Introducing 100% online classes for the Master of Science Education Program - Fall 2012.

BIO6173 Cells and Organisms
Explores the general structure and functions of cells as they relate to tissue, organs, and ultimately organisms. Topics covered include cell structure, cell growth and reproduction (mitosis), and cellular metabolism. Recent advances in cellular biotechnology and the implications of this work on human health and the field of biology will be covered, along with the physiology of the major organ systems and their contribution to the form and function of the human organism. Students apply contemporary teaching methods and will utilize written and oral modes of communication to relate knowledge about biological principles and concepts. Hands-on learning encompasses lab activities, written and oral presentations, experimental design projects, interactive discussions, journaling, a midterm, and a non-cumulative final exam. Course based on the five Es of the constructivist approach to teaching: Engagement, Exploration, Explanation, Elaboration, and Evaluation.

CHM6253 Materials and Their Uses
Details why diverse materials have the properties they do based on the atomic model. The physical and chemical properties of different materials are examined by means of physical measurements and observations. Topics include: properties of metals and naturally occurring and artificial polymers; polymer compositions, their many uses, and how they are recycled; medicinal compounds and their physiological effects; nutrition and the three major components of food other than water, i.e., carbohydrates, proteins, and fats.

SCE6103 Introductory Seminar
Covers topics from the core science classes of the MSE program and introduces the methods of constructivist teaching, classroom management, student assessment, and research used throughout the program.

For further information, call 248.204.3516 or email msedir@ltu.edu.