Histotechnology

Histotechnology is a structural science that incorporates elements from anatomy, physiology, immunology and chemistry. Histology is the science dealing with the structure, function and chemical composition of cells of normal and abnormal tissue. The histotechnologist prepares tissue specimens for microscopic examination. Histologic techniques utilize the chemical properties of both tissues and dyes to impart color to particular tissue elements to aid identification and disease diagnosis. Histology is an applied laboratory science, whose practitioners are in great demand in the current job market. A certificate in Histotechnology provides intense training in histotechnology through a combination of lectures, hands-on laboratory experience and clinical internships. Some of the certification requirements can be completed with proper selection of courses as University Core Curriculum substitutes and by using elective courses to fulfill certification requirements. Students are encouraged to discuss their interests with a departmental representative to obtain additional information.

This program admits a limited number of students based on specific selection criteria. Applicants must submit additional application materials to be approved for entry into the Histology certificate program. Students will be evaluated on the number of hours of college credit, and college grade point average as calculated by SIU Carbondale. Students begin the professional sequence each fall only. This certificate program requires the successful completion of clinical internships. In accordance with Federal and State guidelines, the clinical sites will require proof of the following: vaccination for measles, mumps, rubella, tetanus, TB, and Hepatitis B; current CPR card; proof of completion of HIPPA and blood-borne pathogens training. Affiliation sites may also require students to undergo a criminal background check and drug screening.

Histotechnology Courses

**HTL400 - Histotechnology Practicum I** 400-5 Histotechnology Practicum I. Designed to introduce students to the basic procedures used in the Histology laboratory. The student studies the principles and theories of fixation and staining processes. Practice and skill are developed in tissue processing, embedding, sectioning and routine staining. Laboratory safety and regulatory compliance will be included. Lecture is 2 hours; laboratory is 6 hours/week. Special approval needed from the instructor.

**HTL401 - Histotechnology Practicum II** 401-5 Histotechnology Practicum II. This course is designed to build on the knowledge and skills learned in HTL 400 to introduce students to more advanced aspects of histological procedures used in clinical and research settings. The course will reinforce standard histological practices and include immunohistochemistry and transmission electron microscopy. Lectures are integrated with hands-on lessons providing students both basic knowledge and practical experience. 2 hours lecture; 6 hours lab/week. Must be accepted into the HTL certificate program. Prerequisite: HTL 400 (Histotechnology Practicum I) with a minimum grade of B.

**HTL402 - Special Topics-Histotechnology** 402-3 Special Topics in Histotechnology. The course focuses on microscopy-based methods used in today's research. Topics can include confocal/fluorescence microscopy, laser capture microdissection and specialized techniques for water miscible plastics. Lectures are integrated with hands-on lessons providing students practical experience. Lecture 1 hour; Lab 4 hours. Prerequisite: Histotechnology Practicum I & II (HTL 400 & 401) with a minimum grade of B.

**HTL403 - Lab Mgmt & Reg Compliance** 403-2 Laboratory Management and Regulatory Compliance. This course covers the principles of laboratory management and regulatory safety requirements. OSHA’s standard for the laboratory safety that incorporates the chemical hygiene plan will be covered. The
class will focus on regulations regarding bloodbornes and other potential infectious materials. HIPPA, 
Ergonomics, DOT and EPA guidelines will be discussed.

HTL404 - Occupational Histotechnology Internship I 404-3 to 6 Occupational Histotechnology Internship I. 
Internships are scheduled at clinical or research affiliate sites throughout Illinois during the daytime hours 
in accordance with the schedule of the assigned site. The curriculum will include both daily instruction and 
corresponding laboratory experience. In an occupational setting, the histotechnologist is not isolated; he/ 
she interacts with other areas besides histology. The internship provides practical hands-on experience 
that prepares the student for a career as a histotechnologist. Internship 18 hours/16 week semester or 36 
hours/8 week summer semester. Course can be taken for 2 semesters at 3 credits. Must be accepted into 
the HTL certificate program. Prerequisites: HTL 400 and HTL 401 with minimum grades of B.

HTL405 - Occupational Histotechnology Internship II 405-3 to 6 Occupational Histotechnology Internship 
II. Internships are scheduled at clinical or research affiliate sites throughout the United States in 
accordance with the schedule of the assigned site. The curriculum will include both daily instruction and 
corresponding laboratory experience. In a hospital or research/industrial setting, the histotechnologist 
is not isolated; he/she interacts with other areas besides histology. The internship provides 
aditional hands-on experience in an occupational setting that prepares the student for a career as a 
histotechnologist. Internship 18 hours/16 week semester or 36 hours/8 week summer semester. Course 
can be taken 2 semesters for 3 credits. Must be accepted into the HTL certificate program. Prerequisites: 
HTL 400, 401, 404 with minimum grades of B.

HTL400 - Histotechnology Practicum I 400-5 Histotechnology Practicum I. Designed to introduce 
students to the basic procedures used in the Histology laboratory. The student studies the principles 
and theories of fixation and staining processes. Practice and skill are developed in tissue processing, 
embedding, sectioning and routine staining. Laboratory safety and regulatory compliance will be included. 
Lecture is 2 hours; laboratory is 6 hours/week. Special approval needed from the instructor.

HTL401 - Histotechnology Practicum II 401-5 Histotechnology Practicum II. This course is designed 
to build on the knowledge and skills learned in HTL 400 to introduce students to more advanced aspects 
of histological procedures used in clinical and research settings. The course will reinforce standard 
histological practices and include immunohistochemistry and transmission electron microscopy. Lectures 
are integrated with hands-on lessons providing students both basic knowledge and practical experience. 
2 hours lecture; 6 hours lab/week. Must be accepted into the HTL certificate program. Prerequisite: HTL 
400 (Histotechnology Practicum I) with a minimum grade of B.

HTL402 - Special Topics-Histotechnology 402-3 Special Topics in Histotechnology. The course 
focuses on microscopy-based methods used in today's research. Topics can include confocal/ 
fluorescence microscopy, laser capture microdissection and specialized techniques for water miscible 
plastics. Lectures are integrated with hands-on lessons providing students practical experience. Lecture 1 
hours; Lab 4 hours. Prerequisite: Histotechnology Practicum I & II (HTL 400 & 401) with a minimum grade 
of B.

HTL403 - Lab Mgmt & Reg Compliance 403-2 Laboratory Management and Regulatory Compliance. 
This course covers the principles of laboratory management and regulatory safety requirements. OSHA’s 
standard for the laboratory safety that incorporates the chemical hygiene plan will be covered. The 
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HTL404 - Occupational Histotechnology Internship I 404-3 to 6 Occupational Histotechnology Internship I. 
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in accordance with the schedule of the assigned site. The curriculum will include both daily instruction and 
corresponding laboratory experience. In an occupational setting, the histotechnologist is not isolated; he/ 
she interacts with other areas besides histology. The internship provides practical hands-on experience 
that prepares the student for a career as a histotechnologist. Internship 18 hours/16 week semester or 36 
hours/8 week summer semester. Course can be taken for 2 semesters at 3 credits. Must be accepted into 
the HTL certificate program. Prerequisites: HTL 400 and HTL 401 with minimum grades of B.

HTL405 - Occupational Histotechnology Internship II 405-3 to 6 Occupational Histotechnology Internship II. 
Internships are scheduled at clinical or research affiliate sites throughout the United States in 
accordance with the schedule of the assigned site. The curriculum will include both daily instruction and
corresponding laboratory experience. In a hospital or research/industrial setting, the histotechnologist is not isolated; he/she interacts with other areas besides histology. The internship provides additional hands-on experience in an occupational setting that prepares the student for a career as a histotechnologist. Internship 18 hours/16 week semester or 36 hours/8 week summer semester. Course can be taken 2 semesters for 3 credits. Must be accepted into the HTL certificate program. Prerequisites: HTL 400, 401, 404 with minimum grades of B.

Last updated: 09/07/2017

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Catalog Year Statement:
Students starting their collegiate training during the period of time covered by this catalog (see bottom of this page) are subject to the curricular requirements as specified herein. The requirements herein will extend for a seven calendar-year period from the date of entry for baccalaureate programs and three years for associate programs. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them.