MATH 253:

Calculus III Project: #1 Multivariable Differentiation

Select your project team: (Recommended: 4 students.)

1. Name: _____ Sec: _____

Email: _____ Phone: _____

2. Name: _____ Sec: _____

Email: _____ Phone: _____

3. Name: _____ Sec: _____

Email: _____ Phone: _____

4. Name: _____ Sec: _____

Email: _____ Phone: _____

Indicate your preference on projects: (1 for first choice down to 7 for last choice.)

_____ Newton's Method in 2 Dimensions (10.3)

_____ The Gradient Method of Finding Extrema (10.4)

_____ The Trash Dumpster (10.5)

_____ Locating an Apartment (10.6)

_____ Seeing a Blimp (10.7)

_____ Minimal Squares and Triangles (Stewart p. 792 \#5 + similarly w. triangles)

_____ Exact Gradient Method (Stewart p. 793 \#11 or p. 866 \#2 + write a Maple program.)

_____ Minimal Ellipse Containing a Circle (Stewart p. 793 \#13))

MATH 253:

Calculus III Project: #2 Multivariable Integration

Select your project team: (Recommended: 4 students.)

1. Name: _____ Sec: _____

Email: _____ Phone: _____

2. Name: _____ Sec: _____

Email: _____ Phone: _____

3. Name: _____ Sec: _____

Email: _____ Phone: _____

4. Name: _____ Sec: _____

Email: _____ Phone: _____

Indicate your preference on projects: (1 for first choice down to 7 for last choice.)

_____ Interpretation of Divergence and Curl (9.9, 9.10)

_____ Gauss' Law and Ampere's Law (9.11, 9.12)

_____ Volume Between a Surface and Its Tangent Plane (10.8)

_____ Hypervolume of a Hypersphere (10.9)

_____ Center of Mass of Planet X (10.10)

_____ Skimpy Donut (10.10)

_____ Steradian Measure (10.12)