CLINICAL LABORATORY SCIENCE/CYTOTECNOLOGY (CLSC)

Courses

CLSC 301. Introduction to Radiographic Procedures I. 2 Units.
Introduces the nature and description of radiographic procedures for the nonradiologic technologist, with an emphasis on radiographic procedures used in the collection of cytologic specimens. Applies principles, medical techniques, and instrumentation to a radiographic setting. Includes observation laboratory.

CLSC 302. Introduction to Radiographic Procedures II. 2 Units.
Introduces the nature and description of radiographic procedures for the nonradiologic technologist, with an emphasis on radiographic procedures used in the collection of cytologic specimens. Applies principles, medical techniques, and instrumentation to a radiographic setting. Includes observation laboratory.

CLSC 341. Gynecologic Cytology. 11 Units.
Study of the anatomy, histology, and cytology of the female genital tract—including cytohormonal changes, nonneoplastic abnormalities, premalignant and malignant lesions, and rare extraterine malignancies. Students interpret clinical history, explain significance of data, render diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 351. Respiratory Cytology. 8 Units.
Study of the anatomy, histology, and cytology of the respiratory tract—including fine needle aspiration of the lung. Students interpret clinical history, explain significance of data, render diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 353. Urinary Tract and Prostate Cytology. 3 Units.
Study of the anatomy, histology, and cytology of the urinary tract—including the bladder, ureters, renal pelvis, kidney, and prostate. Students interpret clinical history, explain significance of data, render diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 357. Gastrointestinal Tract Cytology. 2 Units.
Study of the anatomy, histology, and cytology of the gastrointestinal tract—including the esophagus, stomach, small and large intestines, and colon. Students interpret clinical history, explain significance of data, render diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 364. Body Fluid Cytology. 5 Units.
Anatomy, histology, and cytology of fluids from serosal cavities, including CSF. Students interpret clinical history, explain significance of data, render diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 371. Cytopreparation Techniques. 3 Units.
Collection techniques; fixation and staining procedures; preparation of monolayers, smears, and cell blocks from various cytologic specimens. Includes basic laboratory skills, such as universal precautions, reagent preparation, centrifugation, pipetting, and micropipetting. Introduces basic laboratory operations, including quality control, quality assurance, laboratory safety, and emergency preparedness. Lecture, demonstration, and laboratory.

CLSC 373. Histotechnology Techniques. 1 Unit.
Technical preparation of tissue specimens for microscopic evaluation, with emphasis on special stains and immunohistochemistry. Lecture and observation laboratory.

CLSC 381. Fine Needle Aspiration Cytology I. 4 Units.
Study of the benign and malignant cells aspirated from thyroid, salivary gland, breast, liver, pancreas, lymph node, soft tissue masses, and other miscellaneous organs. Includes fine needle aspiration techniques, touch prep of cores preparation, and rapid on-site adequacy assessment. Students interpret clinical history, explain significance of data, render adequacy assessment and/or diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 382. Fine Needle Aspiration Cytology II. 6 Units.
Study of the benign and malignant cells aspirated from thyroid, salivary gland, breast, liver, pancreas, lymph node, soft tissue masses, and other miscellaneous organs. Includes fine needle aspiration techniques, touch prep of cores preparation, and rapid on-site adequacy assessment. Students interpret clinical history, explain significance of data, render adequacy assessment and/or diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 383. Urinary Tract and Prostate Cytology. 6 Units.
Study of the benign and malignant cells aspirated from thyroid, salivary gland, breast, liver, pancreas, lymph node, soft tissue masses, and other miscellaneous organs. Includes fine needle aspiration techniques, touch prep of cores preparation, and rapid on-site adequacy assessment. Students interpret clinical history, explain significance of data, render adequacy assessment and/or diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 384. Fine Needle Aspiration Cytology III. 2 Units.
Study of the benign and malignant cells aspirated from thyroid, salivary gland, breast, liver, pancreas, lymph node, soft tissue masses, and other miscellaneous organs. Includes fine needle aspiration techniques, touch prep of cores preparation, and rapid on-site adequacy assessment. Students interpret clinical history, explain significance of data, render adequacy assessment and/or diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 385. Fine Needle Aspiration Cytology IV. 2 Units.
Study of the benign and malignant cells aspirated from thyroid, salivary gland, breast, liver, pancreas, lymph node, soft tissue masses, and other miscellaneous organs. Includes fine needle aspiration techniques, touch prep of cores preparation, and rapid on-site adequacy assessment. Students interpret clinical history, explain significance of data, render adequacy assessment and/or diagnoses, and offer recommendations for further testing. Lecture and laboratory.

CLSC 406. Pathophysiology. 3 Units.
Advanced didactic study of disease processes and corresponding pathologic findings of major organ systems of the human body.

CLSC 411. Histopathology I. 4 Units.
Didactic and microscopic study of basic normal tissue types of major organs and systems of the human body, with emphasis on function and clinical relevance of histologic structures.

CLSC 412. Histopathology II. 4 Units.
Didactic and microscopic study of basic pathology of major organs and systems of the human body, with emphasis on relevance to field of cytotecnoLOGY.

CLSC 424. Hematology. 3 Units.
Theory and background of routine and special laboratory procedures used in diagnosis and treatment of hematologic and other diseases. Evaluates and compares methodologies. Emphasizes bone marrow, body fluid, and peripheral blood-cell morphology: hematopoiesis, maturation, kinetics. Atypical and abnormal cellular morphology, including leukemias, lymphomas, and anemias.

CLSC 432. Current Research Techniques. 3 Units.
Introduces current research techniques and skills development. Techniques in immunocytochemistry, image and flow cytometry, and molecular pathology.

CLSC 471. Advanced Cytology Practices I. 2 Units.
Provides further practical experience by working with routine cytology specimens. Includes cyto preparation; microscopic evaluation of gynecologic and nongynecologic specimens, with an emphasis on fine needle aspiration specimens, maintenance of regulatory statistics, and error identification.

CLSC 472. Advanced Cytology Practices II. 2 Units.
Expands clinical experience with advanced theory and techniques, including image-assisted screening, LIS operation, mock proficiency testing, and use of telepathology.

CLSC 481. Supervised Cytology Research Project I. 2 Units.
Research project under the supervision of the program director. Oral presentation and paper.
CLSC 482. Supervised Cytology Research Project II. 2 Units.
Research project under the supervision of the program director. Oral presentation and paper.

CLSC 494. Cytology Practicum. 11 Units.
Eleven weeks of clinical cytology internships in a variety of cytopathology laboratories. Students rotate through all phases of diagnostic service work and laboratory functions (pre-analytical, analytical, and postanalytical). Independent microscopic evaluation of gynecologic, nongynecologic, and fine needle aspiration specimens.