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Contact Information

Administration ................................................. (352) 381-3750
Fax ............................................................... (386) 418-0269
Advisement ..................................................... (352) 381-3754
Biomedical Engineering Program .......................... (352) 395-5965
Biotechnology Program ....................................... (352) 381-3755
Bachelor Degrees ............................................. (352) 381-3755

Location:
14180 NW 119th terrace Alachua, Florida 32615

Office Hours:
Mon - Fri, 8 a.m. - 4:30 p.m.

Building Hours:
Mon - Fri, 8 a.m. - 7:30 p.m.

sfcollege.edu/centers/perry/
From the Director
The Santa Fe College Perry Center faculty, staff and I would like to welcome you to the Clinical Laboratory Sciences program. We at the center are dedicated to providing an educational setting that is focused on meeting the needs of students pursuing careers in Biotechnology, Engineering, and Clinical Lab Sciences. In order to meet this goal, we offer classes that have a low instructor to student ratio, limited tutoring, and other support services. As a student at the Perry Center, you will have the opportunity to interact with highly trained professionals in local industries relevant to your course of study.

About the Center: The Charles R. and Nancy V. Perry Center for Emerging Technologies is located in Alachua, Fla. in the heart of Florida’s high tech corridor, about 13 miles from SF’s Northwest Campus. Its mission is to provide educational opportunities and programs that directly relate to and support the greater mission of Santa Fe College:

*In keeping with our values and goals, Santa Fe College, a comprehensive public institution of higher education serving North Central Florida and beyond, adds value to the lives of our students and enriches our community through excellence in teaching and learning, innovative educational programs, student services, and community leadership and service.*

Opened in 2009, the Perry Center focuses specifically on emerging technology degrees. The 30,000 square foot building has functioning laboratories and state-of-the-art technology classrooms. The Perry Center is uniquely poised across from Progress Corporate Park, a growing industrial park with approximately 1000 employees. Progress Corporate Park is anchored by the University of Florida’s Sid Martin Biotechnology Incubator, RTI Biologix, Intermed, and graduates of the UF Sid Martin Incubator (e.g. Nanotherapeutics, Banyan Biomarkers, and Axogen).

I hope that you will find your experience with us rewarding and challenging. You are among the brightest in your field and I know you will make a significant contribution to this rapidly growing industry.

Sincerely,

Eileen K. Monck, M.S.
Interim Academic Director
### Emerging Technologies Faculty and Staff

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Programs</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eileen Monck, M.S.</td>
<td>Int. Academic Director</td>
<td><a href="mailto:eileen.monck@sfcollege.edu">eileen.monck@sfcollege.edu</a> 352.395.5321</td>
</tr>
<tr>
<td>Deborah Singletary</td>
<td>Administrative Assistant</td>
<td>deborah.singletary 352.395.3764</td>
</tr>
<tr>
<td>Richard Jenkins, M.S.</td>
<td>Lab/Building Manager</td>
<td><a href="mailto:richard.jenkins@sfcollege.edu">richard.jenkins@sfcollege.edu</a> 352.381.3763</td>
</tr>
<tr>
<td>Myra Urso, M.S., MT-ASCP</td>
<td>Clinical Director, CLS Program</td>
<td><a href="mailto:myra.urso@sfcollege.edu">myra.urso@sfcollege.edu</a></td>
</tr>
<tr>
<td>Mary El-Semarani, M.S.</td>
<td>Assist. Professor, Coordinator</td>
<td><a href="mailto:mary.elsemarani@sfcollege.edu">mary.elsemarani@sfcollege.edu</a> 352.381.3755</td>
</tr>
<tr>
<td>Ron Tinckham, M.S.-Ed</td>
<td>Assoc. Professor, Coordinator</td>
<td><a href="mailto:ron.tinckham@sfcollege.edu">ron.tinckham@sfcollege.edu</a> 352.395.5965</td>
</tr>
<tr>
<td>Aaron Hirko, PhD</td>
<td>Associate Professor; CLS and Biotech Programs</td>
<td><a href="mailto:aaron.hirko@sfcollege.edu">aaron.hirko@sfcollege.edu</a> 352.381.3766</td>
</tr>
<tr>
<td>Birgitta Kimura, PhD</td>
<td>Associate Professor; CLS and Biotechnology Programs</td>
<td><a href="mailto:birgitta.kimura@sfcollege.edu">birgitta.kimura@sfcollege.edu</a> 352.381.3753</td>
</tr>
<tr>
<td>Alejandra (Ale) Maruniak, PhD</td>
<td>Assistant Professor; CLS and Biotechnology Programs</td>
<td><a href="mailto:alejandra.maruniak@sfcollege.edu">alejandra.maruniak@sfcollege.edu</a> 352.381.3766</td>
</tr>
</tbody>
</table>
What is Clinical Laboratory Sciences?

Code of Ethics for Clinical Lab Science Technologists:

Preamble

The Code of Ethics of the American Society for Clinical Laboratory Science sets forth the principles and standards by which clinical laboratory professionals practice their profession.

I. Duty to the Patient

Clinical laboratory professionals are accountable for the quality and integrity of the laboratory services they provide. This obligation includes maintaining individual competence in judgement and performance and striving to safeguard the patient from incompetent or illegal practice by others.

Clinical laboratory professionals maintain high standards of practice. They exercise sound judgment in establishing, performing and evaluating laboratory testing.

Clinical laboratory professionals maintain strict confidentiality of patient information and test results. They safeguard the dignity and privacy of patients and provide accurate information to other health care professionals about the services they provide.

II. Duty to Colleagues and the Profession

Clinical laboratory professionals uphold and maintain the dignity and respect of our profession and strive to maintain a reputation of honesty, integrity and reliability. They contribute to the advancement of the profession by improving the body of knowledge, adopting scientific advances that benefit the patient, maintaining high standards of practice and education, and seeking fair socioeconomic working conditions for members of the profession.

Clinical laboratory professionals actively strive to establish cooperative and respectful working relationships with other health care professionals with the primary objective of ensuring a high standard of care for the patients they serve.

III. Duty to Society

As practitioners of an autonomous profession, clinical laboratory professionals have the responsibility to contribute from their sphere of professional competence to the general well-being of the community.

Clinical laboratory professionals comply with relevant laws and regulations pertaining to the practice of clinical laboratory science and actively seek, within the dictates of their consciences, to change those which do not meet the high standards of care and practice to which the profession is committed.

Job Responsibilities

Clinical Laboratory Scientists (or Medical Technologists) may work in several different settings. For example they work in medical facilities, industrial settings, and reference and research laboratories. These individuals may practice as
generalists or specialists in the areas of serology, microbiology, clinical chemistry, hematology, and immunohematology. There are channels for continued academic specialization and advanced degrees that may bring further employment opportunities and benefits.

Career Opportunities and Salary

The Clinical Laboratory Sciences program prepares you to work as a medical technologist in a clinical setting such as a hospital, medical center or reference laboratory. When you graduate, you are eligible for certification as a medical technologist by the American Association of Bioanalysts (AAB), American Medical Technologists (AMT), and the American Society for Clinical Pathology (ASCP) Board of Certification.

AVERAGE SALARY: $54,000

Program Description

Overview

The Bachelor of Applied Science in Clinical Laboratory Sciences adheres to the State of Florida common course prerequisites and curriculum frameworks. All BAS degree seeking students are required to complete the same basic requirements as traditional baccalaureate students, including 36 hours of General Education, and demonstration of foreign language competence. The entrance requirements for this program require students choose specific courses in biological sciences (16 credit hours), chemistry (16 credit hours), and mathematics within their lower division coursework to finish the degree in an appropriate timeframe. Therefore, students are strongly advised to consult with an advisor as early as possible to plan their progress through this degree program.

Baccalaureate students will enroll in courses full-time and will complete a clinical internship in the five specialty license areas in their final year at affiliated laboratories. Part time students will be allowed to take courses if space is available. The clinical affiliate internships will only be offered on a full time basis after completion of all didactic coursework and serve as an evaluation point at which the students must demonstrate mastery of the program’s learning outcomes. To ensure equity across sites, the SF Clinical Director works closely with all affiliate institutions to ensure that students gain proficiency in the skills needed to enter the Clinical Laboratory workforce.

If starting as a freshman, the suggested course sequence for this program schedules a full load of classes each semester including summers over four years for a total of 125 semester credit hours. If starting as a junior with the required prerequisites, the suggested sequence of courses takes two years including summers to complete. Students from other colleges and universities requesting to enter the upper division portion of the program must document comparable prerequisite course work before admission to the program.

Upon completion of all program requirements, students will graduate with a
Southern Association of Colleges and Schools (SACS) accredited Bachelor of Applied Sciences degree in Clinical Laboratory Sciences. Graduates are then eligible for certification as a medical technologist by the American Association of Bioanalysts (AAB) at which point they may apply for licensure in the state of Florida. This program is currently in serious applicant status with the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) accreditation. Subsequently, graduates are eligible to take the American Society for Clinical Pathology (ASCP) exam.

Application Process

Students must complete a Santa Fe College application for admission and a Clinical Laboratory Science Program application for admission. Students must arrange for transcripts to be sent to the institution from all colleges and universities attended prior to the start of the term in which CLS program admission is sought. Included in the application is a 500 word essay addressing the student’s professional and personal goals.

Santa Fe College is part of the Florida College System and is an open access institution.

Acceptance Criteria

In order to qualify for admission to the Bachelor of Applied Sciences in Clinical Laboratory Science, students must:

• Have a 2.5 overall GPA in previous coursework.
• Have earned a minimum of an Associate of Science or Associate of Arts degree from a regionally accredited educational institution or 60 credit hours*.
• Have successfully completed the following common program prerequisite courses (or appropriate substitutions) with a grade of C or higher:
  • BSC 2010/L Core Biology with Lab (4 credits)
  • MCB 2010/L Microbiology with Lab (4 credits)
  • BSC2085/L & BSC2086/L Anatomy & Physiology 1&2 with Labs (8 credits)
  • CHM 2045, 2046, 2210, 2211/Labs General Chemistry & Organic Chemistry (16 credits)
  • STA 2023 Statistics (3 credits)

*Applicants that have not completed an Associate’s degree may need to complete general education requirements before graduation.

Sample Degree Audit

**Overview of Credits Required for BAS in Clinical Laboratory Science**

<table>
<thead>
<tr>
<th>Component</th>
<th>Required Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education Program</td>
<td>36 credit hours (AS grads may need up to 18 hrs)</td>
</tr>
<tr>
<td>Biotechnology Core (lower division)</td>
<td>9 credit hours (AA may need these courses)</td>
</tr>
<tr>
<td>Clinical Lab Science Core (upper division)</td>
<td>55 credit hours</td>
</tr>
<tr>
<td>Additional Prerequisite Courses</td>
<td>25 credit hours</td>
</tr>
<tr>
<td><strong>Total required credit hours for program:</strong></td>
<td><strong>125 credit hours total</strong></td>
</tr>
</tbody>
</table>
**Biotechnology Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC2423C Protein Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>BSC2426C Biotech Methods 1</td>
<td>3</td>
</tr>
<tr>
<td>BSC2427C Biotech Methods 2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Clinical Laboratory Science Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSC 3555C Pathophysiology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 3134/L Molecular Biology</td>
<td>3/1</td>
</tr>
<tr>
<td>MLS 4308/L Hematology</td>
<td>3/1</td>
</tr>
<tr>
<td>MLS 4460C Diagnostic Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>MLS 4625/L Clinical Chemistry</td>
<td>3/1</td>
</tr>
<tr>
<td>MLS 4550/L Immunohematology</td>
<td>2/1</td>
</tr>
<tr>
<td>PCB4233C Immunology</td>
<td>3</td>
</tr>
<tr>
<td>MLS 4191/L Molecular Diagnostics</td>
<td>2/1</td>
</tr>
<tr>
<td>MLS 3705 Clinical Laboratory Management</td>
<td>2</td>
</tr>
<tr>
<td>MLS 4150 Clinical Correlations</td>
<td>2</td>
</tr>
<tr>
<td>BCH3023C Biochemistry</td>
<td>4</td>
</tr>
</tbody>
</table>

**Internships (M-F 30-40 hours/week at affiliated clinical laboratories and Perry Center for Emerging Technologies, Alachua, FL)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MLS 4820L Clinical Chemistry Internship</td>
<td>4</td>
</tr>
<tr>
<td>MLS 4821L Microbiology Internship</td>
<td>4</td>
</tr>
<tr>
<td>MLS 4822L Hematology Internship</td>
<td>4</td>
</tr>
<tr>
<td>MLS 4823L Immunohematology Internship</td>
<td>3</td>
</tr>
<tr>
<td>MLS 4824L Serology Internship</td>
<td>3</td>
</tr>
</tbody>
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*12 hours taken during spring, 6 hours taken during summer*

**Total Clinical Laboratory Science Required Courses** 55

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**Suggested Course Sequence (entering as a junior)**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry (4 cr)</td>
<td>Hematology (4 cr)</td>
<td>Protein Biotech (3 cr)</td>
</tr>
<tr>
<td>Pathophysiology (3 cr)</td>
<td>Clinical Chemistry (4 cr)</td>
<td>Biotech Methods 2 (3 cr)</td>
</tr>
<tr>
<td>Immunology (3 cr)</td>
<td>Molecular Biology (4 cr)</td>
<td>Pathogenic Microbiology (5 cr)</td>
</tr>
<tr>
<td>Biotech Methods 1 (3 cr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(13 credits)</td>
<td>(12 credits)</td>
<td>(11 credits)</td>
</tr>
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**Year 2**

| Clinical Lab Mgt (2 cr)                   | Clin Chem Internship (4 cr)           | Immunoheme Internship (3 cr)       |
| Clinical Correlations (2 cr)              | Serology Internship (3 cr)            | Microbiology Internship (4 cr)     |
| Molecular Diagnostics (3 cr)              | Hematology Internship (4 cr)          |                                    |
| Immunohematology (3 cr)                   |                                       |                                    |
| (10 credits)                              | (12 credits)                          | (6 credits)                        |

**Note:** The above course sequence has been designed to provide basic science
knowledge in the first semester and then build from that in subsequent semesters in the clinical science courses.

Course Descriptions

Program Course Descriptions

(including prerequisites and mode of delivery*; H-hybrid, N-normal, Q-taped, X-web.)

*Most courses are delivered by more than one method simultaneously. For example, normal lecture courses are uploaded to a secure learning management system in the form of PowerPoint and video files of the formal classroom lecture offered each week. Therefore the mode of delivery for that type of course will be designated below as “N augmented by H & Q”. Strictly hybrid courses have lecture material on line with practical lab experience onsite.

Biotech Core Course Descriptions

BSC 2423C PROTEIN BIOTECHNOLOGY 3 credits (H)
Introduction to protein biotechnology and methods of protein purification and analyses. Includes instruction in basic techniques of plant and animal cell culture. Prerequisite: MCB2000/L or MCB2010/L and BSC2010/L, with a minimum grade of C.

BSC 2426C BIOTECH METHODS I 3 credits (H)
Modern concepts of molecular biology, with a laboratory focus on basic methods for preparing and analyzing nucleic acids. Prerequisites: BSC2010/L and CHM 1025/L or higher.

BSC 2427C BIOTECH METHODS II 3 credits (H)
Continued study of molecular biology, with a laboratory focus on advanced methods for manipulating and analyzing nucleic acids. Prerequisite: BSC2426C with a minimum grade of C.

CLS Core Course Descriptions

BCH3023C BIOCHEMISTRY 4 credit hours (N augmented by H & Q)
This course surveys the fundamental components of biochemistry. In this course, students will learn concepts such as the structure and function of amino acids, proteins, carbohydrates, lipids, and nucleic acids, together with discussions of oxidative metabolism and regulation. The lab component is designed to introduce the student to common techniques in biochemistry and biotechnology. Pre-requisite: CHM 2210/L

HSC 3555C PATHOPHYSIOLOGY 3 credit hours (N augmented by H & Q)
This course provides an overview of the etiology, pathophysiology, prevention and treatment of the major human diseases. Both infectious and non-infectious diseases of the human body systems will be presented. Pre-requisite: BSC2085 and BSC2085L, BSC2086 and BSC2086L

MLS 3308/L HEMATOLOGY w/lab 4 credit hours (N augmented by H & Q)
Theories of clinical hematology will be presented, including phlebotomy, hematopoiesis, hemoglobinometry, and cell morphology. A detailed account of the hematologic diseases of red blood cells, white blood cells and platelets will be covered, as well as principles of hemostasis and examination of other serous body fluids. Common hematology tests will be performed during laboratory sessions, including blood cell and platelet counts, indices of red blood cells, WBC differentials, phlebotomy, and coagulation tests. Prerequisites: MCB 2010 (or MCB 3020), PCB 4233

MLS 3705 CLINICAL LABORATORY MANAGEMENT 2 credit hours (X)
Course emphasis is on quality control and quality assurance programs, laboratory records, equipment and reagent purchasing, laboratory computerization, workload recording programs, scheduling, personnel handling, and methods of laboratory self-evaluation. Prerequisites: STA 2023 Co-requisite: MLS 4150

MLS 4150 CLINICAL CORRELATIONS 2 credit hours (N augmented by H & Q)
This seminar type class is designed to help students correlate laboratory analytes with the organ(s) of origin and with the predominant pathophysiology associated with abnormal results. The students will describe the most common test methodologies used to measure individual analytes and interrelate lab results from different disciplines. Problem based learning and papers will be used to enhance critical thinking skills. Prerequisites: MLS 4308/L, MLS 4625/L, CHM 2211/L Co-Requisite: MLS 4460C, MLS 4550/L, MLS 4705

MLS 4191/L MOLECULAR DIAGNOSTICS w/lab 3 credit hours (N augmented by H&Q)
This course presents the molecular mechanisms of human diseases and focuses on diagnosis through cytogenetic and nucleic acid molecular technology. Laboratories emphasize basic and clinical techniques of DNA-based diagnostic methods. Prerequisites: PCB 3134/L, BSC 2427C, CHM 2211/L

MLS 4460C DIAGNOSTIC MICROBIOLOGY 5 credit hours (N augmented by H & Q)
This course focuses on the collection, handling and processing of specimens from human tissues and body fluids for the identification of pathogenic bacteria. Conventional and rapid microbiological methods for identification of organisms as well as nontraditional methods for identification and detection of organisms or their products will be addressed including principles of automated methods. The laboratory sessions will include techniques and methods for the identification of organisms and antimicrobial susceptibility testing. Prerequisites: MCB 2010 (or MCB 3020), PCB 3134/L, CHM 2211/L

MLS 4550/L IMMUNOHEMATOLOGY w/lab 3 credit hours (N augmented by H&Q)
Topics covered include the fundamentals of blood banking including blood grouping, compatibility testing, antibody identification, blood group systems, hemolytic disease of the newborn, transfusion therapy and blood components. Laboratory sessions include the performance of routine operations of clinical blood bank laboratories, daily quality control procedures, routine testing procedures for ABO and Rh typing, identification of antibodies to antigens other
than ABO and Rh, and direct and indirect antiglobulin test. Prerequisites: PCB 4233/L, MLS 3308/L CHM 2211/L

MLS 4625/L CLINICAL CHEMISTRY w/lab 4 credit hours (N augmented by H & Q)
This course addresses renal, liver and gastrointestinal physiology and includes an in-depth study of chemical methods used in the analysis of carbohydrates, proteins, lipids enzymes, hormones and electrolytes. Patient lab profiles including evaluating renal and liver function will be discussed and related to pathophysiology. Instrumentation including automation will be addressed. Laboratory will cover blood glucose, electrolyte, lipid, enzyme, and protein methods and will include advanced concepts in troubleshooting. Prerequisites: HSC 3555C, BCH 3023C Co-requisite: CHM2211/L

MLS 4820L CLINICAL CHEMISTRY INTERNSHIP 4 credit hours (H)
Practical experience performed in a clinical chemistry laboratory with emphasis on chemistry instrumentation, electrophoresis, therapeutic drug monitoring, and toxicology. Emphasis for course includes performance of diagnostic procedures and application of knowledge from previous coursework with emphasis on clinical correlations to human diseases. Prerequisites: MLS4308/L, MLS4460C, MLS4550/L, MLS 4625/L

MLS 4821L MICROBIOLOGY INTERNSHIP 4 credit hours (H)
Practical experience performed in a clinical microbiology laboratory with emphasis on sample setup, instrumentation, aerobic and anaerobic cultures from various sites and their interpretation, and includes the subject areas of mycology, mycobacteriology, and parasitology. Prerequisites: MLS4308/L, MLS4460C, MLS4550/L, MLS 4625/L

MLS 4822L HEMATOLOGY INTERNSHIP 4 credit hours (H)
Practical experience performed in a clinical hematology/ hemostasis laboratory. Emphasis for course includes performance of diagnostic procedures and application of knowledge from previous coursework with emphasis on clinical correlations to hematological diseases. Prerequisites: MLS4308/L, MLS4460C, MLS4550/L, MLS 4625/L

MLS 4823L IMMUNOHEMATOLOGY INTERNSHIP 3 credit hours (H)
Practical training in modern blood banking and transfusion services at the hospital and area blood banks. Training includes practice and performance, under supervision, of all the procedures involving pre-transfusion tests on patient’s blood, selection of donor blood, compatibility determination, problem solving, and release of suitable blood/blood components for transfusion therapy. Prerequisites: MLS4308/L, MLS4460C, MLS4550/L, MLS 4625/L

MLS 4824L SEROLOGY INTERNSHIP 3 credit hours (H)
Practical experience performed in a clinical serology laboratory. Emphasis is placed on special methods in clinical chemistry, microbiology and other areas which includes non-routine (special) immunochemical procedures, methods in
immunodiagnostics, and virology. Prerequisites: MLS4308/L, MLS4460C, MLS4550/L, MLS 4625/L

PCB 3134/L MOLECULAR BIOLOGY w/lab 4 credits hours (N augmented by H & Q)
This class concentrates on cellular chemistry and physiology, morphology and function of cellular organelles, cellular motility, growth, division, and endocrine and exocrine communication. Emphasis is placed on interrelation of structure and function and regulation of metabolism. Specialized activities of animal cells will be highlighted, including concepts relating genetics to regulatory mechanisms and abnormal cell physiology will be introduced. Laboratory sessions will include applications of molecular biology with emphasis on advanced techniques in biotechnology, research methods and data interpretation. Prerequisites: BSC 2010/L, BSC2426C CHM 2210/L

PCB 4233C IMMUNOLOGY 3 credit hours (N augmented by H & Q)
Basic principles of immunology, including humoral and cell-mediated immune mechanisms, the complement system and the inflammatory response are presented in this course. Disorders of the immune system and laboratory methods will also be topics for discussion. Lab sessions will address experiments with an immunological basis, such as the methodology and performance of home pregnancy and home drug tests, biotechnology methods related to immunology, immunostaining, ELISA tests, antibody production and other related concepts. Prerequisites: MCB 2010 or MCB 3020, BSC 2085/L, BSC 2086/L

Program Entrance Prerequisite Course Descriptions

BSC 2010/L CORE BIOLOGY 1 w/lab 4 Credit Hours (N)
This is the first course of a two semester core biology sequence designed to fulfill the needs of the student interested in a career focusing on the life sciences. It includes a study of the origins of life; cell chemistry, structure and function; energy and metabolism; genetics; and taxonomy. A basic knowledge of atomic structure and bonding is helpful and successful completion of the first term of the chemistry sequence is suggested. The course earns General Education credit under the Biological Sciences category for which successful students will demonstrate the skills necessary to understand and apply scientific concepts and reasoning, including the analysis and interpretation of various types of data. Co-requisite: BSC2010L. The lab experience is an integral part of the course and will consist of weekly experiences paralleling the topics covered in the lecture. Co-requisite: BSC2010

BSC2085/L ANATOMY AND PHYSIOLOGY 1 w/lab 4 Credit Hours (N)
Intended for nursing and allied health students requiring a two-semester anatomy and physiology sequence. This integrated course presents cell morphology and function, biochemistry, histology of tissues and embryology. The organ systems covered are integumentary, skeletal, muscular, and nervous systems. This sequence meets the needs of numerous students including all pre--nursing students (bridge/generic ASN and BSN majors) and students who intend to articulate to an upper division health science program such as Health and Human Performance and Pharmacy majors. Co-requisite: BSC2085L
Laboratory topics include fetal pig dissection, human anatomy with cadaver, microscopic anatomy, measuring physiological parameters, and various computer software programs. Safety equipment is required. Co-requisite: BSC2085 Prerequisite Recommended successful completion of HSC2531, BSC2005L but not prerequisite.

BSC2086/L ANATOMY AND PHYSIOLOGY 2 w/lab 4 Credit Hours (N)

This is the second course in a two-semester sequence intended for nursing and allied health students. It uses an integrated approach to discuss topics of the main organ systems of the human body. These include: the endocrine, reproductive, cardiovascular, respiratory, urinary and digestive systems along with the topics of metabolism, energy use and fluid and electrolyte balance. This sequence meets the needs of numerous students including all pre-nursing students (bridge/generic ASN and BSN majors) and students who intend to articulate to an upper division health science program such as Health and Human Performance and Pharmacy majors. The course earns General Education credit under the Biological Sciences category for which successful students will demonstrate the skills necessary to understand and apply scientific concepts and reasoning, including the analysis and interpretation of various types of data. Laboratory experiences include: blood and cardiovascular testing, spirometry, urinalysis, human anatomy with cadaver and fetal pig dissection and various computer software programs. Safety equipment is required. Prerequisite: BSC2085, BSC2085/L with minimum grade of C. Co-requisite: BSC2086

MCB 2010/L INTRODUCTION TO MICROBIOLOGY w/lab 4 Credit Hours (N)

A study of pathogenic bacteria; growth, metabolism, genetics, control principles of disease and epidemiology. A laboratory experience in which students learn the various techniques necessary for the isolation and characterization of bacteria. Students are expected to work independently with attention to detail. Safety equipment is required. Co-requisites: MCB2010 Prerequisite: Must have completed a college chemistry course and its lab with C or better: BSC2005/L, or BSC2010/L, or CHM1025/L or CHM1030/L or CHM1040/L or CHM2045/L.

CHM 2045/L COLLEGE CHEMISTRY 1 w/lab 4 Credit Hours (N)

This is the first course of a two-term survey of chemistry intended for science, engineering and pre-professional majors. It includes the study of atomic structure, bonding, molecular geometry, stoichiometry, nomenclature, states of matter, thermodynamics, periodic trends in physical and chemical transformations, solution chemistry, and chemical kinetics. The course earns General Education credit under the Physical Sciences category for which successful students will demonstrate the skills necessary to understand and apply scientific concepts and reasoning, including analysis and interpretation of various types of data. The successful student will have prior chemistry experience from high school or college Co-requisite: The same section of CHM2045 and CHM2045L must be taken together. Prerequisites: A minimum score on the placement exam or successful completion of CHM1025 and a grade of C or better in College Algebra (MAC1105), or its equivalent.
CHM2046/L COLLEGE CHEMISTRY 2 w/lab 4 Credit Hours (N)
This is the second course of a two-semester survey of chemistry intended for science, engineering and pre-professional majors. It includes the study of kinetics, chemical equilibrium, acid/base chemistry, electrochemistry, properties of selected elements and their compounds, coordination compounds, qualitative analysis, nuclear chemistry, and introductions to organic chemistry and spectroscopy.

CHM2210/L ORGANIC CHEMISTRY 1 w/lab 4 Credit Hours (N)
This course is intended for science and pre-professional majors. It is the first part of a two-term organic chemistry sequence, CHM2210 and CHM2211, and provides an introduction to the structure, properties, reactions, synthesis, and occurrence of organic molecules with emphasis on modern synthetic and spectrophotometric methods. The laboratory is an integral part of the course and consists of selected experiments that correlate with the lecture topics. Co-requisite: CHM2210L Satisfactory completion of the general chemistry sequence (CHM2045/L, CHM2046/L) or the consent of the instructor.

CHM2211/L Organic Chemistry 2 w/lab 4 Credit Hours (N)
This is the second part of a two-term organic chemistry sequence, CHM2210 and CHM2211. This course is a continuation of the study of the structure, properties, reactions, synthesis and occurrence of organic compounds. The laboratory experience is an integral part of the course and consists of selected experiments to correlate with lecture topics. Prerequisites: Satisfactory completion of CHM2210 and CHM2210L. Co-requisite: CHM2211L.

STA2023 Introduction to Statistics 3 Credit Hours (N)
This is the first course in a two-course statistics sequence. The student is introduced to the fundamental concepts involved in using sample data to make inferences about populations. Included are the study of measures of central tendency and dispersion; finite probability; probability distributions; statistical inferences; linear regression; and correlation. The primary General Education Learning Outcome for this course is Quantitative Reasoning, which is to understand and apply mathematical concepts and reasoning and analyze and interpret various types of data. Prerequisite: MAT1033 or its equivalent.
Textbooks (subject to change – see instructor for details)

### Representative textbooks for upper division courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Author</th>
<th>Edition</th>
<th>ISBN</th>
<th>Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry</td>
<td>Principals of Biochemistry with a Human Perspective</td>
<td>Garrett &amp; Grisham</td>
<td>1st</td>
<td>978-0-03097369-7</td>
<td>Brooks/Cole</td>
</tr>
<tr>
<td>Clinical Chemistry</td>
<td>Clinical Chemistry</td>
<td>Kaplinit Pesce</td>
<td>5th</td>
<td>978-0-32303658-0</td>
<td>Mosby Elsevier</td>
</tr>
<tr>
<td>Pathophysiology</td>
<td>Understanding Pathophysiology</td>
<td>Huether &amp; McCance</td>
<td>5th</td>
<td>978-0-32307891-7</td>
<td>Mosby Elsevier</td>
</tr>
<tr>
<td>Clinical Lab Management</td>
<td>Lab Management Principles &amp; Process</td>
<td>Harmening</td>
<td>2nd</td>
<td>978-0-80361599-1</td>
<td>DH Publishing</td>
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<tr>
<td>Molecular Diagnostics</td>
<td>Molecular Diagnostics Fundamental, Methods, &amp; Clinical Applications</td>
<td>Buckingham</td>
<td>2nd</td>
<td>978-0-80362677-5</td>
<td>FA Davis</td>
</tr>
<tr>
<td>Immunohematology</td>
<td>Modern Blood Banking &amp; Transfusion Practices</td>
<td>Harmening</td>
<td>6th</td>
<td>978-0-80362682-9</td>
<td>FA Davis</td>
</tr>
<tr>
<td>Pathogenic Microbiology</td>
<td>Textbook of Diagnostic Microbiology</td>
<td>Connoly Mahon, Donald Lehman, George Manuselis</td>
<td>4th</td>
<td>978-1-5106165-6</td>
<td>Saunders Elsevier</td>
</tr>
<tr>
<td>Pathogenic Microbiology</td>
<td>Medical Mycology A Self-Instructional Text</td>
<td>Martha E. Kern, Kathleen S. Blevins</td>
<td>2nd</td>
<td>978-0-80360036-2</td>
<td>F.A. Davis</td>
</tr>
<tr>
<td>Pathogenic Microbiology</td>
<td>Medical Parasitology A Self-Instructional Text</td>
<td>Ruth Leventhal, Russell F. Cheadle</td>
<td>6th</td>
<td>978-0-80362543-3</td>
<td>F.A. Davis</td>
</tr>
<tr>
<td>Hematology</td>
<td>Clinical Hematology &amp; Fundamentals of Homeostasis</td>
<td>Harmening</td>
<td>5th</td>
<td>978-0-80361732-2</td>
<td>FA Davis</td>
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<tr>
<td>Molecular Biology</td>
<td>Cell and Molecular Biology</td>
<td>Karp</td>
<td>6th</td>
<td>978-0-47048337-4</td>
<td>Wiley</td>
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<tr>
<td>Immunology</td>
<td>Immunology &amp; Serology in Lab Medicine</td>
<td>Turgeon</td>
<td>4th</td>
<td>978-0-32304382-3</td>
<td>Mosby</td>
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<tr>
<td>Immunology</td>
<td>Kuby immunology</td>
<td>Kindt, Goldsby, Osborne, Kuby</td>
<td>2011</td>
<td>071-6767643</td>
<td>W. H. Freeman</td>
</tr>
</tbody>
</table>

**Program Learning Outcomes**

- Demonstrate competency in all aspects of analytical testing in each of the specialty areas of the clinical lab including hematology, chemistry, microbiology, immunohematology, urinalysis, phlebotomy, and molecular diagnostics.
- Demonstrate appropriate decision making and problem solving techniques when analyzing data, interpreting results, and troubleshooting abnormalities.
• Recognize and practice safety and security procedures in the laboratory and advocate for safety in the working environment.

• Demonstrate knowledge of legal and ethical responsibilities in the health care industry

• Recognize and demonstrate skills consistent with the philosophies of quality assurance, continued quality improvement, professional development, and resource management.

• Demonstrate professionalism, collegiality, and confidentiality when interacting with patients and coworkers.

• Demonstrate the ability to utilize health care technology applications to communicate and document critical information.

Program Performance Standards

Essential Functions

• Ability to use oral and written communication effectively in the English language and to read, understand and follow directions both written and oral.

• Display manual dexterity required to perform laboratory tasks, e.g. operation of various instruments, performance of phlebotomy and pipetting procedures, and manual entry of data into computers.

• Demonstrate microscopic and macroscopic visual acuity required to perform all technical activities requiring visual skills.

Cognitive Skills

• Recognize shifts, trends and other significant deviations in order to identify sources of error, verify test results accuracy, and implement corrective actions and follow-up procedure as required to ensure the reporting of valid data.

• Demonstrate the ability to interpret results derived by the instrumentation and recognize when the instrument is functioning improperly and yielding aberrant results and be able to troubleshoot preanalytical, analytical, and postanalytical causes of problems that result in invalid data.

• Identify types of safety equipment and inspect and maintain safety equipment including fire

• extinguishers, safety showers, eyewash stations, safety storage cabinets, splash guards, biological and fume hoods.

• Demonstrate the ability to retain information previously gained through the didactic education, assigned reading or discussion in the clinical area and drawing on previously gained information to solve problems.

• Distinguish between factual reports and personal opinion.

• Respond appropriately to special orders/request (i.e. STAT, ASAP, and verbal test orders), take corrective actions to resolve unexpected results and or events and make decisions to recommend appropriate follow-up to prevent the recurrence of error.
Psychomotor Skills

- Recognize and report hazardous situations, take actions to minimize injury to self and others, to prevent further occurrences and follow documentation procedures for work-related accidents.
- Adhere to all laboratory safety protocols including disposal of biohazard materials, safe use of instrumentation, specimens and reagents and demonstrate proper body mechanics and health habits in all work endeavors.
- Practice laboratory safety as described in the OSHA of 1970, 29 USCA section 655 and all subsequent regulations including instructions in universal precautions in handling all specimens.
- Demonstrate proper protocol for reporting results in written and oral form; when telephoning results, properly identifies patient and self, and document the location, time and person called.
- Organize work so that procedures are performed within established turn-around times and make economical use of resources and time by demonstrating the ability to coordinate a simultaneous series of tests with accuracy.
- Select and correctly use appropriate lab ware for specific procedures considering necessary accuracy and precision and perform reagent/solution preparations as needed and according to laboratory protocol.
- Perform basic operations of computer system(s) including data entry, transmission, and retrieval.
- Perform all quality control procedures according to established protocol including data collection, statistical analyses, monitoring and interpreting quality control data.
- Perform proper operation of instrumentation and apply the principles by which the instrumentation operates including daily maintenance, use of controls, standards, and calibration procedures.
- Perform and adhere to special procedures for collection, transportation and processing of patient specimens including time constraints, reliability, patient safety, and infection control and determine need for rejection and recollection of specimens according to laboratory protocol.

Affective Domain Skills

- Demonstrate confidentiality to respect the patient's right to privacy by never discussing medical information about patients in a public area or with persons not directly related to the task performance.
- Demonstrate integrity by not deceiving peers, instructors, or supervising staff in the performance of his/her laboratory duties and accept criticism in a constructive manner and demonstrate prompt improvement.
- Recognize personal limitations and working within them, asking a supervisor/instructor for assistance when required and interact with laboratory personnel, other ancillary staff, patients and the public in a positive and professional manner.
• Promote a pleasant learning environment by accepting tasks as assigned and take actions reflective of the profession's standards when participating in any activity that would associate him/her as a clinical laboratory scientist.

• Adhere to Santa Fe College, Clinical Laboratory Science Program, and the clinical affiliate laboratory policies and procedures. Actively seek additional information not covered in the student materials and perform a task on a repeated basis without additional instructions.

• Take responsibility for his/her own work by completing assigned tasks and return from meal times and breaks in a timely manner.

• Report to the laboratory on schedule and in accordance with clinical affiliate laboratory agreement with SFC CLS Program.

• Report all absences in case of illness and all instances of expected tardiness to the supervising professional at the clinical affiliate laboratory and notify the CLS Program Director.

• Demonstrate effective interpersonal relationships in working with others in the laboratory.

• Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solutions of such questions and demonstrate ability to evaluate and draw conclusions.

Program Cost Estimate

See advisor or coordinator for current schedule of fees.

College/Program Policies

Americans with Disabilities Act (ADA): If you are a student with a disability: In compliance with Santa Fe College policy and equal access laws, we are available to discuss appropriate academic accommodations that you may require as a student with a disability. Request for academic accommodations need to be made during the first week of the semester, except for unusual circumstances, so arrangements can be made. You must be registered with Disabilities Resource Center (DRC) in S-229 for disability verification and determination of reasonable academic accommodations.

Student Rights & Responsibilities: The purpose of this document is to provide students with a general overview of both their rights and responsibilities as members of the Santa Fe College community. For a complete list of students’ rights and responsibilities go to

http://dept.sfcollege.edu/StudentAffairs/content/media/Right_and_Responsibilities.pdf

EA/EO notice: “Santa Fe College is committed to an environment that embraces diversity, respects the rights of all individuals, is open and accessible, and is free of harassment and discrimination based on, but not limited to, ethnicity, race, creed, color, religion, age, disability, sex, marital status, national
origin, genetic information, political opinions or affiliations, and veteran status in all its programs, activities and employment. EA/EO notice Inquiries regarding non-discrimination policies should be directed to: Lela Frye, Equal Access/Equal Opportunity Coordinator 3000 NW 83rd Street, R-Annex, Room 105, Gainesville, Florida 32606, (352) 395-5420, lela.frye@sfcollege.edu.”

Practical Experience Guidelines & Expectations:

1. **Admission to Clinical Year:** Students are eligible for clinical placements in the first semester after they have successfully completed all didactic coursework. Due to the limited availability of local sites, a ranking system is used to place students. The highest ranking students are given first preference for Gainesville sites. Students are ranked according to the following criteria:
   
a) 1st Tier – SF upper division GPA  
b) 2nd Tier – all SF GPA  
c) 3rd Tier – volunteer hours; service to the school or community (must be approved by the program directors, coordinator, or advisor.

2. **Delayed Assignment Policy:** Initially, students are placed in-house (at SF Lab) for serology rotation to provide an equitable experience for all students regardless of their clinical placements. This is a semester long (16 weeks), flexible experience that allows them to rotate in or out as affiliate rotations become available. In the event that there is a break in their affiliate schedule, students return to SF labs until the next site becomes available.

3. **Assignment:**  
The schedule, date, and place of each assignment will be determined by the program coordinator and the affiliate supervisor.

4. **Attendance:**  
Students needing to adjust their schedule due to illness or an otherwise excused absence should report to both the affiliate supervisor and the SF program coordinator. Failure to do so may result in dismissal from the assignment.

5. **HIPAA:**
   
a) Federal Law, 45 CFR Parts 160-164, requires specialized training regarding client privacy and security. All Health Care Providers must complete HIPAA privacy training. Students participating in practical training at a clinical site will complete initial HIPAA training prior to initial clinical rotation and will continue to receive education related to HIPAA integrated in the programs’ curricula. Specific clinical sites may also require additional HIPAA training.  
b) No client/patient data may be photocopied. For educational purposes only, student may have only written notes. HIPAA violation:
Professional standards and norms for all health care providers include areas of: professional behavior, confidentiality, patient’s rights, informed consent, privileged communication, and health care settings standards and norms. Additionally, federal laws (including HIPAA and FERPA), state regulations, licensure requirements and practice acts detail use of specific information related to health care settings and professional behavior. It is the student’s responsibility to adhere to any and all of these standards and regulations. The relaying, discussion, transferring or use of any privileged information or knowledge of events or actions, via any verbal, written, electronic, computer and/or other technology form(s) concerning identifying patient information, health care agency information (institution or staff), SF College faculty and staff, fellow SF College students or any other like information is strictly prohibited.

Failure to comply with this directive in any way will result in disciplinary action and may include immediate dismissal from the program. If the student has a question or concern, or is unclear regarding this issue/topic they should contact their professor, refer to syllabus/course materials and referenced materials, review orientation materials of the health care agency, as applicable and contact associate director and/or director.

6. **Confidentiality/Non-Disclosure Agreements:** Some affiliates may require students to sign a non-disclosure agreement. This is a contract between the student and the affiliate that ensures the student will not discuss or in any way share proprietary information with anyone. When required, this is a non-negotiable condition of placement with the affiliate and any violation of this agreement is grounds for dismissal from the practicum and ultimately the program.

7. **Evaluation:** Practical experience will be evaluated by a pre-set method which will include input from the affiliate supervisor as well as the SF practicum supervisor.

8. **Dress Code:** Unless otherwise directed, students should dress professionally in attire appropriate to the assigned duties. If in doubt, ask the affiliate supervisor.

Recommendations/requirements:

a) Nice pants/slacks (if jeans are allowed, they should be neat without frays or tears)

b) Program polo shirt or SF t-shirt (no words, pictures, or other logos including religious and political logos) or plain polo/button down shirt

c) Closed toed/heeled shoes are required.

d) Lab coat or scrub shirt (if required) should have program patch on the left sleeve (2-3 inches below shoulder seam).

e) Name tag pin should be clearly visible over the right shirt pocket.

f) When required by the affiliate, SF ID should be worn around neck in an SF badge lanyard.
9. **Appearance:** Students should strive to represent their college and program at all times.

   a) Hair neat, clean and pulled back.
   
   b) Beards and mustaches must be neat, clean, and trimmed short.
   
   c) Clean, short and shaped fingernails; no artificial nails allowed; clear nail polish is acceptable, if not chipped. **CDC Guidelines:** Health care personnel should avoid wearing artificial nails and keep natural nails less than one quarter of an inch long if they care for patients at high risk of acquiring infections (e.g. Patients in intensive care units or in transplant units)
   
   d) No heavy make-up, perfume or colognes.
   
   e) No eating, drinking, or chewing gum while on duty.
   
   f) Minimal Jewelry.

10. **Social media guidelines:** Santa Fe College acknowledges that social media is an important method of communication. This policy has been set up to help guide the use of social media sites by program students.

    Students must be aware that posting certain information is illegal. Sensitive and confidential information is protected under HIPAA and FERPA whether discussed through traditional communication channels or through social media. Violations of these regulations could lead to criminal and civil liability. In addition the student could receive academic action ranging from written reprimand to dismissal from the program.

    To maintain positive interactions and to uphold ethical standards, the following guidelines should be complied with while using Social Media websites.

    a) **Be clean.** No swearing, pornography, or lewd speech.
    
    b) **Be nice.** No threats, bullying, or abuse. Santa Fe College does not tolerate online harassment. If you feel that you are the subject of online harassment or threatening behavior, please contact the administrators or other individuals named in the applicable college policy.
    
    c) **Be respectful.** No hate speech, slander or personal attacks. Any pictures of yourself or fellow students in SF program attire needs to be respectful and professional.
    
    d) **Be legal.** Do not post written statements or pictures showcasing underage drinking and/or illegal drug use.
    
    e) **Be truthful.** Don't pretend to be somebody else.
    
    f) **Be protective.** Protect confidential, sensitive, and proprietary information. Do not post confidential or proprietary information about the college, staff, other students, affiliates, patients, or others you may come into contact with in the role as a SF College student. Do not use school marks or logos on social media sites.
    
    g) **Be smart.** HIPAA and FERPA guidelines must be followed at all
times. Identifiable information regarding patients and clinical information MAY NOT be posted on social media websites.

h) Be forward-thinking: what you post online could exist forever. Future employers may conduct web searches to further evaluate their employees. What you post on a social media site could impede your career goals.

11. Dismissal from a Clinical Rotation: If a student is dismissed from a rotation, either by the site supervisor or a program director, the student’s remaining rotations will be suspended until the issue is investigated and resolved. The student may or may not be placed back into their original rotation schedule and may have to wait for additional openings. This may delay graduation.

Health and Safety

Medical Emergency: FIRST, call (9)-911 and make sure you tell them your location because their caller ID may not indicate the accurate campus location of the call. SECONDLY, have another person call ext. 5555, and our police department will send one officer to assist you and a second officer to assist the arriving ambulance.

Latex Advisory: The use of latex/latex based products may exist in health care universal precautions and in environments such as, but not limited to, Emerging Technologies' classrooms and training labs, industry laboratories, hospitals and other clinical settings. Individuals with latex allergies should seek expert advice from their healthcare provider so that they may receive information to make an informed decision regarding their exposure to latex in the healthcare field.

HBV-HCV-HIV Exposure: PEPline (the National Clinicians’ Post exposure Prophylaxis Hotline) is a 24-hour, 7-day-a-week consultation service for clinicians managing occupational exposures. This service is supported by the Health Resources and Services Administration Ryan White CARE Act and the AIDS Education and Training Centers and CDC. PEPline can be contacted by phone at (888) 448-4911 (toll free).

Recommendation for occupational exposure to HIV includes post-exposure prophylaxis should be initiated as soon as possible. If there is an associated cost for this treatment, it is the student’s responsibility.

Health and Liability Insurance: All students are strongly encouraged to carry some form of Personal Health and Accident Insurance for the duration of their enrollment. Workplace Liability Insurance is contracted by the college with Hartford Life and Accident Insurance Company. Specific and complete details with associated literature are available for review by students and affiliate HR departments. Please refer to literature and/or program coordinator for questions.

Health Status Change: It is the student’s responsibility to contact the program coordinator if their health status changes during the program, which may require a release statement from the physician stating “without restrictions.”
Incidents/Injuries: If a student incurs or is involved in an activity resulting in an injury or potential injury, including needle sticks, the student is responsible for notifying their program coordinator whether in the classroom, lab or clinical in order to follow appropriate procedures and to complete appropriate paperwork and a SF incident report. In addition, if the incident/injury occurs in the clinical area, procedures/paperwork for that clinical agency must also be completed. The SF incident report must be turned into the program coordinator the following school day following the incident/injury.

Physical examination: The completed physical examination form is due on the date indicated in your orientation paperwork. This includes required immunizations.

Pregnancy may affect immunizations and/or other program requirements. Individuals who are pregnant should seek expert advice from their healthcare provider so that they may receive information to make an informed decision regarding their exposure to infectious diseases and carcinogens/mutagens in the healthcare/biotech field. A statement from the student’s healthcare provider, noting that the student may proceed through the program with "no limitations", will be required of all pregnant students. A student who is pregnant may remain in the program with physician's permission through delivery. The student may return to the program following delivery with written permission from physician. Physician’s permission (in both instances) must address ability to complete lab and clinical assignments without restrictions.

Vaccinations: All clinical and some biotech affiliates require immunizations, therefore students must show proof of immunization prior to their practical experience semester. Vaccination and or proof of titer records are to be obtained at the student’s expense.

Hepatitis B: The first two Hepatitis B vaccinations, in the series of three, should be completed prior to the last “on-campus” semester.

All other vaccinations (or titers) and Tuberculosis testing should be completed prior to the last “on-campus” semester. (Tuberculosis required annually).

Flu Vaccines: Annual flu vaccines are strongly recommended for all program students. Some facilities may require flu vaccines prior to the start of flu season at the student’s expense.

Licensing and/ Pre-employment Screenings

Background Checks: A federal and state criminal Level 2 and expanded background check will be performed (at the students expense) prior to the practical experience assignment.

Acceptance into a program requires you to remain free of disqualifying charges or face dismissal from the program. You are obligated to notify the program director and/or associate director of any arrests, incidents and/or charges regardless of adjudication that occur after acceptance and during enrollment in the program. Failure to promptly notify shall be grounds for immediate dismissal.
from the program. Students that are charged and/or arrested will not be allowed to continue their practical experience until the charges are completely resolved.

**Licensure:** Students in the Clinical Laboratory Sciences program are required (at their own expense) to obtain a training license prior to being placed in the practical experience assignment. Details on this procedure will be provided by the program coordinator.

**Additional Information**

**Children on Campus:** Due to safety regulations, children are not permitted in the labs. Children are allowed in other parts of the building when accompanied by an adult. Students in need of limited daycare are encouraged to form “co-op” daycare arrangements with other students at the center. If a more permanent solution is needed, students should inquire at Little School on main campus.

[http://www.sfcollege.edu/littleschool/](http://www.sfcollege.edu/littleschool/)

**Organizations, athletic teams, etc.:** The Emerging Technologies Programs support SF student activity resulting in expansion of students' academic, social and community areas. Students are encouraged to take part in clubs (i.e., the Biotechnology Club), student government, honor societies, and professional organizations. Contact your advisor for information.

**Biotechnology Club:** The Biotechnology Student Organization meets at the Perry Center under the supervision of one or all of the club advisors; Aaron Hirko, Birgitta Kimura, and Ale Maruniak. The Biotech Club is constantly seeking ways to enhance student experiences at the Perry Center as well as persuading opportunities for students to interact with clubs on main campus. A prime example of this was their participation in generating the payload for the Engineering Club’s Rocket Launch for the 2012 and 2013 NASA sponsored competition. In addition, the Biotech club has helped in several events at the Perry Center, main campus, and community events including tabling during the first week of classes to help new students.

**Perry Center Activities:** The Charles R. and Nancy V. Perry Center for Emerging Technologies is located in Alachua, Fla. in the heart of Florida’s high tech corridor, about 13 miles from SF’s Northwest Campus. Its mission is to provide educational opportunities and programs that directly relate to and support the greater mission of Santa Fe College:

_In keeping with our values and goals, Santa Fe College, a comprehensive public institution of higher education serving North Central Florida and beyond, adds value to the lives of our students and enriches our community through excellence in teaching and learning, innovative educational programs, student services, and community leadership and service._

**STEM FEST** Together with the Research in Undergraduate Education initiative, The Perry Center hosts a three-day STEM Fest annually in November. Santa Fe College students and area high schools are invited
to display posters showcasing their accomplishments in the STEM disciplines (science, technology, engineering and math). Each evening the fest features a guest speaker from a STEM discipline.

STEM Summer Camp  Each summer, Santa Fe College invites rising ninth graders in Alachua and Bradford Counties to apply for a free, weeklong environmental day camp at the Perry Center. Campers have fun with hands-on activities in toxicology, earth and water sciences, DNA science, energy resources and computer gaming. Funding for the camp is provided by the Santa Fe College Perkins Initiative.

Mentoring/tutoring:

The Emerging Technologies Programs provide a setting for a special fostering relationship between students and faculty. Incoming student are encouraged to interact with the senior students early on. Mentors make referrals to college-wide support services, help students improve their study habits, actively listen, and offer encouragement.

Tutors are also available either through the department or on main campus at the tutoring center.  

Records

Currently enrolled students' files are kept in the Emerging Technologies Administration Office for all programs. Although records cannot be removed, students do have access to their own personal files. Contact program director for access.

Do not send in original immunization records, CPR cards, etc. to be placed in your files. Please bring the original (for verification) plus a copy of any other record to be placed in your file. Keep your originals!

Name or Address Changes:  Students are instructed to keep current the information in their college student record. When a change is necessary;

- The student is directed first to the Records Office in R-101 to make an official change in their record.
- The student must then make the change with the program advisor or coordinator.

Upon graduation, if a graduate's official name does not match their picture identification, this may result in an incorrect name being submitted to the certifying agency when applicable.

Resources

Computer Support:  The Perry Center for Emerging Technologies has a 40 station computer lab which is available for student access, testing, and printing. Each station is equipped with internet and standard programs including Microsoft
Office. In addition, wireless internet is available through the building.

Library Resources: The L. W. Tyree Library at Santa Fe College is staffed with an experienced, professional faculty all of whom hold Master’s degrees in Library and Information Science from accredited universities. The library includes an extensive assortment of services including; Reference Service, Library Instruction, various collections, access through the Florida Library Information Network for Community Colleges Library Online Catalog known as LINCCWeb and Interlibrary Loans.

Textbooks: The Santa Fe College Library has copies of required texts. Librarians are available to assist you with your learning needs.

Withdrawal, Repetition, and Transfer

Withdrawal: A student who drops from the program may return; beginning in the course sequence from which they left. Dismissal: If a student is dismissed from the program for academic and/or clinical failure, disciplinary reasons, or for any other reason, the student must meet with the coordinator and/or director.

Repetition: A student may repeat courses but may not proceed in the program until successful completion of repeated course.

Transfer: All courses are transferrable to any institution offering the same course number/description at the program’s discretion.

Certifications and Licensure

Check with your coordinator to discuss possible certifications and/or licensure that you may be eligible for. In most instances these are at the students’ expense and not reimbursable.

Graduation Information

Graduation is Not Automatic! During the semester before you plan to graduate, you must make an appointment with the program advisor to ensure that you have met all requirements.

Degree Application: Must be completed by the student online. Only the student can complete the graduation application.

It is your responsibility to take care of these necessary details, i.e.: Have you satisfied financial obligations? Are all books returned to the library? If any obligation has not been met, your final transcript and diploma will be delayed. This may impede your ability to sit for certification exams or to obtain licensure (not applicable to all programs).

Organizational Structure & Communication Process:
We care about you and your academic pursuits and encourage you to communicate your needs and concerns as a SF College Perry Center for Emerging Technologies student. SF College and the Perry Center policies are in place to provide a mechanism for voicing your needs and concerns in a respectful, neutral environment. It is essential that you initialize the communication process at the most immediate level and continue, as needed, through the path indicated on the following organizational chart.
PROGRAM HANDBOOK ACKNOWLEDGEMENT
& STUDENT CONTRACT

I have read the _____________ Program Handbook and attended an Orientation/Meeting. I am aware of the responsibilities and expectations associated with the program and understand all policies. I understand that failure to meet program standards may result in dismissal from the program.

STUDENT NAME (Print)  SEMESTER:

______________________________
Signature:  Date:

Please initial below, if you agree to do the following:

☐ Attend Orientation or Meeting.

☐ Return all Paperwork by Deadline.

☐ Meet with program advisor to finalize schedule.

☐ Inform advisor of any changes to contact information during and at the completion of program.

☐ Meet with program coordinator at least twice during the semester.

☐ Agree to apply for graduation at the completion of program.

☐ Agree to be photographed and/or videotaped for program promotional reasons.

For department use only:

Student Orientation Date: __________________________

Program Coordinator Signature: __________________________________

Sign form, bring to coordinator for signature and copying. DO NOT REMOVE FROM HANDBOOK!
Clinical Laboratory Sciences Program

Acknowledgement of Essential Functions and Expectations

Essential Functions

• Ability to use oral and written communication effectively in the English language and to read, understand and follow directions both written and oral.

• Display manual dexterity required to perform laboratory tasks, e.g. operation of various instruments, performance of phlebotomy and pipetting procedures, and manual entry of data into computers.

• Demonstrate microscopic and macroscopic visual acuity required to perform all technical activities requiring visual skills.

I acknowledge that I have received the SF College CLS Internship manual and have read the Expectations and Essential Requirements for the program. To the best of my knowledge, I will be able to perform these requirements upon completion of the program. To enable me to meet these Essential Requirements, I request the following accommodations:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

______________________________
Name (print): _________________________________________

Signature: ____________________________________________

Date: ________________________________________________

Witness: ______________________________________________

Name (print)      Signature
Eileen Monck, M.S., Interim Academic Director, Emerging Technologies
Clinical Laboratory Science | Biotechnology Laboratory | Biomedical Engineering
Charles R. and Nancy V. Perry Center for Emerging Technologies • 14180 NW 119th Terrace • Alachua, FL 32615
Office 352.395.5321 * Fax 386.418.0258 • E-mail Eileen.monck@sfcollege.edu