Math 41 – 24 (02537): *Pre-Calculus I: Theory of Functions* **Date/Time** : *Mondays and Wednesdays, 4:00pm – 6:15am (Adm 103)*
Instructor: *Y. AuYOUNG*   **Office Visit Hours** : *MW 12:45 pm – 1:15 pm or by appointment (E37a)*
Additional Office Hours: *MW 12:00 pm – 12:45 pm via e-mail (auyoungyatman@fhda.edu) or v-mail ((408) 864-8999 ext 3312)*
          (Note: For your protection, I do not release or discuss any personal info, including student grade, via phone or email)

This is a demanding, but rewarding class. If you cannot commit to a minimum of 10 hours study weekly, then you should take this class in a quarter when you have time to learn. This is a collaborative class and you will be expected to work with your classmates both inside and outside of class (no exceptions). You are encouraged to form study groups. Throughout the course, working collaboratively in groups and relating the material to the real world will be stressed. A scientific calculator (TI-83 or 84) will be used. Bring pencil, ruler, paper, calculator, and text to each class meeting. The students will work on Functions (Polynomial, Rational, Exponential, Log) and their Graphs; Transformation of Functions; Composite, Inverse and Combination of Functions, as well as Math Models.

Students Learning Outcomes (SLO): *(1) Investigate, evaluate, and differentiate between algebraic and transcendental functions in their graphic, formulaic, and tabular representations. (2) Synthesize, model, and communicate real-life applications and phenomena using algebraic and transcendental functions*

Prerequisite: *Passing grade (C or Better) in Intermediate Algebra (Math 114) or the Placement Test within the last calendar year*

Text: *Pre-Calculus with Limits by Larson 3rd Edition, (Brooks/Cole CENGAGE Learning)*

Related Materials: *TI-83 PLUS (or 84 or 86) graphing calculator is required (Instructions: http://www.ti.com/calc)*

Student Conduct: *You are required to participate in all class work. Any student disrupting class will be asked to leave. A student who refuses to leave the room will be dropped from the class and will be reported for further action.*

Cheating will not be Tolerated. *If anyone is caught cheating in any work (in class/take home), s/he will pay the consequences*

Cell Phones: In the classroom, you *must turn off or set in vibrate mode your cell phone and all electronic equipments.* If a cell phone rings in class, the student will have to leave and this will count as a full class absence. *If this should occur during a quiz, test or the final exam, the student will receive a zero grade for that test. Cell phone cannot be used as a calculator or for any purpose in quiz or exam.*

Attendance: *Class attendance is mandatory and can earn up to 20 points for perfect attendance. You are expected to present promptly each class and stay for the entire class. Coming late, leaving early or in and out the classroom is irresponsible, impolite, and disruptive to your classmates and is not acceptable. Each absence, tardiness for any reason will result in a loss of 2 points. Arriving to class late or leaving early will be counted as half absent. You may be dropped for missing 2 classes without a reasonable excuse. You must attend each class in the first week of class or you will be dropped. If you miss a class, please work with a fellow student to keep up with class activity. You are responsible for reading the material on your own and for turning in all assignments that is due on the day you return to class.*

Drop Policy: *A student who discontinues coming to class and does not drop the course will receive an F. Should you stop attending, you will not be automatically dropped. It is your responsibility to drop the class yourself.*

Homework: *The purpose of homework is to help you learn the course material. It is your responsibility to read the text before each class and do the homework on a daily basis. You will be involved in a group with whom you may share your work. Homework must be done daily and will be collected on the due date at the beginning of class. Grading will be on your effort, neatness, and completeness. In order to receive full credit, you must follow the guidelines as described in the first class meeting and show how you arrived at the answer for each problem. Turning in answers only is not considered completing the assignment. Late or sloppy homework could not earn any credit. Some of the problems on quizzes/tests will be very similar to the homework/classwork problems. Please keep up with the assignments daily. If you cannot commit 2 hours daily on study/homework, you are in the wrong class! Collaborative effort on quizzes or tests, however, is not allowed. Students who don't do homework do not succeed in math! Please keep up with the assignments daily.*

Projects: *Projects are done in groups and use data collected by the group. No make-ups or late papers will be accepted.*

Quizzes: *Quizzes are closed book. Quizzes will test your understanding of the class material, and understanding and completion of homework problems. The lowest quiz grade will be dropped. Any quiz missed is marked as 0 point and no make-ups.*

Tests: *Tests are closed book. The lowest test grade will be dropped. Any test missed is marked as 0 point and no make-ups.*

Final Exam: *A two-hour comprehensive exam will be given on Monday, Dec 7, 2015, at 4 pm – 6 pm. Multiple Choice and Graphing may be tested on Wed, Dec 2. Bring a brown #2052 scantron . If you miss the final exam, you will receive an F for the course.*

Grade:

Quizzes (8@10) : 70 *(lowest 1 dropped)*	A⁻: 500 – 515	A: 516 – 529	A+: above 529
Tests (3 @100) : 200 *(lowest 1 dropped)*	B⁻: 440 – 459	B: 460 – 479	B+: 480 – 499
Attendance : 20		C: 390 – 419	C+: 420 – 439
Homework : 54	---		
Project (TBD) *(extra credits)*	D⁻: 345 – 359	D: 360 – 379	D+:380 – 389
Final Exam : 200	F : below 345		
Total : 544			

<u>*Math 41 – 24: Pre-Calculus Algebra*</u> – *Minimum Homework Assignment Cover Sheet*

Name: _____ Row: _____ CID: _____

> *Hand in the HW for each section after it is completed, within the first two minutes of the day they are due **(no late, sloppy, or answers only work).*** ***Work MUST be well-organized and neatly done in pencil on 8½ x 11 binder paper, not tear off from a book.*** *You may write on the back only if both sides can be read. Each answer must be clearly indicated (circled or boxed) and supported by sufficient work for credit. Graph must be neatly drawn on a graph paper (use a ruler).* ***Start each section on a new sheet of binder paper.*** *Problems and pages must be arranged in their proper order.* ***Submit HW and this cover sheet inside a folder (with two pockets) by each due date which will be announced in class.***

<u>*Note*</u>*: last due date = the due date of the last section of this chapter. I will return your HW folder after all sections of the chapter is checked.*

____ H1 (3sec: A.5 – A.7): due Monday, ~~Sept 28~~ **Oct 5**   Test 1 (A.1 – A.7 and 1.1 – 1.10): Wed. Oct 14

____ H2 (10 sec: 1.2 – 1.10): due Wednesday, Oct 14   Test 2 (2.1 – 2.7): Wed, Nov 11

____ H3 (7 sec: 2.1 – 2.7): due Wed, Nov 11   Test 3 (3.1 – 3.5 and 10.2 – 10.4): Mon, Nov 30

____ H4 (8 sec: 3.1 – 3.5 and 10.2 – 10.4): due Monday, Nov 30   **Final Exam: Mon, Dec 7 (Multiple Choices/Graphing may be earlier)**

	Sec	Page	Minimum Homework Problems
	~~4.1~~	A1	10, 16, 36, 39, 43, 46, 48, 56, 58, 59, 64, 74, 76, 100, 106, 110, 119, 125 – 134
	~~4.2~~	A24	9, 13, 17, 22, 29, 37, 43, 50, 55, 62, 64, 69, 76, 90, 94, 97, 101,112, 118, 123 – 127, 130
	~~4.3~~	A35	17, 21, 30, 34, 43, 72,110, 118, 131, 144, 150, 158, 166, 169, 191, 203, 206, 211, 213, 219, 224, 235 – 244, 246
(H1)	~~4.4~~	A45	14, 21, 29, 42, 43, 44, 46, 47, 54, 65, 67, 69, 70, 74, 76, 86, 93, 97, 101, 103 – 105
	A.5	**A56**	11, 12, 24, 30, 40, 41, 46, **48**, 53, 58, **63**, 69, **71,** 75, **76**, 79, **84**, **87**, **89**, 97, **98**, **99**, **100**
	A.6	**A64**	**5, 7**, 27, 28, 39, 46, 48, **57**, 59, **63**, **67**, 68, 71, **73**, 77, **79**, **81**, **82**, 87, 92, 99, 102, 104, 107, 112, 115, **116, 117**
	A.7	**A72**	3 – 22, 28, 29, 30, 32, 39, 41, 42, 43, 49, 54, 57, 63, 68, 72
	1.1	8	23, 25, 41, 49, 52, 53, 54, 55 – 57, 58
	1.2	19	14, 17, 22, 28, 33, 37, 40, 43, 43, 52, 54, 61, 62, 65, 68, 74, 76, 80, 82, 87, 89, 90
	1.3	31	21, 32, 35, 37, 40, 41, 47, 51, 53, 57, 67, 68, 71, 73, 82, 85, 90, 97, 99 – 103, 107, 108
(H2)	1.4	44	6, 8, 10, 14, 15, 18, 25, 29, 32, 35, 47, 48, 50, 54, 60, 66, 67, 72, 74, 80, 89 – 98
	1.5	56	3, 6, 7, 9, 13, 14, 17, 20, 23, 28, 30, 36, 37, 38, 43, 53, 60, 64, 69, 73, 75 – 77, 79, 83, 86, 90, 92 – 94, 97, 98
	1.6	65	27, 30, 36, 39, 43, 47, 48, 49, 50
	1.7	72	4, 9, 12, 18, 19, 27, 34, 39, 42, 45, 48, 50, 52, 53, 55, 57, 62, 64, 69, 71 – 74, 76, 78
	1.8	81	4, 10, 18, 22, 23, 28, 33, 34, 37, 40, 42, 43, 45, 49, 51, 52, 58, 60, 63, 65 – 67
	1.9	90	9, 11, 13, 20, 26, 30, 33, 35, 39, 44, 49, 53, 61, 63, 65, 68, 77, 82, 84, 87 – 92, 95, 96, 99, 102, 103
	1.10	100	12, 13, 26, 28, 33, 35, 38, 46, 50, 54, 61, 68, 73, 77, 78
	2.1	120	2, 5, 6, 16, 23, 29, 33, 42, 44, 45, 52, 55, 58, 64, 65, 67, 71, 73, 76, 7781, 83, 87 – 89, 94, 95
	2.2	133	1, 4, 5, 8, 16 17, 20, 27, 29, 32, 34, 39, 44, 48, 49, 54, 59, 62, 64, 69, 71, 73, 79, 84, 87, 95, 99, 101, 105- 112, 114, 116
(H3)	2.3	144	13, 17, 22, 26, 28, 32, 33, 43, 48, 52, 53, 58, 60, 64, 66, 69, 73, 75, 82, 84, 87, 88, 90, 91, 95 – 97
	2.4	152	9, 18, 20, 28, 37, 41, 42, 45, 47, 50, 52, 58, 59, 64, 68, 69, 76, 86, 88, 90, 93 – 101
	2.5	164	7, 12, 14, 15, 18, 24, 28, 29, 31, 35, 38, 42, 43, 47, 49 – 51, 54, 55, 59, 61, 67, 71, 75, 77, 82, 90, 91, 93, 95, 97, 100, 103, 105, 113, 115 – 122, 128
	2.6	177	1 – 4, 10, 11, 15, 19, 22, 26, 31, 39, 46, 48, 52, 58, 61, 65, 66, 68, 69, 71, 76 – 82
	2.7	187	5, 7, 12, 15, 27, 32, 33, 35, 38, 41, 50 – 52, 56, 60, 63, 66, 68, 73, 75, 78, 83, 84, 87, 90
	3.1	208	11, 17, 18, 28, 30, 31 – 33, 37, 42, 44, 48, 50, 53, 59, 65, 67, 70, 73 – 75, 79, 83, 85, 86
	3.2	218	1, 4, 6, 8, 9, 12, 13, 16, 19, 20, 27, 28, 30, 31, 34, 36, 43, 44, 48, 49, 51, 55, 56, 59 – 63,66, 67, 70, 72, 74, 76, 78, 81 – 84, 87, 89
	3.3	225	12, 13, 16, 20, 27, 28, 31, 34, 36, 47, 49, 54, 57, 63 – 66, 72, 74, 77, 81, 83, 84, 96 – 108
	3.4	235	4, 6, 9, 11, 14, 15, 16, 18, 28, 30, 33, 35, 39, 41, 44, 45, 51, 53, 56, 57, 60, 61, 64, 69, 71, 75 – 78, 84, 87 – 92, 95
(H4)	3.5	245	14, 16, 33, 36, 40, 45a, 46a, 59, 61 – 64
	10.2	700	4 – 6, 19, 23, 26, 27, 33, 35, 42, 47, 53, 55, 57, 63, 71, 75, 77, 78, 80
	10.3	710	11, 15 – 17, 23, 25, 31, 35, 39, 45, 65, 66,
	10.4	720	9, 14, 21, 27, 37, 39, 41, 43, 54, 61, 67, 69 – 72, 76

wk	Month	Monday	Tuesday	Wednesday	Thursday	**Reminder**
1	Sept	21 *Instruction Begins* **Appx. A.1 – A.7** *Begins HW daily*	22	23 **Quiz** **A5 – A.6** **Appx A Review** *Continue HW daily*	24	**Begins HW daily** **Prepare daily quiz** **Read course material before class**
2	Sept/ Oct	28 **Quiz** *1.1 (Review)* **1.2 – 1.4**	29	30 **Quiz** *1.4 (Review)* **1.5 – 1.6**	1	**Daily Quiz begins** **Last day to add: Sat, Oct 3** **Last day to drop with no record of grade: Sun, Oct 4**
3	Oct	5 **Quiz** **1.7– 1.8**	6	7 **Quiz** **1.9– 1.10**	8	**Censes Day: Mon, Oct 5** **Daily Quizzes**
4	Oct	12 **Quiz** *Ch 1 Review* **2.1 – 2.2**	13	14 **T1** **2.2 – 2.3** *Synthetic Division*	15	**T1 (A.1 – A.7 and 1.1 – 1.10)** **Last day to request P/NP: Fri, Oct 16**
5	Oct	19 **Quiz** **2.4 – 2.5** *Complex Numbers*	20	21 **Quiz** **2.5 – 2.6** *Poly Functions, Zeros, and Graphs*	22	**Daily Quizzes**
6	Oct	26 **Quiz** **2.6** *Rational Function, Asymptotes and Graphs*	27	28 **Quiz** **2.6** *Rational Function, Asymptotes and Graphs*	29	**Daily Quizzes**
7	Nov	2 **Quiz** **2.7** *Nonlinear Inequalities*	3	4 **Quiz** *Ch 2 Review and* **3.1 – 3.2** *Exponential and Logarithmic functions*	5	**Daily Quizzes**
8	Nov	9 **Holiday** **Veterans Day**	9	11 **T2** **3.2 – 3.3** *Log function and graph*	12	**T2 (2.1 – 2.7)** **Last Day to drop with a "W": Fri, Nov 13**
9	Nov	16 **Quiz** **3.4 – 3.5** *Exp/log Equations*	17	18 **Quiz** **3.5** *Ch 3 Review*	19	**Daily Quizzes**
10	Nov	23 **Quiz** **10.1 – 10.2** *Lines/Conic: Parabolas*	24	25 **Quiz** **10.3 – 10.4** *Ellipses, Hyperbolas*	26 **Thanksgiving**	
11	Nov/ Dec	30 **T3** **Review** *(all Chapters)*	1	2 **Review** *(Final Exam Part I?)*	3	**T3 (3.1 – 3.5 and 10.2 – 10.4)** **May schedule Final Part I (Multiple Choices and Graphing) on Wed (12/2)**
12	Dec	7 **Final Exam** **4 pm – 6 pm**	8	9	10	**Final Exam (all chapters)**
Reminder:		**8 Quizzes (drop one)** **Appx (A.1 – A.7)** **1.1 – 1.6 and 1.7 –1.10** **2.1 – 2.4 and 2.5 – 2.7** **3.1 – 3.3 and 3.4 – 3.5** **10.2 – 10.4**	**3 Tests (drop one)** **T1 (Appx A and Ch 1)** **T2 (Ch 2)** **T3 (Ch 3 and 10)**	**Projects** *(tbd)* **typed and stapled packet**		a. 3 Tests drop the lowest test score b. 8Quizzes drop the lowest quiz score c. Project d. Final Exam all chapters/sections

* Winter 2016 Quarter Classes start Monday, Jan 4, 2016 Enjoy the Christmas and the New Year Holidays!