ACE Calc I

Chapter 4B – Anti-differentiation

Assignment Sheet

***This is a tentative schedule only. Actual assignments may differ from what is shown.*

Day	Section	Page	Assignment
1	4.4 A Fundamental Thm. Of Calculus	288	Odds #5-41(eo)
2	4.4 B 2nd Fundament Thm. Of Calculus	288	Odds #45,55,63,67,77,85,89,91
3	4.5 A Integration by Substitution	301	Odds #5-25(eo), 33-41(eo), 55,59
4	4.5 B More U-Substitution	301	Odds #7-19(eo),35,39,47-51,57,65
5	4.6 A Numerical Integration	310	Odds #1,7,11,17,23,35
6	Review		
7	Test		

Chapter 4B Board Problems

	A	B	C	D
1	Evaluate: $\int_2^4 (x^2+7x)dx$	Evaluate: $\int_0^{\pi} (2\cos x+1)dx$	Evaluate: $\int_{3\pi/4}^{\pi} \sec x \tan x dx$	Evaluate: $\int_4^6 x(2x^2+1)^2 dx$

2	Calculate the average value: $f(x)=4x^2-3x$, on [0,2]	Find $F'(x)$: $\int_1^x \sec^3(2t)dt$	Find $F'(x)$: $\int_3^{2x^3} t\sin^2(t)dt$	The temperature (°F) in a city over a 24 hour time period can be modeled by the function: $y=0.026x^3-1.03x^2+10.2x+34$ Find the average temperature of the city over the 24 hour period.

3	Evaluate: $\int 6x(x^2+7)dx$	Evaluate: $\int \frac{2x^2+1}{\sqrt{2x^3+3x}}dx$	Evaluate: $\int \cos^2 x \sin x dx$	Evaluate: $\int_4^6 x(2x^2+1)^2 dx$

4	Evaluate: $\int \tan(3x)\sec^3(3x)dx$	Evaluate: $\int x^2(x+1)^3 dx$	Evaluate: $\int x\sqrt{3x+5}dx$	Evaluate: $\int_1^5 x(4x+1)^4 dx$

5	Use the Trapezoid Rule to approximate the area below y using n=6. $y=2x^3+7x$, on [0,5]	Use Simpson's Rule to approximate the area below y using n=6. $y=2x^3+7x$, on [0,5]	Use the Trapezoid Error Rule to approximate the error in using the trapezoid rule for n=6. $y=2x^3+7x$, on [0,5]	Use Simpson's Error Rule to approximate the error in using Simpson's rule for n=6. $y=2x^3+7x$, on [0,5]