GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF COMPUTING, MATHEMATICS and STATISTICAL Sciences

Formal Systems and Logic in Computing Science
CS2720 3(3-1-3)

Room: Lecture: CS2720 A3   J 229   TT   10:00 – 11:20
          Lab: CS2720 L1   A301   M   14:30 – 17:20
          Seminar   Cs2720 S1   J229   F   9:00 – 9:50

Instructor: Dr. Reddy Ganta, J220, Ph. 539-2850 , rganta@gprc.ab.ca

Calendar Description of the Course:

An introductory course to present the tools of set theory, logic and induction, and their use in the practice of reasoning about algorithms and programs. Basic set theory. The notion of a function. Counting. Propositional and predicate logic and their proof system will be studied. Inductive definitions and proofs by induction will be covered along with program specification and correctness.

Prerequisite: CS 1140 or equivalent
Transfer: UA, UC, UL, AU, CU, KUC, AUC.

This course is designed to introduce computing science students to formal systems and logic. Students will be expected to achieve strong familiarity with ideas and concepts from propositional , predicate logic and Mizar proof system. Other topics to be covered include: theory of sets; functions and relations; induction; program correctness; graph theory; boolean algebra; circuit design and finite state machines.

Text: i) Discrete Mathematics and Its Applications (Fifth Edition) by Kenneth H. Rosen.(ISBN 0072424346)

Assesment: Your final grade will be determined in the following manner:

Assignments /Quizzes	30%
Mid Term	32%
Final Exam	38%

Special Notes:

1)   When necessary, lab time will be utilized for lecturing on specific topics and Mizar proof system.
2)   No Late assignments will be accepted.