

# MAT 511 : Problem Solving, Communication & Reason

The instruction of mathematics rests heavily on the first three process standards of the National Council of Teachers in Mathematics: problem solving, communication and reasoning. This course is organized around these three intertwined themes, each of which is crucial and pertinent to primary, middle and secondary teaching. The premise for this course is that the learning of mathematics by you and by your future students is best achieved by active student participation and involvement, discovery, critical thinking, working collaboratively in groups, written and verbal communication of ideas, the use of graphical representations when appropriate, and the exploration of more open ended problems.