OUTCOMES for Linear Algebra

Students will be able to

1. **define** matrices, linear equations, and determinants, **recall** basic vector algebra.
2. **understand** basic concepts such as vector spaces, linear dependence /independence of vectors, basis and linear maps.
3. **analyze** and **calculate** eigen values, eigen vectors, rank nullity of a matrix / linear map.
4. **prove** theorems, **apply** Gram-Schmidt process on inner product spaces, diagonalize special matrices.
5. **apply** concepts of linear algebra to various applications including real life problems.

OUTCOMES for Univariate Calculus

Students will be able to

1. **list** continuity / differentiability conditions for functions of single variable,
2. **state** mean value theorems, **know** sequence and series.
3. **understand** basic concepts of Riemann sums, fundamental theorem of calculus, convergence of sequence and series.
4. **sketch** function graphs, **evaluate** improper integrals, **calculate** integrals using special techniques, **apply** various tests of convergence.
5. **prove** theorems, **evaluate** length / area / volume using single integrals, **find** Fourier series expansions.
6. **apply** concepts of univariate calculus to various applications including real life problems.