

# DEPARTMENT OF PATHOLOGY

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## 2013-2014 GUIDELINES

GRADUATE STUDENTS IN M.CI.Sc – PATHOLOGISTS'  
ASSISTANT PROGRAM

Department of Pathology  
Schulich School of Medicine & Dentistry  
Western University

# Masters of Clinical Sciences Pathologists' Assistant Program

## *Receipt of*

### **Outline of Criteria for Graduation**

This is to confirm that, I understand that in order to graduate from the Masters of Clinical Sciences Pathologists' Assistant Program.

**I have to;**

- Pass all courses in year 1(unless exempted) with a minimum average of 70%.
- Complete all rotations with "Meets Expectations" evaluation in year 2
- Pass all oral examinations in year 2 at the end of each rotation
- Satisfactory complete the Research Project and present the data at the Annual Pathology Research Day
- Abide by all the rules and the regulations as required by the PA - Graduate Education Committee, Department of Pathology, and Western University.

**Student Name  
(Print)**

\_\_\_\_\_

**Student Signature**

\_\_\_\_\_

**Date:**

\_\_\_\_\_

**Please return your signed form to Tracey Koning, 4025 Dental Sciences Build, by September 27th.**

## Masters of Clinical Sciences Pathologists' Assistant Program

### Student Handbook/Guidelines Agreement

In signing this document, I acknowledge that the contents of the Student Handbook and Guidelines have been presented to me by the Masters of Clinical Sciences Pathologists' Assistant Program. In addition to the presentation, I have read and reviewed the manual and understand that I am responsible for the contents therein.

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Student Name (print)

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Student Signature

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Date

**Please return your signed form to Tracey Koning, 4025 Dental Sciences Build, by September 27th.**

## **Essential Function to Satisfy Program Requirements**

Admission to and completion of the M.Cl.Sc. degree in the Masters of Clinical Sciences Pathologists' Assistant Program signifies that the holder has obtained minimum competencies in specific areas of anatomic pathology (as outlined) laboratories. The student must possess certain abilities and skills to function effectively and meet the safety and technical requirements in a broad variety of classroom, laboratory and clinical settings and that the graduate must have the knowledge and skills to function in a wide variety of laboratory situations and to perform a wide variety of procedures.

Students must have somatic sensation and the functional use of the senses of vision and hearing, the sense of equilibrium, smell, and taste as the candidate's diagnostic skills will be lessened without such abilities. Additionally they must have sufficient motor function to permit them to carry out the activities described in the specific sections. They must be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) employed, and in addition must have the intellectual ability to learn, integrate, analyze, and synthesize data.

A student of this program must have skills of observation and communication, and motor, conceptual, integrative, quantitative, behavioral, and social abilities. Many handicaps can be accommodated reasonably and without undue hardship in certain of these areas but a student should be able to perform in a reasonably independent manner. The purpose of this document is to act as a guideline for the capabilities and skills needed in a student for this program. The essential requirements presented in this document are pre-requisite for admission, academic advancement, and graduation from the Masters of Clinical Sciences Pathologists' Assistant Program. For admission, and progression and graduation from this program, the student should have the ability to meet the Program's Essential Requirement Functions, without accommodation or with reasonable accommodation.

### **1. Observation:**

A student must be able to observe accurately close up and at a distance and describe anatomic features and the appearance of tissues. Visual skills are necessary to observe tissues in normal and in pathological states. The student must be able to observe demonstrations and participate in examinations, dissections and processing of specimens. The student must be able to use a variety of tools, equipment and chemicals in order to consistently and accurately prepare specimens. Observation further requires the functional use of the sense of vision and somatic sensation. It is enhanced by the functional use of the sense of smell.

### **2. Communication:**

A student should be able to speak, to hear, and to observe people in order to elicit information and perceive nonverbal communications such as facial changes, gesturing and posturing. A

student must be able to communicate effectively and efficiently in oral and written form with physicians, faculty, fellow students, staff, patients, families and other members of the health care team. Communication includes speaking and listening, reading and writing, in English. The student must be able to make accurate and appropriate entries in medical records, documents and reports, and to understand and implement instructions in a complete and timely manner working alone or with others. A student must also be able to describe characteristics or the appearance of tissues and detect and interpret sounds necessary to ensure safety in a clinical or laboratory facility.

### **3. Sensory and Motor Coordination and Function.**

A student must have sufficient sensory and motor function to execute movements required to conduct laboratory procedures in all phases of autopsy performance and dissection of surgical specimens. Such actions require coordination of both gross and fine muscular movements, equilibrium and functional use of the senses of touch and vision. A student must be able to: lift heavy objects, carry heavy objects, pull, push, reach and bend while performing autopsy and dissection of surgical specimens. A candidate must be able to perform laboratory protocols, work with standard laboratory materials, reach and manipulate equipment and tools, and put on and remove personal protective equipment. This requirement also includes but is not limited to the use of an electronic keyboard. He/she must be able to complete the autopsy protocol including photography, coding of specimens and filing of reports. In association with the pathologist the candidate must possess the skills to dissect surgical specimens and prepare tissues for microscopic examination including the preparation of frozen and permanent sections for light, electron and immuno-fluorescent microscopy. The candidate must also possess the motor skills necessary to operate specific instruments and perform special techniques as directed by the pathologist. Therefore the student must be able to move freely and safely about a laboratory and reach bench tops or shelves. The student must be able to travel to clinical affiliate sites for their practical experience. Furthermore, the student must perform moderately taxing continuous physical work, often requiring prolonged sitting or standing unassisted, for several hours.

### **4. Intellectual, Conceptual, Integrative and Quantitative Abilities.**

A student must be able to measure, calculate, reason, analyze, integrate and synthesize data in a timely manner. Problem solving, a critical skill of the PAs, requires all of these intellectual abilities. A student must be able to identify significant findings from autopsy or gross pathology and retain and recall and apply the concepts in an accurate and timely manner. In addition, the student must be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures. He/she must have the mental ability to assimilate, learn and communicate large volumes of complex, technically detailed information in a timely manner.

## 5. Behavioral and Social Attributes.

A student must possess the emotional maturity and health required for full use of their intellectual abilities, the exercise of good judgment, self control and the awareness of the importance of the responsibilities of a Pathologists' Assistant. They need to promptly complete the specimen assessment and provide accurate documentation of procedures. The candidate is expected to behave and develop relationships in a mature, sensitive and professional manner with patients, families and members of the health care team. A student is expected to accept appropriate suggestions and criticism and to take corrective or remedial measure when appropriate. A student must act with integrity, concern for others and respect for the dignity of the profession. They must be able to adapt to changing environments and deal with physically and mentally taxing workloads. He/she needs to be able to obtain information, process it and prioritize activities effectively and collaboratively. The student must be able to critically evaluate his/her own performance, accept constructive criticism, and investigate avenues to improve. Compassion, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities that will be assessed during the admissions and educational process.

### **Applicants with Disabilities and Enrolled Students with Disabilities**

Western University is committed to meeting its obligations under the **Ontarians with Disabilities Act (ODA)**. (Although the Accessibility for Ontarians with Disabilities Act (AODA) received Royal Assent on June 13, 2005, universities remain subject to the ODA, 2001.

Please see the [Accessibility for Ontarians with Disabilities](http://www.mcass.gov.on.ca/mcass/english/pillars/accessibility) website

[<http://www.mcass.gov.on.ca/mcass/english/pillars/accessibility> Ontario] for more

information). An annual accessibility plan is prepared by Western's Ontarians with Disabilities Act Committee (WODAC). Past and present accessibility plans can be viewed on the

[WODAC webpage](http://accessibility.uwo.ca/wodac.htm) [<http://accessibility.uwo.ca/wodac.htm>]. Western University's policy and guidelines on academic accommodation for the students with disability are in the student handbook and may be found in on the website.

[[http://www.uwo.ca/univsec/handbook/appeals/accommodation\\_disabilities.pdf](http://www.uwo.ca/univsec/handbook/appeals/accommodation_disabilities.pdf) ]

**The Program will provide reasonable accommodation to applicants with disabilities and to enrolled students with disabilities. An effort will be made to work out potential difficulties as long as this does not pose a threat to the well being of patients, other students, faculty, other health care team members or the candidate themselves. The Program is not required to make, nor will it make, modifications that would fundamentally alter the nature of the admissions process or the educational program or provide auxiliary aids that present an undue burden on the Program. A student must be able to perform all of the Essential Requirements with or without reasonable accommodations to enroll, continue or graduate in the program. Requests for accommodation should be made in writing to:**

**Western University  
Masters of Clinical Sciences Pathologists' Assistant  
Program**

**Essential Functions Signature Page**

I have read the attached Pathologists' Assistant Program Essential Functions and I believe that I am able to accomplish these functions as a student in the Department of Pathology, Western University, Masters of Clinical Sciences Pathologists' Assistant Program.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print name

**Return "Essential Functions and Signature Page" to Tracey Koning, Department of Pathology, Schulich School of Medicine & Dentistry, Dental Sciences Building, Room 4025. Western University, London, Ontario, N6A 5C1**

## **1. DEPARTMENT OF PATHOLOGY GRADUATE PROGRAM**

### **1.1 Introduction**

The Department of Pathology, Schulich School of Medicine and Dentistry, WU, offers a full-time course- and practicum- based Graduate Program in Pathology leading to the M.CI.Sc Degree. This is a 2 year program that will fill a gap in the health care setting by training personnel to function as Pathologists' Assistants and also may prove attractive to those who wish to gain pathology graduate training in a more clinical setting before going on to professional schools or to a research intensive Doctoral Program in Pathology.

### **1.2 Mission Statement**

The Masters of Clinical Sciences-PA program will provide an outstanding education within a research- and clinical- intensive environment, where tomorrow's pathologists' assistants will learn to be academically excellent and socially responsible.

### **1.3 What is a Pathologists' Assistant**

Pathologists' Assistants (PAs) are highly trained health professionals who work under the supervision of a medically-qualified pathologist, providing a broad range of services in anatomic pathology. Many of their duties are those previously performed by pathologists. The extra technical skills brought to the laboratory by the PAs, standardize and enhance the overall quality in the practice of anatomic pathology. The decreased time pathologists spend on more routine tasks enables them to maximize their time spent on more complex problems and increase the technical repertoire of the laboratory. The PAs assumes major responsibility for the initial examination and dissection of all surgically removed tissues and to a variable extent, for the dissection of bodies during post-mortem examination.

## **1.4 Goals**

The overall goal of the Pathologists' Assistant (PA) training program in Pathology is to provide students with high quality training in the areas of pathology as needed by PAs. At the conclusion of the training period, students have fulfilled the requirements of M.CI.Sc.-PA Graduate Program in, School of Graduate and Postdoctoral Studies, WU and Accreditation of the program by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) is in progress so that our graduates will be eligible to write the American Society for Clinical pathologists (ASCP).

## **1.5 Program Overview**

This is a continuous program of 22 months duration. The students take various courses at the University of Western Ontario during Year 1 (September to April). In the first two months of Year 2 (May, June), they will rotate through various laboratories of London Health Sciences Centre and perform several related activities (see below). They will rotate through autopsy and gross surgical pathology for a total of 10 months (July to May, Year 2). During year 2 they also complete a pathology research project. During the last two months of year 2, students complete a community hospital rotation.

## **1.6 Objectives**

The objectives below are organized according to the seven competencies of the CanMEDS roles, derived from the Royal College of Physicians and Surgeons of Canada's Canadian Medical Education Directions for Specialists 2000 project. These objectives are divided into General and Rotation Specific objectives

## 2. General Program Objectives

### 2.1 Medical Expert

*The student must:*

- Gain knowledge and skills required to function effectively as Pathologist Assistants, (e.g., general knowledge of anatomy, histology, general and systemic pathology; be able to read and understand the medical record; have the technical skills required to effectively and efficiently assist in autopsies).

### 2.2 Communicator

*The student must:*

- Establish a good working relationship with clinical and non-clinical colleagues, and allied health care workers and patient families (as necessary)
- Prepare written documentation that is accurate and legible.

### 2.3 Collaborator

*The student must:*

- 3.1 Interact effectively with all members of the health care team.
- 3.2 Consult and delegate appropriately.
- 3.3 Be able to work effectively with community based care providers when appropriate.

### 2.4 Manager

*The student must:*

- Be an effective time manager; prioritize personal and professional time to achieve a healthy balance.
- Understand and use information technology effectively, including the performance of literature searches.
- Understand the rationale for and approach to the ordering of laboratory tests; order tests with due regard to minimizing unnecessary testing.

### 2.5 Health Advocate

*The student must:*

- Understand the PA's role in representing the patient's best interests with respect to disease prevention, and advocating for socio-economic factors to improve health.
- Understand the PA's role in community intervention with regard to disease prevention.

## **2.6 Scholar**

*The student must:*

- Accept responsibility for self-learning and self-evaluation.
- Implement an effective personal learning strategy.
- Be able to appraise the literature critically.

## **2.7 Professional**

*The student must:*

- Demonstrate integrity and respect when dealing with all peers, supervisors and other staff.
- Demonstrate honesty in dealing with colleagues and others.
- Demonstrate compassion for and employ tactful honesty with individuals and their families.
- Be accountable for his/her personal actions.
- Have a high degree of self-awareness and insight, and be able to evaluate himself/herself realistically and on a regular basis.
- Be aware of personal and professional limitations and be willing to seek appropriate help when faced with these.
- Maintain an appropriate balance between personal and professional roles.
- Deal effectively with interpersonal disagreements and conflicts, working for harmonious outcomes.
- Act as an appropriate role model for students and others.
- Be reliable and conscientious in the discharge of professional responsibilities.
- Be aware of the existence of cultural, ethnic and personality differences in his/her own and other's behavior and responses to situations.
- Be able to accept and evaluate criticism with equanimity and to take appropriate steps to improve as required.
- Practice medicine in an ethically responsible manner that respects the medical, legal and professional obligations of belonging to a self-regulating body.
- Know and understand the professional, legal and ethical issues in the practice of pathology.
- Recognize, analyse and know how to deal with unprofessional behaviors in the practice of medicine, including but not exclusive to health problems such as dementing illness, psychiatric illness or substance abuse, taking into account local and provincial regulations.

### 3. COURSE REQUIREMENTS

#### 3.1 Required courses for all M.Cl.Sc. students

| Year 1         |   |                      |
|----------------|---|----------------------|
| Course Number  | Title   | Term                 |
| PATHOL 9240A   | Understanding Disease                         | September – December |
| PATHOL 9561    | Functional Histology                          | September – April    |
| PATHOL 9562    | Infectious Diseases & Pathology               | September – April    |
| ANAT 9560      | Human Anatomy, Embryology                     | September – May      |
| PATHOL 9245B   | Diseases of the Organ System                  | January – April      |
| PATHOL 9540B   | Environmental Pathology                       | January – April      |
| *PATHOL 9541B  | Environmental Pathology<br>– Special Topic    | January - April      |
| PATHOL 9550B   | Intro to Forensic Sciences                    | January – April      |
| **PATHOL 9551B | Intro to Forensic Sciences<br>– Special Topic | January - April      |
| ***PHYSIO 2130 | Human Physiology                              | September            |

#### 3.2 Course descriptions

##### 9240A/9245B General & Systemic Pathology

**1.0 Credit**

This is a survey course for students covering, in the first term, fundamental mechanisms of common disease processes. The second term course includes a lecture based discussion of diseases that affect most of the major organ systems of the human body, knowledge of which is important to the practice of Pathology. The lectures will be delivered conjointly with undergraduate students. The PA graduate students will also have to participate in case studies of disease. *Lectures, assessment is by written examinations*

**9560 Human Anatomy & Embryology**

**2.0 Credit**

A study of human anatomy, embryology and imaging for graduate students. The course consists of dissection and tutorials in gross anatomy, as well as tutorials in embryology. Students should expect to spend at least 6 hours/week in the lab and 2-4 hours/week in tutorials. Imaging will be covered in tutorials and by guest presentations.

*Offered through the Department of Anatomy & Cell Biology*

**2130 Human Physiology**

**1.0 Credit**

A survey course outlining the principles of human/mammalian physiology; general properties of the living cell and its internal environment; neural, muscular, cardiovascular, respiratory, gastrointestinal, renal and endocrine systems; metabolism, reproduction and homeostasis.

*Lectures, tutorials or equivalent on-line material. Final marks in the course are based on 3 mini-tests (20%each) given throughout the year and a final exam.*

*Most students at UWO have taken this course as an undergraduate. If a student has not taken this course or an equivalent course in Human Physiology they will be required to take it as par of their degree.*

**9562 Infectious Diseases & Pathology**

**1.0 Credit**

A detailed study of microbiologic organisms and how they cause disease. The course will be divided into two halves. The first half will cover the basics of microbiology and infectious diseases. It will cover the basic organisms and how they produce disease. This will be followed by a series of lectures dealing with the prevention and treatment of infectious diseases. The second half of the course will build on the material learnt in the first half and on the material presented in pathology 3240a. The second half will be a series of presentations by the course coordinator and the graduate students. Each presentation will be based on a specific infectious disease and will cover the etiologies, clinical presentation, diagnosis, lab investigations, treatment and prevention.

*Lectures, assessment: written examinations and assignment.*

**9540 Environmental Pathology**

**0.5 Credit**

The pathology of occupational and environmental diseases, including information on recent developments and basic mechanisms involved in these diseases. Recognition of occupational and environmental diseases, early diagnosis, mechanisms of cell injury and regeneration, and the effects of a wide variety of toxic drugs, chemicals and UV and ionizing radiation are included.

*Lectures, assessment: written examinations and assignment.*

**9541 Special Topic Environmental Pathology**

**0.5 credit**

Students who have taken Pathol 4400B (Env Path) within the last two years of study will be exempt from taking Path 9450, but will be required to conduct a literature or systematic review or case study on a selected topic in Environmental Pathology. This will be submitted as a written report and assessed by a Pathology faculty member.

**9550 (550b) Introduction to Forensic Sciences**

**0.5 Credit**

Examination of the medicolegal framework investigating the nature and circumstance of certain deaths. These forensic investigations involve experts in different disciplines assisting the coroner and police in resolving cases. Forensic pathology examines the effects of disease

**9551 Special Topic Forensic Sciences**

**0.5 Credit**

Students who have taken Pathol 4500B (For Path) within the last two years of study will be exempt from taking Path 9550, but will be required to conduct a literature or systematic review or case study on a selected topic in Forensic Sciences. This will be submitted as a written report and assessed by a Pathology faculty member

**3.3 Exemption from required courses**

A student may submit a request, in writing to the PA- Graduate Education Committee, for exemption from taking any of the Department's required courses. The request form is on the Western Pathology website. The request must be accompanied by documentation that details the equivalent course. The course documentation may include the course outline or course notes/exams/evaluation scheme. The equivalent course must have been taken within the last 5 years and the student must have received a mark of 80% or above.

## **4. YEAR1 – SPECIFIC OBJECTIVES**

### **4.1 General**

The objective of year 1 is to gain appropriate theoretical knowledge to function as a Pathologists' Assistant by taking various university courses at Western University.

### **4.2 Medical Expert**

The specific objectives are listed according to;

### **4.3 Communicator**

*The student must be able to:*

- Communicate effectively (both verbally and in writing) with teachers, other students and academic support staff.
- Demonstrate effective oral and written presentation skills in course assignments.

### **4.4 Collaborator**

The student must be able to:

Work effectively with other students and teachers to solve specific learning objectives.

### **4.5 Manager**

The student must be able to:

Manage his/her time and resources efficiently.

### **4.6. Scholar**

The student must acquire knowledge to pass all the courses.

- The student must demonstrate ability to identify gaps of knowledge and seek appropriate consultation to remedy such gaps.
- The student must incorporate an attitude of scientific enquiry and identify the need for continuous learning.

## 5. EVALUATION-YEAR 1

### 5.1 Components of the Evaluation Process Year 1:

The evaluation process will include evaluation of students (by assignments, in-class tests, or examinations), evaluation of individual courses and instructors, and evaluation of the program.

- **Evaluation of the student**

The student will have to successfully pass course examinations (with a minimum final grade of 70%). The examination process for individual courses is different and may contain multiple choice questions, short answers, essays, assignments, etc.

The students will be made aware of examination and evaluation processes for individual courses at the beginning of each course. These will also be listed in the course outline.

The students will be made aware of examination and evaluation processes for individual courses at the beginning of each course. These are also listed in the course outlines (see course syllabi attached in Standard 9A).

- **Evaluation of the faculty and the Course**

The student will evaluate each course and faculty instructor(s) using specific forms provided by the department and/or university.

- **Evaluation of the program**

At the end of the year, students are asked to evaluate the program using a the Graduate Student Exit and Program Evaluation Form. Within the program committee, average grades of all students and all courses are monitored to identify and possible outliers or deviations from expected norms.

*Students will receive a more detailed schedule in with your Clinical Handbook.*

## **6. SPECIFIC OBJECTIVES – YEAR 2**

### **6.1 GENERAL**

Year 2 objectives have been listed as Rotation Specific Objectives. Such objectives for all rotations in autopsy pathology have been listed together. Rotation specific objectives in gross surgical pathology are arranged according to specific rotations. The objectives build upon each other, i.e., objectives listed for an initial rotation are not re-listed for subsequent rotations, but are presumed to have been completed.

### **6.2 Medical Expert**

### **6.3 General Lab Rotation (May – June, Year 2)**

*The student must:*

- Be Familiar with hospital policies as they are applied to Pathologist's Assistants
- Be Familiar with the use of the hospital information system
- Complete WHMIS, Fire and Safety, and Privacy Training
- Be Familiar with the coroner's office, funeral home, identity units, and the London court House
- Learn how to cut and stain frozen sections
- Be Familiar with various pathology satellite offices and laboratories
- Be Familiar with workflow and work processes as they are applied to the autopsy suite and gross pathology laboratory
- Be Familiar with ethical issues in pathology
- Be Familiar with various educational methodology

The student will observe the operation of laboratories in pathology and laboratory medicine which includes biochemistry, hematopathology, molecular pathology, microbiology, flow cytometry. They will learn how to cut frozen sections. Arrangements will be made for the student to visit the London Police Identity Unit, the London Court House and a Funeral Home. Before initiating their full rotation they will also receive training in WHMIS, medical education methodology, medical ethics, privacy issues and hospital information.

## 6.4 Autopsy Pathology (July-April)

### 9570 Autopsy

### Complete/Incomplete

Students will spend 8h/day working under supervision in the autopsy suite for approximately 5 months. The students will be taught by hands-on instruction the duties and responsibilities of the Pathologists' Assistant, including organ examination techniques, tissue selection for microscopy, and autopsy reporting.

The students will also attend Autopsy Rounds. During these rotations, the students are expected to maintain a log of the cases they handle. The students will be assessed on an ongoing basis by the laboratory supervisor. At the end of these rotations they will be examined in a viva. They will be given a pass/fail grade.

Each student is expected to actively assist in at least 50 autopsies in the 5 month period.

*The student must be able to:*

- Extract relevant information from the clinical chart
- Summarize this information orally.
- Use this information appropriately to plan the autopsy
- Assess the validity of consent for autopsy
- Apply appropriate precautions for cases with infectious etiologies
- Cut and block samples appropriately
- Describe orally the gross findings of specimens
- Photograph gross specimens
- Correlate autopsy findings with the clinical, radiologic, laboratory and other data
- Perform the autopsy in a systematic manner
- Collect samples for toxicological, microbiological, cytogenetic, molecular genetic and flow cytometric analysis
- Understand criteria for notification of the coroner
- Perform other autopsy related activities in the autopsy suite

## **6.5 Gross Surgical Pathology (July –April)**

### **9575 Surgical Gross Anatomical Pathology**

### **Complete/Incomplete**

Students will spend at least 8h/day working under supervision in the gross pathology suite for approximately 5 months. Students will be taught by hands-on instruction as to how to perform an analysis, descriptions, and dissections of all surgical specimens. This rotation will be supplemented by pathology rounds or small group discussions, as appropriate, to provide students with a complete understanding of the protocols for specimen examination and dissection.

During these rotations, the students are expected to maintain a log of the cases they handle. The students will be assessed on an ongoing basis by the laboratory supervisor. At the end of these rotations they will be examined in a viva. They will be given a complete/incomplete grade.

**Each student is expected to become proficient in the gross examination of the following specimens during rotations 1 and 2, Year 2**

#### **Biopsies**

- Needle (liver, breast, soft tissue, kidney, prostate, heart)
- Endometrial curetting and ablations
- Prostate curetting
- Products of conception
- Skin – punch, shave, curetting, ellipse
- Miscellaneous – GI, cervical, vulval, bladder mucosal
- Lymph node

#### **Gastrointestinal (GI) System**

- Appendix
- Small bowel resection – benign
- Colonic/rectal resection – benign

#### **Pancreaticobiliary**

- Gallbladder

#### **Gynecological (GYN) System**

- Cervical cone biopsy

- Simple hysterectomy – benign
- Salpingo-oophorectomy – benign

**Breast**

- Lumpectomy

**Head and Neck**

- Salivary gland resection
- Thyroidectomy
- Parathyroidectomy

**Lung**

- Lung wedge resection

**Bone and Soft Tissue**

- Joint resections for degenerative disease

**Other**

- Amputations for vascular disease
- Splenectomy

**Each student is expected to become proficient in the gross examination of the following specimens during rotation 3 and 4, Year 2**

**GI**

- Small bowel resection – malignant
- Colonic/rectal resection – malignant
- Abdominoperineal resection

**Liver**

- Segmental hepatic resection

**Pancreaticobiliary**

- Partial pancreatectomy

**Gyn**

- Hysterectomy – malignant
- Salpingo-oophorectomy – malignant
- Placenta

**Breast**

- Mastectomy + axillary dissection

### **Head and Neck**

- Radical neck dissection

### **Lung**

- Pneumonectomy
- Pulmonary lobectomy
- Deep soft tissue resection specimen

### **Other**

- Adrenalectomy

**Each student is expected to become proficient in the gross examination of the following specimens during rotation 5, Year 2**

At this level, students are expected to be able to describe, dissect and block virtually all gross specimens without supervision, but consulting appropriately when necessary. Remaining specimens, in which, grossing proficiency needs to be acquired are as follows:

### **GI**

- Esophageal resection
- Gastric resection – benign
- Gastric resection – malignant

### **Liver**

- Liver explant

### **Pancreaticobiliary**

- Whipple's resection

### **Gyn**

- Vulvectomy
- Radical hysterectomy

### **Breast**

- Needle localization specimen

### **Head and Neck**

- Maxillectomy/mandibulectomy
- Laryngectomy

### **Bone**

- Amputation for malignancy

### **Genitourinary**

- Cystectomy
- Radical prostatectomy
- Suprapubic prostatectomy

### **Heart**

- Valves

### **Other**

- Thymic resection

*The student must be able to:*

- Describe gross findings orally
- Describe the gross findings in writing
- Appropriately cut and sample surgical specimens
- Apply appropriate precautions for dealing with surgical specimens with established or suspected infectious etiologies
- Handle instruments including sharps safely
- Demonstrate knowledge of the commonly used routine and special histochemical stains
- Use word-processing, database, graphics and presentation programs
- Demonstrate familiarity with the applications of computers to laboratory medicine in general, and anatomical pathology in particular
- Perform other gross pathology related activities

## **6.6 Community Hospital Rotation (May-June of year 2)**

- Apply the knowledge gained in 1.0-1.3 in a community hospital setting under the supervision of a Pathologist or Pathologists' Assistant
- Continue fulfilling the objectives outlined in 1.0-1.3 as appropriate

## **6.7 Research Project**

### **9585 Pathology Research Project**

**Complete/Incomplete**

#### **Objective**

Gain appropriate knowledge and skill to answer the questions proposed in the identified research project.

The course will allow students to conduct an independent research project under the supervision of a faculty member. Potential projects may involve an extensive literature review, a series of case reports, a small clinical or basic research project, investigation of quality

improvement indicators or development of a pathology learning module. Projects will be determined in consultation with a Pathology faculty member.

Independent study and systematic review and analysis of the medical literature, experimental design and analysis, and effective communication skills will be emphasized. Within the pathology laboratories students will be exposed to a number of techniques that are used in modern pathology research (e.g. immunochemistry, FACS, molecular pathology, image analysis, gross and microscopic examination of tissues). Students will be expected to do an Oral/poster presentation. Student will conduct this activity throughout year 2.

During the research project students will:

- develop a familiarity with a variety of methodologies in common use in pathology research laboratories.
- develop skills in the formulation of a hypothesis and the design and execution of a research project.
- develop the analytical skills required to conduct research in pathology, perform the associated data presentation and analysis, and derive appropriate conclusions.
- develop skills in critical evaluation of medical and scientific information.
- develop skills in oral and written communication.

## 7.0 Course requirements Table – YEAR 2

| Year 2        |                         |                          |
|---------------|-------------------------|--------------------------|
| Course Number | Title                   | Term                     |
| PATHOL 9575   | Gross Surgical Rotation | June – June (~12 months) |
| PATHOL 9570   | Autopsy Rotation        | June – June (~12 months) |
| PATHOL 9585   | Research Project        | June – June (~12 months) |

## YEAR 2 – ROTATION SCHEDULE

**THIS IS JUST A SAMPLE SCHEDULE ONLY- DETAILS MAY CHANGE**

| Student | Orientation<br>May/June<br>LHSC | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | April |
|---------|---------------------------------|------|-----|------|-----|-----|-----|-----|-----|-----|-------|
| 1       | LHSC                            | A    | A   | B    | B   | A   | C   | C   | D   | D   | E     |
| 2       | LHSC                            | A    | A   | B    | B   | A   | C   | C   | D   | D   | E     |
| 3       | LHSC                            | B    | B   | A    | A   | B   | D   | D   | E   | C   | C     |
| 4       | LHSC                            | B    | B   | A    | A   | B   | D   | D   | E   | C   | C     |
| 5       | LHSC                            | C    | C   | D    | D   | E   | A   | A   | B   | B   | A     |
| 6       | LHSC                            | C    | C   | D    | D   | E   | A   | A   | B   | B   | A     |

**LONDON:**

A: Surgicals, London Health Sciences Centre  
 B: Autopsy, LHSC

**TORONTO:**

**C: Surgicals, Mt. Sinai** – need 6 months total training time (3 pairs of students would each visit for 2 months)

**D: Autopsy, Toronto Forensic Unit**- need 6 months total training time (3 pairs of students would each visit for 2 months)

**E: Sick Kids, Toronto** – need 3 months total training time (3 pairs of students would each visit for 1 month)

## Year 2

### COMMUNITY HOSPITAL PLACEMENT

| Month | Community hospitals                    | Student  |
|-------|--|--|
| May   | Guelph, Kitchener, Windsor,<br>Chatham | Students will be given their<br>placement information in early<br>march. |
| JUNE  |  |  |

## **7.1 Knowledge Base**

The student should continue reading a standard textbook of Pathology such as “Pathologic Basis of Disease” 7<sup>th</sup> Edition by Robbins and Cotran during this period.

The student should also read around current autopsy and surgical cases in a book such as Robbins, in addition, to a standard surgical pathology textbook such “Diagnostic Surgical Pathology” Vol. 1, 2 and 3 that by Sternberg, SS.

## **7.2 Communicator**

*The student must:*

- Communicate effectively with technical and other support staff in the laboratory
- Communicate effectively both verbally and in writing with clinical colleagues
- Present autopsy findings at and participate effectively in rounds
- Present surgical pathology at and participate effectively in rounds
- The student must be able to communicate research findings in an oral presentation  
The student must be able to communicate research findings in the form of a research report of manuscript

## **7.3 Collaborator**

*The student must:*

- Consult with clinicians to obtain clinical data
- Recognize the expertise, roles and opinions of other members of the health care team, and work effectively with them
- Consult with other students, PAs, residents and with pathologists when needed
- Perform other administrative and infrastructure maintenance duties as carried out by PAs
- The student must interact effectively with all members and support staff of the research team

## **7.4 Manager**

*The student must:*

- Effectively utilize information technology such as the Pathology LIS for self-learning activities
- The student must be able to effectively utilize learning and incorporate an attitude of scientific inquiry to answer specific research questions.

## **7.5 Scholar**

*The student must:*

- Understand and commit to the need for continuous learning; implement an on-going and effective personal learning strategy. Demonstrate the ability to identify gaps in knowledge and expertise
- Incorporate an attitude of scientific inquiry and the use of evidence into the process of making pathologic diagnosis
- The student must be committed to continuous learning and incorporate an attitude of scientific enquiry to answer specific research questions

## **8.0 EVALUATION PROCESS – YEAR 2**

### **8.1 Components of the Evaluation Process**

- Evaluation of the students – to ensure that students' goals are being met and educational progress is being made, and to prepare students to fulfill one of the requirements of M.Sc. in Pathology, School of Graduate and Postdoctoral Studies, UWO and Accreditation of the program by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) is in progress so that our graduates will be eligible to write the American Society for Clinical pathologists (ASCP).
- Evaluation of the program – to ensure that the program remains relevant and provides the best possible learning environment for its students.
- Evaluation of the teachers – to ensure that the teachers receive appropriate feedback and opportunities to improve teaching methods where applicable

### **8.2 Outline of Principles**

1. The objectives or expected outcomes of the rotations and other educational experiences have been defined. *See Rotation Specific Objectives*
2. A logical program that blends a variety of assessment tools to evaluate the components of competency including knowledge, skills, attitudes, and overall competence in real and simulated situations are in place.

3. The timing of assessments must be appropriate to the trainee's expected abilities; students are expected to pass the assessments, unless the assessments are designed to identify areas of weakness to direct further study.
4. The consequences of poor performance are outlined in advance.
5. A system of collecting and reviewing evaluation information is in place.
6. The responsibility for regularly collecting and interpreting the assessment information rests with the Program Admin, Program Director and the PA-Graduate Education Committee.
7. Timely judgments of student progress, based on these evaluation procedures, are made. A system is in place that permits prompt communication of these judgments to the trainees.

*(Modified from: Catton P, Tallett S, Rotman A. Annals RCPSC 1997;30:403-409.)*

### **8.3 In-Training Evaluation Reports (ITERS)**

Students will be evaluated at the end of each rotation and at the mid-way point of rotations two months in length or longer. Evaluations will be objective-based and collected on specific forms. In general, the rotation supervisor will complete the form using input from all of the teachers with whom the trainee worked during the rotation, and will sign the evaluation report. The supervisor will then discuss the evaluation with the student, and the student will be asked to sign the report to acknowledge that it was reviewed with the student. A space will be provided on the form for any comments that the student may wish to make. The evaluation report will then be sent to the Program Director who will review it, and in certain cases, will bring it to the next course-based graduate education program committee meeting for discussion. At the meeting, the student representatives will be asked to leave the room during these discussions. After this meeting, the report will be placed in the student's file and the Program Director will follow-up with the student.

#### **8.4 Comprehensive In-Training Evaluation**

A “Viva” Evaluation: At the end of each month rotation in gross surgical pathology, each student will be asked to gross two to four specimens, in which s/he has been already trained, in the presence of a teacher. The students will be evaluated as to the handling of the specimens, taking of sections and description. S/he may also be asked oral questions related to the specimens by the examination co-ordinator. Based on the performance, a pass/fail grade will be submitted to the Program Director for review and inclusion in the student’s file, and will be discussed at a subsequent PA-Graduate Education Committee meeting.

Similarly, based on their level of training each student will be asked to perform dissection on specific organ or complete cadaver dissection in the presence of a teacher. The students will be evaluated as to the handling of the specimens, taking of sections and description. S/he may also be asked oral questions related to the specimens by the examination co-ordinator. Based on the performance, a pass/fail grade will be submitted to the Program Director for review and inclusion in the student’s file, and will be discussed at a subsequent PA-Graduate Education Committee meeting.

At the end of community hospital rotation similar evaluation report will be obtained from the co-coordinator of the specific site.

#### **8.5 Oral Examinations**

Oral examinations will be held at the end of each rotation. The examination consists of assessment of student’s ability to formulate an appropriate approach to a hypothetical case. Questions testing knowledge regarding the entities may be expected. There will be two examiners (Pathologists and PA) for each oral, and an evaluation form will be completed. The evaluation includes suggestions for improvement by the student. The evaluation form is signed by the examiners and student. A copy of the evaluation is provided to the student, and the original sent to the Program Director for review and inclusion in the student’s file.

## **8.6 Evaluation of Research Presentation**

Each student will present their research in a department-wide forum and will be asked questions (15 minute presentation, 10 minutes Q&A). They will be evaluated by two examiners (Pathologist and PA) with respect to their quality of research, knowledge, presentation skills and ability to answer questions. Based on the performance, a pass/fail grade will be submitted to the Program Director for review and inclusion in the student's file, and will be discussed at a subsequent PA-Graduate Education Committee meeting (PAGEC).

## **8.7 Evaluation of Research Project**

The final research report should be prepared in consultation with the research supervisor and may be written in the format of a scientific article (e.g. a case report, a case series, a literature review, a methodological or technical report, or other format which is suitable for the nature of the research project). The research report will be marked by two faculty members and a pass/fail grade submitted to the Program Director. Feedback will be given to the student in the form of written comments and in cases where the material is appropriate for publication; students will be encouraged to submit their articles.

## **9.0 SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES: STUDENT ROLE AND RESPONSIBILITIES**

- 1- The student should make and maintain a strong commitment to devote the required time and energy needed to engage successfully in graduate work and research, write a thesis, and contribute fully to the scholarly and intellectual life of the University. The student should show dedicated efforts to gain the background knowledge and skills needed to pursue graduate work successfully, and adhere to the highest standards of ethical behaviour to assure academic integrity and professionalism.
- 2- The student should discuss with the supervisor, very early on, any expectations concerning authorship on publications, and issues surrounding ownership of intellectual property (this may include patents/licenses). This may result in written agreements or contracts between the student and supervisor covering these issues. In this regard, the student should become familiar with relevant policies in these domains.
- 3- The student should become aware of, very early on, all program requirements and deadlines, information about various sources of funding, and university policies covering the proper conduct of research, race relations, sexual harassment, AIDs, appeals, and any other relevant safety and/or work place policies and regulations.
- 4- The student should, very early on, discuss and formulate with their supervisor a plan of study for completion of degree requirements and thesis work, with clear milestones denoting progress. This would include, for example, setting a viable time schedule and adhering to it for all graduate work, including thesis progress and completion. Any variations to this schedule, including prolonged absences by the student, should be discussed. More generally, the student should maintain open communication and feedback with the supervisor on all issues, including supervisory practices.
- 5- The student and supervisor should discuss and agree on an appropriate schedule for supervision meetings. This discussion should also include agreement regarding appropriate time frames for the submission of student materials to be reviewed by the supervisor, and the supervisor providing feedback to the student.
- 6- The student should be reasonably available to meet with the supervisor and supervisory committee when requested, and be able to report fully and regularly on thesis progress and results.
- 7- The student should give serious consideration and response to comments and advice from the supervisor and committee members.

- 8- The student should maintain registration throughout the program and ensure, that where required, visas and employment authorization documents are kept up to date. The student should be aware of and conform to program, The School of Graduate and Postdoctoral Studies, and University requirements relating to deadlines, thesis style, award applications, and other graduate requirements, etc.
- 9- The student should pay due attention to the need to maintain a workplace which is safe, tidy, and healthy. The student should respect the work and equipment of others, and show tolerance and respect for others sharing the same facilities. This would include, for example, cleaning up work space when finished, and complying with all safety and work regulations of the program/university.
- 10-The student should be thoughtful and reasonably frugal in using resources, and assist in obtaining resources for the research of other group members, when applicable.
- 11-Where applicable, the student should comply with all ethical policies and procedures governing human or animal research.
- 12-The student should meet agreed performance standards and deadlines of funding organizations, to the extent possible, when financing has been provided under a contract or grant. This would include adherence to any contractual terms under which the thesis research is conducted.
- 13-The student should meet the terms and conditions of any financial contractual agreements, such as RA or TA positions.
- 14-The student should inform the program (i.e., graduate chair or chair), in a timely fashion, of any serious difficulties which may arise in supervision. These might include major professional academic disagreements, interpersonal conflicts, or potential conflict of interest situations.

*NOTE: This document is also available on the School of Graduate and Postdoctoral Studies Web Site at: <http://grad.uwo.ca/>. This website also contains information on further topics of interest, such as: admission requirements, registration and progression requirements, funding sources and eligibility criteria, the appeals process, general program requirements, and thesis examination and submission regulations.*

## **10. GUIDE TO NORMAL PROCEDURES FOR MASTERS OF CLINICAL SCIENCES, PATHOLOGISTS' ASSISTANT PROGRAM**

1. A prospective graduate student applies to the Department of Pathology, M.Cl.Sc-PA Graduate Program.
2. The application is assessed by departmental members of the PA –Selection Committee. If the application is rejected, the applicant is notified.
3. If acceptable, the student may/may not be invited for an interview with interested PA-Selection Committee. Following the interview and consideration of the application. The committee recommends admission.
4. The student is notified of acceptance.
5. Following admission the students are aware of the full details of the program.
6. The Graduate Chair and the PA- Graduate Education Committee monitors the progress of the student, and reports to the Graduate Education Committee
7. At least once a year, the student will be informed as to his/her general progress through the program.
8. The PA- Graduate Education Committee considers the results of examinations in courses designated and developments - recommending changes if necessary.
9. Close to the end of the first year of the M.Cl.Sc-PA program, the Chair of the PA-Graduate Education Committee reviews the process and procedures of second year rotations student students.
10. The PA-Graduate Education Committee, in consultation with the student, define topics for research at the beginning of their 2<sup>nd</sup> year and identifies a supervisor for such project. The committee continue to monitor the students through the second year.
11. Following receipt of all evaluations from all rotation and research presentations the PA-Graduate Education Committee supervise to ensure that the student fulfils all the criteria for the granting of their M.Sc. Degree.
12. In exceptional cases a transfer from M.Cl.Sc to Ph.D. will be considered. This will be performed on a case by case basis. The PA- Graduate Education Committee will send a request to the Research Based Graduate Education Committee for such consideration. For such conversion, the student has to fulfil the UWO criteria for converting from M.Sc. to Ph.D. (see the research based guidelines)

13. Appeal/Petition mechanisms should follow as specified by the Faculty of Graduate Studies Calendars and departmental guidelines.

## **11. M.Cl.Sc- PATHOLOGISTS' ASSISTANT PROGRAM GRADUATE EDUCATION COMMITTEE-TERMS OF REFERENCE**

1. Review regularly the objectives and progress of the departmental M.Cl.Sc. graduate training program and make recommendations to the department for future modifications or developments.
2. Meet on a regular basis, and furnish reports of deliberations to the Graduate Education Committee.
3. Consider the applications for M.Cl.Sc. graduate training and make recommendations for acceptance or rejection. Scrutinize proposed programs of the students and approve, disapprove or suggest modifications.
4. Review standards for acceptance into graduate programs from time to time as considered desirable.
5. Set rules and standards for content and format of rotation examinations, and review these as needed.
7. Review examination and rotation performances and make recommendations on their progress to the chair.
8. Make recommendations concerning awards and scholarships to M.Cl.Sc. graduate students where needed.
9. Ensure proper liaison between the Graduate Education Committee and the student.
10. Periodically evaluate performance and operational methods of the committee.
11. The Committee Structure consists of;
  - a. Departmental Chair/Chief
  - b. Program Director of Masters of Clinical Sciences, Pathologists' Assistant Program (M.Cl.Sc.)
  - c. Medical Director of Masters of Clinical Sciences, Pathologists' Assistant Program (M.Cl.Sc.)
  - d. Community Member

- e. Chair of the Research Based Graduate Education Committee
  - f. Education Director or his/her delegate
  - g. Three graduate faculty members
  - h. Clinical Coordinator - from Autopsy and Gross Service.
  - i. Clinical Preceptor(s) – from Autopsy and Gross Service
  - j. A graduate student Representative
12. Committee members concluding a term of elected office will not be eligible for re-election for a period of one year.
  13. Committee members who miss four consecutive meetings must be removed from the committee and a new member elected.
  14. One of the members elected by this committee will represent this committee in the Departmental Graduate Education Committee.
  15. Members who go on sabbatical are to be replaced and a new member elected.

## 12. APPEALS PROCEDURES

Within the department, there are resources available to you in the form of your supervisor, Advisory Committee, the Graduate Chair and the Graduate Education Committee. Please feel free to use them for help and advice.

Full documentation on graduate programs, regulations, appeals and thesis preparation is available on the School of Graduate and Postdoctoral Studies website at [http://grad.uwo.ca/current\\_students/regulations/index.html](http://grad.uwo.ca/current_students/regulations/index.html)

The procedures to be followed in cases of conflict in this department are outlined below:

If a conflict or difference of opinion arises between a student and supervisor which cannot be resolved:

- 1- You may ask your supervisor to convene a meeting of your Advisory Committee. A compromise or mutually agreeable settlement may be reached at that meeting.
- 2- If this agreement is not reached or is unsatisfactory, you may appeal to the Graduate Chair. You should put in writing your appeal and specify what you would like to see happen. At this step, the Graduate Chair may act alone to resolve the issue or depending on the nature of the case, bring the matter before the departmental Graduate Education Committee. The Chair of the Graduate Education Committee will inform you and your supervisor in writing of its decision.
- 3- If you are unsatisfied with the final decision of the Graduate Education Committee, you may appeal its decision to the Chair of the Department. Upon review, the Chair will either uphold or overturn the decision.
- 4- If the problem cannot be resolved at the departmental level, you are entitled to appeal to the Dean of the School of Graduate and Postdoctoral Studies. At that level, the Dean may settle the issue or establish an *ad hoc* appeals committee (See the School of Graduate and Postdoctoral Studies website for more details).
- 5- Your final appeal of the School of Graduate and Postdoctoral Studies ruling is to the Senate Review Board Academic.

### 9.1 Appeal of Grades

Grades in courses given through the Department of Pathology should be appealed in the first instance to the course manager/coordinator. If the issue cannot be resolved at that level, an appeal may be made to the Program Director and departmental Graduate Education Committee (steps 2 to 5 above).

### 13. GUIDELINES FOR VOLUNTARY WITHDRAWAL FROM GRADUATE STUDIES

In the case where a student voluntarily chooses to withdraw from a program he/she must complete the following steps:

- 1- Review the current information on withdrawal procedures provided on: [http://grad.uwo.ca/current\\_students/graduate\\_regulations/section\\_4.htm](http://grad.uwo.ca/current_students/graduate_regulations/section_4.htm)
- 2- The student must formally notify his/her program.
- 3- The student must go to the secure Graduate Student Web Services Portal (<https://grad.uwo.ca/student/index.cfm>) to withdraw from the program.
- 4- The request will be forwarded to the School of Graduate and Postdoctoral Studies (SGPS) for processing.
- 5- The request will be forwarded to the Program for final approval.
- 6- The Change of Status will be entered into PeopleSoft and the student will be officially withdrawn. After the change of status, he/she will no longer be a student and may not attend classes, receive supervision, or have access to any resources of the University.
- 7- An annual meeting will take place between the Coordinator of Graduate Student Recruitment and Retention (CGSRR) and the Associate Dean of SGPS to review reasons for withdrawal across programs and possible modifications to curricular structure/milestones.

## **14. GRADUATE STUDENT AWARDS / DEPARTMENTAL AWARDS**

### **14.1 The Dutkevich Memorial Foundation Award**

#### **Introduction:**

The School of Graduate and Postdoctoral Studies does not provide any funds for graduate students to attend and present papers at Scientific Meetings. It is the responsibility of the supervisor to provide funds for students to present their work at scientific meetings. By offering partial funding, the Department of Pathology will support students who present at scientific meetings.

#### **Eligibility:**

- 1- All graduate students registered in Pathology program (full-time and part-time students).
- 2- Students must have the abstract accepted for presentation at a National or International meeting.

#### **Deadline:**

June 1st and December 1st

#### **Application:**

The applications should be submitted to the Chair, Graduate Education Committee. The application form is available on the Western Pathology website. Briefly, the application should include a) a copy of the abstract as submitted, b) a notification of abstract acceptance for presentation at the meeting, c) a full description of the meeting (place, time, registration fee, etc.), and d) a letter from the supervisor indicating the importance and benefit for the student to be able to attend the meeting. The letter of support from the supervisor should indicate the need for travel support.

#### **Selection of Award:**

The award will be approved by the Graduate Education Committee. The award will be based on the merit of the abstract and letter from the supervisor. Priority will be given to students who have not received a Dutkevich award previously. In cases where a student has already received Dutkevich Travel Award, the abstract in the new application needs to be sufficiently different from the previously accepted/awarded abstract.

#### **Amount and Number of Award(s):**

The Dutkevich Foundation Award is to be used to defer some of the expenses of attending and presenting at a meeting. The maximum award will be \$500.00 per student per year. A maximum of two awards will be given out in the June competition and a maximum of two awards in the December competition. The Graduate Education Committee, however, may change the amount or number of awards.

## 15. FORMS

Revised and up-to-date forms are found on the UWO Department of Pathology website (<http://www.uwo.ca/pathol/graduate/forms.html>). These include:

### 1. Course Exemption Request

*To be completed by the student, signed by the Advisory Committee and the supervisor(s). Additional documents must be provided to support the request. Please return the form to Tracey Koning (4025 Dental Sciences Building).*

### 2. Dutkevich Travel Award Application Form

*To be completed by the student. Letter of support and additional documents (listed on the application form) are also required to support the application. Please return to Tracey Koning (4025 Dental Sciences Building).*

### 3. Graduate Student Exit Survey

*To be completed by all graduating students and returned to Tracey Koning.*

***For all other forms or templates, please contact Ms. Tracey Koning, 4025 Dental Sciences Building ([Tracey.Koning@schulich.uwo.ca](mailto:Tracey.Koning@schulich.uwo.ca)).***

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