Math 123: Syllabus and Integration By Parts

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CSU Long Beach

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Outline

1. Syllabus Highlights
2. Review of Integration
3. Integration By Parts

Syllabus Highlights

Course Webpage:
http://www.csulb.edu/∼rblair/Math123F17/index.html

Here you will find

1. Lecture slides
2. Course Calendar
3. A link to WebAssign
4. Instructions for accessing WebAssign
5. A copy of the syllabus
6. A link to Beachboard (where your quiz, homework and test scores are posted)
7. Other useful links

Text

Required Text: Stewart, Essential Calculus: Early Transcendentals, Second Edition + **Supplemental Materials** (These are available in a bundle from the book store or for free online).

Required Homework Platform: A subscription to WebAssign.
Homework for today: Log in to WebAssign!!!!

Redesigned Calc. Sequence

Big Changes

1. Coordinated homeworks, exams and content.
2. More emphasis an test preparation.
3. Mandatory supplemental instruction for students that are not exempt (However, all students are welcome).
4. Collaborative work in Activity Sections.

Goal: Get more students to pass Math 123!!!

Grading

1. 7% Webassign
2. 6% Show your work
3. 7% Activity Assignments
4. 10% Maintenance and Improvement
5. 15% Midterm 1
6. 15% Midterm 2
7. 15% Midterm 3
8. 25% Final

Homework

1. Online on WebAssign (http://www.webassign.net/)
2. Class key is csulb 7761 9948.
3. Access Code is sold online at the webassign web page or with the text book package from the library.

Exams

Mark your calendars

1. Midterm 1: September 27
2. Midterm 2: October 25
3. Midterm 3: November 29
4. Final: December 13

Classroom Decorum:

1. No Talking
2. No Texting
3. Cellphone Ringers Off
4. Laptops and cell phones only used for class activities.

Adding the Course

Speak to me about adding the class after class.

Space is limited.

Grading

Grades will be computed by the following absolute scale:

1. A $85 - 100\%$
2. B $75 - 85\%$
3. C $65 - 75\%$
4. D $55 - 65\%$
5. F $0 - 55\%$

Be Aware

1. Accommodations because of a disability
2. Withdraw
3. Academic Integrity

Fundamental Theorem of Integration

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Where F is any antiderivative of f.

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Examples: Evaluate $\int_0^1 x^2 + 1dx$.

U-Substitution for definite integrals

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Examples: Evaluate $\int xe^{x^2}dx$.

Integration by Parts

$$\int u(x)v'(x)dx = u(x)v(x) - \int u'(x)v(x)dx$$

Exercise: Derive the above equality by using the product rule to find the derivative of $u(x)v(x)$.

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Example: Derive the above formula from the product rule for derivatives and the fundamental theorem of calculus.

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Example: Find $\int ln(x)dx$.
Key: Sometimes by-parts can be used to integrate functions we know how to differentiate.
Example: Find $\int (2x+1)ln(x)dx$.