

## Fall 2020 Course Descriptions as of 04/05/2020 08:13 PM

Information in Browse Course Catalog is subject to change. Information is term specific. Please refer to the appropriate term when searching for course content. Key to Course Descriptions may be found at: [http://rcs.registrar.arizona.edu/course\\_descriptions\\_key](http://rcs.registrar.arizona.edu/course_descriptions_key).

### Pathology (PATH)

#### **PATH 481A: Innovation, Translation and Entrepreneurship** (2 units)

**Description:** Where do new medical devices and therapeutic systems come from? In this course students will learn how one innovates in the medical arena and how you take a concept of potential practical value and make it real. All the critical steps in medical innovation will be discussed.

**Grading basis:** Regular Grades

**Career:** Undergraduate

**Course Components:**      Lecture                                      Required

**Equivalent to:** ENGR 481, ENGR 481A, ENTR 481, MED 481, MED 481A, OPTI 481, OPTI 481A, PATH 481, PATH 481A

**Also offered as:** BME 481A, ENGR 481A, ENTR 481A, LAW 481A, MED 481A, OPTI 481A, SOC 481A

**Co-convened with:** PATH 581A

**Course typically offered:**

Main Campus: Spring

**Home department:** McGuire Center for Entrepreneurship

#### **PATH 512A: Biological Electron Microscopy** (5 units)

**Description:** Provides theoretical background and practical experience in transmission and scanning electron microscopy that are necessary for the efficient and effective application of ultra-structural and cytochemical techniques as research tools.

**Grading basis:** Regular Grades

**Career:** Graduate

**Course Components:**      Laboratory                                      May Be Offered  
                                         Lecture                                      Required

**Equivalent to:** ANS 512, ANS 512A, BIOC 512, BIOC 512A, CBA 512, CBA 512A, EIS 512A, ENTO 512, ENTO 512A, MBIM 512, MCB 512, PATH 512, PATH 512A, PLP 512, PLP 512A, PSIO 512, PSIO 512A, VSC 512, VSC 512A

**Also offered as:** ACBS 512A, CMM 512A, EIS 512A, MCB 512A, PLP 512A, PSIO 512A

**Recommendations and additional information:** One college-level course in each of physics, chemistry, and biology.

**Home department:** Molecular & Cellular Biology

**Interdisciplinary Interest Area:** BIOC - Biochemistry

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

**May Be Offered** Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

**PATH 515: Mechanisms of Human Diseases** (4 units)

**Description:** Biochemical, structural, and functional changes in cells, tissues, and organs, which cause and are caused by diseases. For graduate students training for a career in biomedical research.

**Grading basis:** Regular Grades

**Career:** Graduate

<b>Course Components:</b>	Laboratory	Required
	Lecture	Required

**Also offered as:** CBIO 515, PCOL 515

**Course typically offered:**

Main Campus: Spring

**Recommendations and additional information:** Open to all graduate students.

**PATH 581A: Assessing Early Stage Medical Technologies for Commercial Potential** (2 units)

**Description:** Where do new medical devices and therapeutic systems come from? In this course students will learn how one innovates in the medical arena and how you take a concept of potential practical value and make it real. All the critical steps in medical innovation will be discussed. Graduate-level requirements include graduate students serving as team leaders.

**Grading basis:** Regular Grades

**Career:** Graduate

<b>Course Components:</b>	Lecture	Required
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**Equivalent to:** ENGR 581, ENGR 581A, ENTR 581, MED 581, MED 581A, OPTI 581, OPTI 581A, PATH 581, PATH 581A

**Also offered as:** ENGR 581A, ENTR 581A, LAW 581A, MED 581A, OPTI 581A

**Co-convened with:** PATH 481A

**Course typically offered:**

Main Campus: Spring

**Home department:** McGuire Center for Entrepreneurship

**PATH 800: Research** (1 - 16 units)

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

<b>Course Components:</b>	Independent Study	Required
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**Course typically offered:**

Main Campus: Fall, Spring

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

**May Be Offered** Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

**PATH 838B: Clinical Pathology Elective** (3 units)

**Description:** The course will consist of a continuous series of 3 or 4 week-long rotations selected from the following areas: medical chemistry and toxicology, hematology, microbiology, blood banking and hemotherapy, immunology and immunopathology. Clinical Pathology will emphasize the following: 1. Applying and interpreting laboratory data in solving clinical problems. 2. Appreciating relationships between basic science information and disease, e.g., biochemical aspects and pathophysiology of selected diseases or clinical states. 3. Understanding the role of the medical laboratory in clinical diagnosis and therapy. 4. Acquiring perspective on modern medical laboratory technology and laboratory cost effectiveness. 5. Learning how management and control are essential in the provision of good medical laboratory information.

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Independent Study Required

**Recommendations and additional information:** Successful completion of first 2 years of medical school.

**PATH 850A: Surgical Pathology** (1 - 16 units)

**Description:** An intern-type program with students participating in surgical pathology, autopsies and cytopathology. Instruction is strongly clinically oriented.

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Independent Study Required

**Repeatable:** Course can be repeated a maximum of 99 times.

**Course typically offered:**

Main Campus: Fall, Spring

**Recommendations and additional information:** PATH 801 and 12 weeks of clinical clerkships.

**PATH 850B: Clinical Pathology** (1 - 16 units)

**Description:** An interpretive approach to the evaluation of laboratory data in the diagnosis and management of clinical disorders. Topics include bacteriology, blood component therapy, body fluid analysis, clinical chemistry, coagulation, hematology, immunohematology, mycology, toxicology, urinalysis, and virology.

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Independent Study Required

**Repeatable:** Course can be repeated a maximum of 99 times.

**Course typically offered:**

Main Campus: Fall, Spring

**Recommendations and additional information:** PATH 801 and 12 weeks of clinical clerkships.

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

**May Be Offered** Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

**PATH 850C: Special Topics** (1 - 16 units)

**Description:** Opportunities for intensive studies during a six-week period in one of the following fields: cytopathology, cytogenetics, immunohematology, immunopathology, microbiology-virology, neuropathology, pulmonary pathology, hematopathology, clinical chemistry and oncology. May be taken more than once for credit.

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Independent Study      Required

**Repeatable:** Course can be repeated for a maximum of 36 units.

**Course typically offered:**

Main Campus: Fall, Spring

**Recommendations and additional information:** PATH 801; prior arrangement and approval by the department.

**PATH 850E: Introduction to Forensic Pathology** (1 - 16 units)

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Seminar      Required

**Equivalent to:** MED 896A

**Course typically offered:**

Main Campus: Spring

**Recommendations and additional information:** PATH 801, consent of instructor.

**PATH 850G: Autopsy Elective** (2 - 4 units)

**Description:** The autopsy elective will emphasize the following student skills:- Acquisition of basic medical knowledge (terminology, classification and methods) relating to disease and normal anatomy in the autopsy setting- Perform basic dissection techniques- Recognize common pathologic processes and their significance- Determine the most likely cause of death integrating history with gross and microscopic findingsThe course is designed to acquaint the student with autopsy pathology. Particular emphasis will be placed on clinical significance of disease. During the two or four weeks, the student will review medical histories, assist in gross dissection, review slides and work up cases along with the pathology residents and post-sophomore fellows. Attendance in a variety of Pathology conferences is required (Pathology Core, autopsy, journal club) and there are also numerous multidisciplinary medical and oncologic management conferences that are available. While the student is based in autopsy pathology, the student may also gain exposure to the practice of surgical pathology.

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Laboratory      Required

**Repeatable:** Course can be repeated a maximum of 2 times.

**Course typically offered:**

Main Campus: Fall, Spring

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

**May Be Offered** Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.

**PATH 891A: Pathology** (1 - 16 units)

**Description:** Specialized work on an individual basis, consisting of instruction and practice in actual service in a department, program, or discipline. Teaching formats may include seminars, in-depth studies, laboratory work and patient study.

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Independent Study      Required

**Repeatable:** Course can be repeated for a maximum of 54 units.

**Course typically offered:**

Main Campus: Fall, Spring

**PATH 899: Independent Study** (1 - 16 units)

**Description:** The goal of this elective is to allow the student to work with a particular faculty member in pursuit of a particular field of study in pathology.

**Grading basis:** Clerkship S,HP,P,F

**Career:** Medical School

**Course Components:** Independent Study      Required

**Repeatable:** Course can be repeated a maximum of 99 times.

**Course typically offered:**

Main Campus: Fall, Spring

-SA represents a Student Abroad & Student Exchange offering

-CC represents a Correspondence Course offering

**May Be Offered** Departments may offer this component in some semesters. See the Schedule of Classes for term-specific offerings.