COURSE CONTENT

This course will be an introduction to algebraic geometry. The main topics to be covered will be theory of ideals in polynomial rings, Nullstellensatz, Hilbert Basis Theorem, Gröbner bases with computation in polynomial rings, affine and projective varieties, singular and smooth points on varieties. This material is essentially Chapters 1, (most of) 2, 4, 5, and 8. The main focus throughout will be on theory, ideas and examples. There might be a little focus on computational aspects, but not much. If time, applications of algebraic geometry to solving problems in noncommutative algebra & physics will also be discussed, together with noncommutative algebraic geometry.

Some new ideas will be introduced in the homework, and lectures will appeal to the homework from time to time. Hence, it is imperative that you keep up with most of the homework questions that are assigned. The homework will be handed out in class, but also posted at my website, and revised from time to time.

HELP OUTSIDE CLASS TIME

My office hours are above. These are times when I am available in my office to discuss the material & homework. If the above times are inconvenient for you, then make an appointment with me for another time. You can also try looking for me at other times or e-mailing/phoning me with questions. I can read e-mail from my home.

My web page will list miscellaneous information pertinent to the course. My web page address is above and is http://www.uta.edu/math/vancliff/T but there might also be items of mathematical interest to you at http://www.uta.edu/math/vancliff.