

Cytotechnology

Cytotechnology is an advanced allied health career which prepares students to use specialized equipment to study cells for detecting cancer, hormonal abnormalities and other pathological disease processes. Individuals entering this curriculum must have earned a bachelor's degree with a concentration in the biological sciences.

Course work includes entry-level knowledge and skills in cell collection and preparation and microscopic use to interpret specimens. Graduates work in conjunction with pathologists to perform special diagnostic procedures.

Upon successful completion of the program, graduates receive a certificate in cytotechnology and are eligible to take the National Board of Certification Examination of the American Society for Clinical Pathology (ASCP). Cytotechnologists may find employment in hospital and university laboratories, private laboratories, private companies and research facilities.

For specific information about potential positions and wages in cytotechnology employment, visit the Central Piedmont Career Coach website.

No degrees are offered in Cytotechnology.

No diplomas are offered in Cytotechnology.

Cytotechnology (C45220)

Certificate Awarded

A Certificate in Cytotechnology is awarded by the college upon successful completion of the program.

Admissions

All students wishing to apply to the Cytotechnology Program must have completed prior to admission:

- A Bachelors degree from an accredited college or university that includes:
 - Biology: 20 semester hours
 - Chemistry: 8 semester hours
 - Mathematics: 3 semester hours
- Applicants must have an overall 2.75 GPA to be eligible to apply to the program. To be strongly considered for acceptance, a minimum science GPA of 3.0 is highly recommended.
- Complete a general admissions application to Central Piedmont
- Complete the Letter of Intent for the Cytotechnology Program
- Send all prior college transcripts to Academic Advisor
- Two letters of recommendation to the Academic Advisor from previous science professors or employers
- An interview with the Cytotechnology Program Faculty.

International Students also must submit:

- Scores from both the Test of Spoken English (TSE) and the Test of English as a Foreign Language (TOEFL) prior to the application deadline.

- Transcript evaluation for course work completed outside the U.S. from an agency approved by the American Society for Clinical Pathology. A list of these agencies found on the ASCP website.
- NOTE: The Cytotechnology program cannot accept F1 Visa students, as it is a certificate only program.

Notes

The Cytotechnology program is a full-time, 12-month program that begins fall semester of each year. Progression in the program is dependent on satisfying course prerequisites, co-requisites and meeting minimal levels of performance for each course. Graduates of this program may apply to take the ASCP Board of Certification Exam in Cytology.

The Cytotechnology program at Central Piedmont is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) on recommendation of the Cytotechnology Programs Review Committee (CPRC) of the American Society of Cytopathology (ASC).

CAAHEP
19355 - 113th St. N, #7709
Seminole, FL 33775
727.210.2350
caahep.org

In addition to tuition and textbooks, costs of the program include the following: uniforms, lab coat, physical examination including immunizations, clinical travel and housing costs and registration fee for the Board of Certification Examination.

In order to participate in clinical education experiences at health care facilities, students are required to submit results of a NC state or national criminal background check at their own expense. As a condition of program admission, students may be required to verify that they are United States citizens or are otherwise legally authorized residents of the United States.

Contact Information

For more information, visit the Cytotechnology website. For further assistance, contact the Program Chair at 704.330.6283.

Major Requirements

CYT 210	Introduction to Clinical Cytology	4.0
CYT 212	Intro to Cyto Techniques	4.0
CYT 214	Gynecological Cytology	14.0
CYT 216	Clinical and Diagnostic Interpretation I	4.0
CYT 220	Non-Gynecological Cytology	12.0
CYT 222	Cytopreparation Techniques	2.0
CYT 224	Gynecological Cytology Clinical Practicum I	4.0
CYT 226	Clinical and Diagnostic Interpretation II	4.0
CYT 230	Non-Gynecological Cytology Clinical Practicum	2.0
CYT 232	Clinical Cytology Practicum	1.0
CYT 234	Gynecological Cytology Clinical Practicum II	3.0
CYT 236	Cytology Literature Review	1.0
CYT 238	Ancillary Studies in Cytopathology	2.0

Total Credits **57**

Cytotechnology Suggested Course Sequence

The following is the suggested sequence for when to take each course to complete the Cytotechnology certificate, based on the program

requirements of the 2023-2024 catalog. This is only a recommendation — you may take courses in another order if you need to. This sequence is based on you starting with college-level math and English courses, starting your program in the fall, and attending full-time. You can also follow this sequence if you attend part-time. Speak with an advisor about the sequence and any questions. Visit the catalog or contact the program for details.

Term I		Credits
CYT 210	Introduction to Clinical Cytology	4.0
CYT 212	Intro to Cyto Techniques	4.0
CYT 214	Gynecological Cytology	14.0
CYT 216	Clinical and Diagnostic Interpretation I	4.0
CYT 222	Cytopreparation Techniques	2.0
Credits		28
Term II		Credits
CYT 220	Non-Gynecological Cytology	12.0
CYT 224	Gynecological Cytology Clinical Practicum I	4.0
CYT 226	Clinical and Diagnostic Interpretation II	4.0
CYT 236	Cytology Literature Review	1.0
CYT 238	Ancillary Studies in Cytopathology	2.0
Credits		23
Term III		Credits
CYT 230	Non-Gynecological Cytology Clinical Practicum	2.0
CYT 232	Clinical Cytology Practicum	1.0
CYT 234	Gynecological Cytology Clinical Practicum II	3.0
Credits		6
Total Credits		57

CYT 210. Introduction to Clinical Cytology. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course provides an overview of the fundamentals of cell biology, basic histology, immunology, and laboratory operations and management as they relate to clinical cytology. Topics include the cell and cell division, histology, inflammatory processes, the immune response, CLIA, professional cytology organizations, workload limits, quality control, quality assurance, billing and coding in cytopathology, LIS systems and ethics. Upon completion, students should be able to understand basic cell biology, histology, immunologic processes, informatics, and the ethical role and responsibilities of the cytotechnologist in healthcare. Corequisites: Take CYT 212, CYT 214, CYT 216 and CYT 222

CYT 212. Intro to Cyto Techniques. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

The course covers care and use of the light microscope and histological and cytological specimen preparation techniques and equipment. Topics include laboratory safety, chemical hygiene, universal precautions, and fundamentals of staining and fixation. Upon completion, students should be able to discuss and demonstrate the care and use of the microscope and discuss basic concepts of staining and fixation. Corequisites: Take CYT 210, CYT 214, CYT 216 and CYT 222

CYT 214. Gynecological Cytology. 14.0 Credits. Class-8.0. Clinical-0.0. Lab-12.0. Work-0.0

This course covers gynecologic cytology, including, normal cytology, pre-malignancies, malignancies, and treatment modalities. Topics include anatomy, physiology, histology, and embryology of the female genital tract and breast; normal cytology, hormonal cytology, microorganisms, precursor lesions, carcinomas, treatment modalities, extrauterine and uncommon tumors, and FNA of the gonads and breast. Upon completion, students should be able to microscopically identify and discriminate between normal and pathological processes in the female genital tract or breast.

Corequisites: Take CYT 210, CYT 212, CYT 216 and CYT 222

CYT 216. Clinical and Diagnostic Interpretation I. 4.0 Credits. Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers cytologic criteria and clinical correlations for representative cytologic and histologic specimens from the female genital tract. Emphasis is placed on the cytology and histology of the female genital system through unknown cases and image exercises. Upon completion, students should be able to detect, diagnose, and appropriately mark cells representative of any normal or pathological process from the female genital tract.

Corequisites: Take CYT 210, CYT 212, CYT 214 and CYT 222

CYT 220. Non-Gynecological Cytology. 12.0 Credits. Class-8.0. Clinical-0.0. Lab-8.0. Work-0.0

This course covers non-gynecologic cytology and fine needle aspiration biopsy of all body sites. Topics include the anatomy, histology, pathology, and cytopathology of the respiratory tract, body cavities, urinary tract, gastrointestinal tract, head and neck, and central nervous system. Upon completion, students should be able to microscopically identify and discriminate between normal and pathological processes in non-gynecologic cytology.

Prerequisites: Take all: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 224, CYT 226, CYT 236 and CYT 238

CYT 222. Cytopreparation Techniques. 2.0 Credits. Class-2.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers the fundamental principles of cytopreparation for cytological specimens. Emphasis is placed on techniques related to cytopreparation. Upon completion, students should be able to demonstrate competence in the various cytopreparation methods.

Corequisites: Take CYT 210, CYT 212, CYT 214 and CYT 216

CYT 224. Gynecological Cytology Clinical Practicum I. 4.0 Credits. Class-0.0. Clinical-12.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in gynecologic cytology. Emphasis is placed on cytological diagnosis by routine screening methods and observation of various procedures relevant to gynecologic cytology. Upon completion, students should be able to demonstrate mastery of all diagnostic skills.

Prerequisites: Take all: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 226, CYT 236 and CYT 238

CYT 226. Clinical and Diagnostic Interpretation II. 4.0 Credits.

Class-4.0. Clinical-0.0. Lab-0.0. Work-0.0

This course covers cytologic criteria and clinical correlations for representative cytologic and histologic specimens from non-gynecologic body sites. Emphasis is placed on the cytology and histology of non-gynecologic body sites through unknown cases and image exercises. Upon completion, students should be able to detect, diagnose, and appropriately mark cells representative of any normal or pathological process from non-gynecologic body sites.

Prerequisites: Take all: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 224, CYT 236 and CYT 238

CYT 230. Non-Gynecological Cytology Clinical Practicum. 2.0 Credits.

Class-0.0. Clinical-6.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in non-gynecologic cytology. Emphasis is placed on cytological diagnosis by routine screening methods and observation of various procedures relevant to non-gynecologic cytology. Upon completion, students should be able to demonstrate mastery of all diagnostic skills.

Prerequisites: Take all: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238

Corequisites: Take CYT 232 and CYT 234

CYT 232. Clinical Cytology Practicum. 1.0 Credit. Class-0.0.

Clinical-3.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in a variety of clinical settings. Emphasis is placed on teamwork in the clinical setting with utilization of cytodiagnostic and cytopreparation skills. Upon completion, students should be able to function effectively as an entry-level cytotechnologist.

Prerequisites: Take all: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238

Corequisites: Take CYT 230 and CYT 234

CYT 234. Gynecological Cytology Clinical Practicum II. 3.0 Credits.

Class-0.0. Clinical-9.0. Lab-0.0. Work-0.0

This course provides supervised clinical experience in gynecologic cytology. Emphasis is placed on cytological diagnosis by routine screening methods and observation of various procedures relevant to gynecologic cytology. Upon completion, students should be able to demonstrate mastery of all diagnostic skills.

Prerequisites: Take all: CYT 220, CYT 224, CYT 226, CYT 236, and CYT 238

Corequisites: Take CYT 230 and CYT 232

CYT 236. Cytology Literature Review. 1.0 Credit. Class-1.0. Clinical-0.0.

Lab-0.0. Work-0.0

This course covers the review and critique of medical literature with emphasis placed on topics in cytopathology. Topics include gynecologic and non-gynecologic cytology. Upon completion, students should be able to analyze, critique, and present scientific articles.

Prerequisites: Take all: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 224, CYT 226 and CYT 238

CYT 238. Ancillary Studies in Cytopathology. 2.0 Credits. Class-2.0.

Clinical-0.0. Lab-0.0. Work-0.0

This course covers the fundamental principles and applications of special and immunohistochemical staining, as well as the principles and applications of molecular testing as they relate to the cytopathology laboratory. Emphasis is placed on the types of special stains used in cytopathology, on identifying positive and negative staining results, and on the application of molecular testing in cytopathology. Upon completion, students should be able to understand the application and interpretation of various special and immunohistochemical stains, and understand the various molecular tests available for use in cytopathology.

Prerequisites: Take all: CYT 210, CYT 212, CYT 214, CYT 216, and CYT 222

Corequisites: Take CYT 220, CYT 224, CYT 226 and CYT 236