

# Clinical Science

## Course Descriptions

### CLS 121 Introduction to Hospital Science (1 crs)

An introductory course directed towards healthcare majors that provides a foundation of medical terminology, used in classrooms and clinical experiences; Explores duties and responsibilities of healthcare related settings in relation to patient care management.

### CLS 130 (PHY 130) Physics for Allied Health (3 crs)

General physical principles with special emphasis on gas laws, flow principles, fluidics, the use of formulae and how they apply to nuclear medicine technology and respiratory therapy.

### CLS 215 Concepts of Epidemiology and Microbiology (2 crs)

The recognition of normal flora occurring on/within the human body, invasion processes, control mechanisms for the prevention of the spread of microorganisms and the effects of the infection by certain specific microbes will be covered. Principles of immunology are covered as well.

### CLS 234 (BIO 234) Pathophysiology (3 crs)

A survey of disease processes which affect tissues, organs, or the body as a whole. A system-wide approach with interactions. Prerequisites: BIO 128 and BIO 129 and BIO 242 or their equivalents.

### CLS 311 Introduction to Pharmacology (1 cr)

Principles of drug actions and reactions.

### CLS 312 Emergency Life Support Techniques (3 crs)

Emergency procedures for first responders. Includes cardiopulmonary resuscitation.

### CLS 320 Management Techniques for the Health Sciences (2 crs)

An introduction to the principles, practices and problems of management encountered in the allied health professions.

### CLS 330 Principles of Instruction (2 crs)

An introduction of educational methods, techniques and their application to a clinical setting, academic classroom or professional arena. This class offers a systematic approach to instruction, presentation, teaching and methods of practice as it relates to educational instruction or professional seminars. This course also includes a service learning project.

# Computer Science

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The computer science major is designed to provide a wide acquaintance with various aspects of computing, ranging from the theoretical to the practical, with an emphasis on the solution of actual problems. Currently the Java programming language is emphasized in the introductory sequence of courses. There is a strong mathematics component since we believe that the successful computer scientist, whether seeking a job or continuing his/her education, is best served by understanding the necessary mathematical thinking and processes that underlie all of computer science.

Upon completion of the Computer Science program, students will be able to demonstrate the ability to:

1. Frame and resolve ill-defined problems.
2. Write small-to-medium-scale programs using software engineering techniques and top-down structured programming.
3. Develop software in a team environment.
4. Integrate knowledge from other disciplines into solutions to real-world problems using various computer languages.
5. Recognize limitations and discover solutions to leading-edge technological issues.

## Requirements for Computer Science Major Bachelor of Science Degree

In addition to completing the core curriculum requirements (17 courses listed on p. 14-15 of this catalog, at least 1 of which is also included below) all majors in computer science must complete at least the following courses:

|               |                                                             |          |
|---------------|-------------------------------------------------------------|----------|
| CSC 110       | Computer Science I                                          | (3 crs)  |
| CSC 112       | Computer Science II                                         | (3 crs)  |
| CSC 222       | Computer Science III                                        | (3 crs)  |
| CSC 220       | Social, Professional and Ethical Issues in Computer Science | (3 crs)  |
| CSC 310       | Analysis of Algorithms                                      | (3 crs)  |
| CSC 320       | Programming Languages                                       | (3 crs)  |
| CSC 325       | Operating Systems                                           | (3 crs)  |
| CSC 330       | Database Management                                         | (3 crs)  |
| CSC 350       | Computer Architecture                                       | (3 crs)  |
| CSC 382       | Junior Seminar                                              | (1 cr)   |
| CSC 435       | Software Engineering                                        | (3 crs)  |
| CSC 436       | Software Project                                            | (1 cr)   |
| MAT 111       | Calculus I                                                  | (4 crs)  |
| MAT 204       | Scientific Statistics                                       | (3 crs)  |
| MAT 235       | Discrete Mathematics                                        | (4 crs)  |
| CSC Electives | (At least 5 upper level courses)                            | (15 crs) |
|               |                                                             | <hr/>    |
|               |                                                             | (58 crs) |