **Getting Help:**

- There is a math Lab located in HMS 318. Lab Hours of Operation will be posted on the door and can be obtained from your instructor. Anytime there is a math instructor on duty, tutoring will be available as volume and time permits.
- There is a Student Solutions Manual available (optional) as a companion to the text.
- There are explanations with the ALEKS tutorial.
- For Technical help accessing ALEKS, you can email support@aleks.com
- Arrange to meet your instructor either in the Blackboard virtual classroom or chat or an oncampus meeting.
- Academic Computing located on the 6<sup>th</sup> floor of the Tampa Campus library will be available for student technical support: (974-1222) in Tampa or toll-free (1-866-974-1222 statewide), electronic mail (<u>help-ac@usf.edu</u>), walk-ins (LIB 608) and on-site services. To access online guides go to <u>http://www.acomp.usf.edu/help.html</u>, select the "Interactive Video Guides" link, and then choose your preferred guide.

# **Grading Policy:**

To maximize your learning you should spend at least two hours outside of class for every hour spent in class. Typically your homework will be the odd problems for each section covered in the course. Actual assignments will be given daily and posted on our course Blackboard site under "*Assignments*." The odd problems have answers in the back of the textbook so you should check your work. Part of the course requirement is to practice a minimum of 2 hours per week on the Internet-based math tutorial called **ALEKS**. All USF courses including HCC classes at USF can be accessed on the Internet through a program called Blackboard. If you have never used Blackboard before, then see "**Using our Course Blackboard Site**" below.

Your grade will be a composite of the following:

- 1. The **10 Chapter Tests** taken on the computer are multiple-choice and must be completed before you take the on-campus test covering those chapters. The computer tests for those chapters will not be available after the on-campus test date including those chapters. The computer tests should be taken without any help from your book, notes, or other people. It will be a one-chance, two-hour timed test. Once you begin the test, you will not be allowed to stop and start again. Any test not taken by the deadline becomes a zero. Retakes are not allowed.
- 2. **Class Participation** quizzes, assignments, group work, etc. Two grades will be dropped. May include any of the following to be administered randomly during any scheduled class.
  - Pop Quiz during the first 5 minutes of class on a few of the assigned homework from the textbook (*No make-ups*)
  - Collect the entire homework assignment on any given class day (*No make-ups*)
  - Assign and grade a group activity to be done in class (*No make-ups*)
- 3. **12 ALEKS** computer tutorial weekly grades (logging a minimum of 2 hrs. per week) The **ALEKS** computer tutorial will be graded weekly beginning the second week of the semester. You will be given a weekly ALEKS grade that will be a composite of the hours logged in (minimum of 2 hours per week) and the amount of objectives mastered (minimum of 1 per week). Your ALEKS grade will also include a final ALEKS assessment. You will find that two hours per week probably won't be enough for you to successfully complete all the objectives in the ALEKS program. Practicing this program regularly has the potential to enhance your long-term memory, thus preparing you to perform well on the comprehensive final exam. The program can be accessed from the Internet and will automatically download

some plug-ins the first time you log in. If you have AOL you may need to download the plugins manually. If you have technical difficulties with ALEKS, email <u>support@aleks.com</u>. To log in to the ALEKS tutorial for the first time using your student access code obtained with your textbook and the class course code your instructor will give you, see the **ALEKS Log-in Instructions** below. Weekly ALEKS points will be assigned as indicated in the following table.

# **ALEKS** Points

12 Weekly ALEKS Times	8 pts each week	96
12 Weekly ALEKS Objectives	2 pts each week	24
Final ALEKS Assessment		30

- 4. **5 Chapter Tests** (dates on the **Semester Schedule** below) There will be **no retakes or make-ups**. You may use your final exam grade to replace your lowest test grade or a missing test grade.
- 5. **Comprehensive Common Final Exam** (date on the **Semester Schedule** below) The final exam is a mandatory departmental multiple choice exam. It will be given during USF Exam Week.
- 6. 1 Personal learning evaluation reflection (extra credit)

This is a one-page paper that you will be asked to write using correct spelling and grammar. The paper will include answers to questions and also some of your own personal thoughts about your learning experience in this course. You will upload the assignment to the Blackboard Reflection Dropbox by Friday Midnight of the week it is assigned (see **Semester Schedule** below).

# **Grade Distribution Points:**

<b>10</b> Computer Chapter Tests	100
Class Work	150
ALEKS	150
5 Tests	500
Final Exam	100
1 Reflection (10 extra credit)	
Total	1000

At the instructor's discretion, extra assignments or quizzes beyond those stated may be used to encourage successful learning experiences.

**Final Grades:** The following grading policy will be used in assigning final grades. If your overall percentage of total points falls into the following ranges, you will receive the corresponding grade:

900-1000 A 800-899 B 700-799 C 600-699 D 0-599 F

Wk #	Week of:	Chapter Sections	ALEKS (minimum 2 hrs per wk)
1	Aug 29-Sept 2	Orientation, 1.1-1.4	
		ALEKS Orientation	
		In HMS 318	
2	Sept 5-9	(No Monday Class)	ALEKS 1
		2.1, 2.2, 2.3	
3	Sont 12-16	2.4, 2.0, 2.0 Review	ALEKS 2
5	Sept 12-10	Ch 1 & 2 Test	
4	Sept 19-23	3.1, 3.2	ALEKS 3
		3.3, 3.4	
5	Sept 26-30	3.5, 4.1,4.2	ALEKS 4
_		4.3, 4.6	
6	Oct 3-7	Review	ALEKS 5
		Ch 3 & 4 Test	
7	Oct 10-14	5.1, 5.2, 5.3	ALEKS 6
		5.4, 5.5, 5.6	
8	Oct 17-21	5.7, 6.1, 6.2	ALEKS 7
		6.3, 6.4	
9	Oct 24-28	6.5, 6.6, 6.7	ALEKS 8
		Review	
10	Oct 31-*Nov 4	Ch 5 & 6 Test	ALEKS 9
		/.1, /.2, /.3	
11	Nov 7-11	7.4, 7.5	ALEKS 10
40	Nov 44 40	ŏ.1, ŏ.∠, o.ɔ	
12	NOV 14-10	0.4, 0.5 Review	<u>ALLING</u>
13	Nov 21-25	Ch 7 & 8 Test	ALEKS 12
10		9.1, 9.2	
14	Nov 28-Dec 2	10.1, 10.2,	ALEKS
		10.3, 10.4, 10.5	<u>Assessment</u>
15	Dec 5-Dec 9	Review	
		Ch 9 & 10 Test	
16	Tues, Dec 13 10:30-12:30	FINAL EXAM	

# **Intermediate Algebra Semester Schedule F05**

\*Nov 4-Last day to withdraw without grade consideration

# **Intermediate Algebra Homework Assignments F05**

Chapter 1 – The Real Numbers 1.1-1.4 Work Every Other Odd (EOO) thru Skill Checker Practice Test p.66 #1-25 all

#### Chapter 2 – Linear Equations and Inequalities

2.1-2.6 EOO thru Skill Checker Practice Test p. 155 # 1-25 all

#### Chapter 3 – Graphs and Functions

3.1-3.5 EOO thru Skill Checker Practice Test p. 239 # 1-25 all

#### Chapter 4 – Solving Systems of Linear Equations and Inequalities

4.1 EOO thru Skill Checker 4.2 #1-11 Odds and #27, 29 4.3 #1-33 EOO 4.6 #1-11 Odds Practice Test p. 335 #1-16 all; 24, 25

#### Chapter 5 – Polynomials

5.1-5.7 EOO thru Skill Checker Practice Test p.416 #1-25 all

#### Chapter 6 – Rational Expressions

6.1-6.3 EOO thru skill checker 6.4 #1-19 Odds 6.5-6.7 EOO thru Skill Checker Practice Test p.381 #1-23 all

#### Chapter 7 – Rational Exponents and Radicals

7.1-7.3 EOO thru Skill Checker7.4 #1-23 Odds7.5 EOO thru Skill CheckerPractice Test p.575 #1-30 all

#### Chapter 8 – Quadratic Equations and Inequalities

8.1-8.2 EOO thru Skill Checker 8.3 #1-9 Odds; #21-39 Odds 8.4 #1-37 EOO 8.5 #1-31 EOO Practice Test p.639 #1-13a, 14, 16, 18-25 all

#### Chapter 9 – Quadratic Functions and the Conic Sections

9.1 #1-39 EOO 9.2 #1-41 EOO Practice Test p.724 #1-12 all

### Chapter 10 – Functions-Inverse, Exponential, and Logarithmic

10.1 #1-27 Odds 10.2 #1-9 Odds, 15, 25 10.3 #1-23 Odds 10.4 #1-73 Odds 10.5 #1-39 EOO Practice Test p. 823 #1-13, 16-17 all

# Aleks Log-in Prompts

# Access the internet using the URL below:

http://www.highed.aleks.com/

Choose the option below. The next time you log in will be with the username and password given to you during registration

Register with Aleks

# . Under the column "For students", select register at the bottom. FOR STUDENTS

Register

# You will be given a contract. Select "I accept".

I ACCEPT

Aleks now looks for plug-ins and adds if necessary. Just be patient and wait.

# Next enter the student access code (may be in the back of your Aleks booklet or given to you by your instructor)

Access Code:

# **Enter personal information**

Enter class codes given to you by your instructor

**Begin the Answer Editor Tutorial** 

**Begin the Assessment** 

View the Evaluation - "My Pie" Begin Learning by clicking on one piece of the pie and choosing an objective to practice.

# Using Our Course Blackboard Site

# 1. How to log-in to the Blackboard course site:

URL https://my.usf.edu

\*Enter USF net id fhopf password \*\*\*\*\*

Select "Courses" tab at the top

# Select "Your Course"

This always takes you to the announcement page of the course. All the other links to the course are in the left margin.

# \*If you are a new user, select the "sign-up" link and follow the prompts

USF card # 640013... date of birth SS number