

The applicant is required to have completed the following background courses in order to gain regular admission into our graduate program. Provisional admission may be granted to the applicants who demonstrated potential for success in the graduate program with the condition that they complete the prescribed courses with a “B” or better grade either before joining the program or within one year after joining the program.

CSCE 145: INTRODUCTION TO ALGORITHMIC DESIGN I. (4) (Prereq: MATH 115 or enrollment in MATH 174) Problem-solving, algorithmic design and programming in a procedural language.

CSCE 146: INTRODUCTION TO ALGORITHMIC DESIGN II. (4) (Prereq: CSCI 145 and MATH 174) A continuation of CSCI 145. Rigorous development of algorithms and computer programs: elementary data structures.

CSCE 213: COMPUTER ORGANIZATION. (3) (Prereq: CSCI 145 and MATH 174) Boolean and sequential circuits; computer components; instruction sets; assembly language programming; data representations; interrupts and memory hierarchies.

CSCE 311: OPERATING SYSTEMS. (3) (Prereq: CSCI 213 and 240) Core concepts and terminology of operating systems. Process implementation, synchronization, memory management, scheduling, security issues, naming protection, resource allocation issues, network file systems

CSCE 350: DATA STRUCTURES AND ALGORITHMS. (3) (Prereq: CSCI 146) Theory of and advanced techniques for representation of information: lists, trees, graphs; analysis of algorithms; sorting, searching, and hashing techniques.

MATH 141: CALCULUS I. (4) (Prereq: qualification through placement or a grade of C or better in MATH 112 or 115) Limits, continuity; derivatives, chain rule, rates of change, curve sketching, max-min problems; definite integral, antiderivatives, and the Fundamental Theorem.

MATH 142: CALCULUS II. (4) (Prereq: qualification through placement or a grade of C or better in MATH 141) Techniques of integration, exponential, and inverse trigonometric functions; numerical methods, and applications of the integral; sequences, power and Taylor series.

MATH 174: DISCRETE MATHEMATICS FOR COMPUTER SCIENCE. (3) (Prereq: qualification through placement or a grade of C or better in MATH 111 or 115) Induction, complexity, elementary counting, combinations and permutations, recursion and recurrence relations, graphs and trees; discussion of the design and analysis of algorithms-with emphasis on sorting and searching.