Analytic Geometry and Calculus I, Math 0220, Section A, CRN 11353

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University of Pittsburgh
Pittsburgh, Pennsylvania, USA
Course Information

Class organization

- **Classes**
  This class is Mathematics 0220, CRN 11353, Analytic Geometry and Calculus I. The classes take place in PUBHL A115, Mondays, Wednesdays and Fridays, 9.00am-9.50am.
  The first class is Wednesday January 3rd 2007.
  The last class is Friday April 20th 2007.
  The final exam is on Friday April 27th 2007, from 8.00am-9.50am.
  There are a total of forty-three classes, of which two are designated for midterm examinations.

- **Instructor:** George Sparling
  **Office:** 609 Thackeray
  **Phone:** 1-412-478-1879.

- **e-mail:** gnilraps@gmail.com

- **Webpage:** http://www.math.pitt.edu/ sparling.

- **Office hours:** Mondays and Wednesdays, 12.00pm-1.30pm, in 705 TY, or by appointment.

Recitations

- **CRN 11354 Instructor:** Veysil Nezir, ven1@pitt.edu
  **Office:** 521 Thackeray.
  Veysil Nezir’s recitations take place in BE523, each Friday, 11.00am-11.50am.

- **CRN 11355 Instructor:** Nathaniel Mays, nhm3@pitt.edu
  **Office:** 517 Thackeray.
  Nathaniel Mays’s recitations take place in BE522, each Friday, 11.00am-11.50am.
Laboratories

Each Wednesday from 11.00am-11.50am there is a Laboratory at GSCC126, conducted by Veysil Nezir and Nathaniel Mays.

Class Schedule

- Every two weeks there is a quiz or an exam during the Friday class.
- Each week, there will be a homework, assigned the previous week and collected by your TA in your Friday recitation.

Grading

There are fourteen homeworks, five quizzes, two midterms and a final exam during the term.
Two homeworks and one quiz will be dropped.

Grading Scheme

- Best 12 homeworks at 25 points each = 300pts
- Best 4 quizzes at 30 points each = 120pts
- Two midterm exams at 120 points each = 240pts
- One final examination at 240 points = 240pts
- Laboratories at 100 points = 100pts
- Maximum Possible Score = 1000pts

Grading is curved and based on your total score only, provided you pass the final.
The one letter grade rule is in effect: the letter grade for your course cannot be more than one letter grade above your grade for the final.
If you pass the final, grading will be in the A+ to B- range, unless your other work is severely lacking.
If you fail the final, grading will be in the range C+ to F.

Textbook

The text for this course is:
Calculus, Concepts and Contexts, 3rd edition,
Syllabus; Problem Sets; Quiz/Exam Schedule

Week 1: 1/3-1/5
Functions 1: 1, 2, 11, 12, 16, 17, 18, 21, 22, 28, 30, 32, 48, 51, 52, 54, 59.
Modeling 1: 5, 6, 8, 10, 11, 12, 14, 15, 19, 20.

Week 2: 1/8-1/12
Composition 1: 2, 3, 4, 6, 7, 10, 12, 13, 15, 26, 35, 36, 50, 53, 56.
Exponentials 1: 5, 7, 9, 10, 13, 17, 18.
Inverses 1: 6, 3, 4, 56, 9, 10, 13, 14, 16, 19, 21, 22, 26, 33, 34, 35, 36, 45, 49, 57.

Quiz 1: Friday 1/12

Week 3: 1/17-1/19
Parametrics 1: 7, 5, 6, 7, 9, 10, 13, 15, 18, 20.
Tangents 1: 1, 3, 5, 7.
Limits 1: 2, 3, 4, 6, 15, 16, 18, 20, 24.

Quiz 2: Friday 1/26

Week 4: 1/22-1/26
More Limits 1: 2, 3, 4, 6, 9, 10, 11, 16, 30, 31, 32, 33, 34, 36, 38.
Continuity 1: 3, 4, 7, 8, 13, 15, 31, 32, 39, 41.
Improper limits 1: 2, 3, 4, 5, 6, 12, 15, 18, 20, 22, 23, 28, 29, 40, 47.

Quiz 3: Friday 2/9

Week 5: 1/29-2/2
Derivatives 1: 1, 3, 5, 7, 8, 9, 13, 14, 15, 17, 20, 21, 22, 24, 26.
Derivatives 1: 2, 3, 5, 7, 12, 15, 17, 25, 26, 27, 28, 29, 30, 31, 32, 33.
Derivatives 1: 2, 3, 4, 6, 7, 12, 19, 20, 22, 29, 30, 31, 44, 50.

Week 6: 2/5-2/9
Applications 1: 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 15, 21, 24, 25, 27, 28.
Polynomials and exponentials 1: 3, 4, 7, 8, 9, 10, 14, 15, 21, 22, 29, 31, 33, 35, 41, 42.
Week 7: 2/12-2/16
More applications 3.3 : 3, 4, 8, 16, 18, 26, 29.
Trigonometric functions 3.4 : 3, 5, 6, 8, 10, 17, 18, 27, 28, 31, 33, 39, 40.
Chain rule 3.5 : 7, 10, 11, 12, 13, 16, 19, 20, 26, 30, 34, 41, 45, 46, 54.

Week 8: 2/19-2/23
Implicit functions 3.6 : 3, 4, 6, 8, 9, 10, 14, 15, 16, 17, 28, 29, 30, 32.

Exam 1: Friday 2/23

Week 9: 2/26-3/2
Logarithms 3.7 : 2, 4, 5, 6, 8, 12, 14, 16, 25, 27, 30, 32, 37.
Approximation 3.8 : 1, 4, 5, 6, 7, 8, 10, 15, 17, 23, 25, 27, 29, 30.
Related rates 4.1 : 2, 4, 5, 8, 9, 10, 11, 12, 16, 18, 25, 29, 33.

Week 10: 3/12-3/16
Extrema 4.2 : 3, 6, 7, 8, 11, 15, 17, 18, 19, 24, 26 – 29, 33, 37, 38, 39, 41, 44, 45, 47.
Graphing 4.3 : 1, 2, 5, 6, 7, 8, 9, 10, 12, 14, 16, 17, 18, 19, 20, 24, 28, 29, 30, 31, 32.
Graphing 4.4 : 1, 2, 3.

Quiz 4: 3/16

Week 11: 3/19-3/23
L'Hôpital’s rule 4.5 : 6, 8, 9, 11 – 18, 26, 28, 31, 32, 33, 34, 37, 38, 39.
Optimization 4.6 : 2, 4, 7, 8, 9, 10, 12, 13, 16, 17, 20, 21, 23, 42.
Newton’s Method 4.8 : 1, 4, 6, 9, 10, 11, 12, 13.

Week 12: 3/26-3/30
Anti-derivatives 4.9 : 5, 7, 9, 10, 11 – 14, 20, 22, 24, 28, 29, 33, 34, 37, 39, 40, 41, 47, 48, 50.

Exam 2: Friday 3/30
Week 13: 4/2-4/6
Area and distance 5.1 : 2, 5, 11, 13, 15, 16.
Riemann sums 5.2 : 1, 5, 7, 9, 31, 32, 33, 34, 35, 38, 40, 42, 43.
Fundamental Theorem 5.3 : 2, 6 – 10, 12, 14, 17, 18, 20, 22, 25, 28, 29, 35, 37, 41, 45 – 49, 55, 57.

Week 14: 4/9-4/13
Fundamental theorem 5.4 : 3, 4, 7, 8, 10, 11, 12, 19, 20.
Substitution 5.5 : 7, 8, 9, 10, 14, 17, 18, 19, 21, 23, 24, 29, 34, 40, 42, 44, 46, 53.
Integration by parts 5.6 : 3, 4, 8, 9, 10, 11, 13, 16, 17, 20, 25, 26, 37, 38, 39, 40.

Quiz 5: Friday 4/13

Week 15: 4/16-4/20
Partial fractions 5.7 : 1, 2, 6, 13, 14, 17, 18, 19, 20, 25, 26, 27.

Final exam:
Friday April 27th,
8.00am-9.50am