

MASTER OF APPLIED SCIENCE ANATOMICAL SCIENCES EDUCATION

Overview Summary

- Degree offered: Master of Applied Science in Anatomical Sciences Education (ASE)
- Registration status option: Full-time
- Language of instruction: English or French
- Expected duration of the program: 5 terms; 20 consecutive months
- Academic units: Faculty of Medicine (<https://med.uottawa.ca/en/>), Graduate and Postdoctoral Studies Office (Grad.med@uottawa.ca).

Other Programs Offered Within the Same Discipline or in a Related Area

At the University of Ottawa the opportunity to combine training in pedagogy and education scholarship with learning human anatomy in the practical, applied hands-on environment a human cadaveric laboratory is unique to this program. However, there are other programs offered jointly through the Faculty of Education and the Faculty of Medicine that allow students to earn a concentration in Health Professions Education. These programs include:

- Graduate Diploma in Health Professions Education
- Masters of Education (MEd)
- Master of Arts in Education (MA)
- Doctorate of Philosophy in Education (PhD)

Fees and Funding

- Program fees:
 - The estimated amount for university fees (<https://www.uottawa.ca/university-fees/>) associated with this program are available under the section Finance your studies (<https://www2.uottawa.ca/study/graduate-studies/funding-financing/>).
- To learn about possibilities for financing your graduate studies, consult the Awards and financial support section (<https://www.uottawa.ca/faculty-medicine/graduate-postdoctoral/student-hub/awards-financial-support/>).

Notes

- Programs are governed by the academic regulations (<https://www.uottawa.ca/about-us/leadership-governance/policies-regulations/>) in effect for graduate studies
- In accordance with the University of Ottawa regulation, students have the right to complete their assignments, examinations, research projects, and theses in French or in English.

Program Contact Information

Graduate and Postdoctoral Studies Office, Faculty of Medicine (<https://med.uottawa.ca/graduate-postdoctoral/>)
451 Smyth Road, Room RGN 2016
Ottawa, Ontario, Canada
K1N 6N5

Tel.: 613-562-5215

Email: grad.med@uottawa.ca

Twitter | Faculty of Medicine (https://twitter.com/uOttawaMed/?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor)

Youtube | Faculty of Medicine (<https://www.youtube.com/c/uOttawaMed/>)

Flickr | Faculty of Medicine (<https://www.flickr.com/photos/uottawamed/>)

Admission Requirements

For the most accurate and up to date information on application deadlines, language tests and other admission requirements, please visit the specific requirements (<https://www2.uottawa.ca/study/graduate-studies/program-specific-requirements/>) webpage.

To be eligible, candidates must have:

- Honours Bachelor's degree with specialization (or equivalent) in one of the following areas: biology, biochemistry, pharmacology, physiology, human kinetics (kinesiology), biopharmaceutical, biomedical or health sciences with a minimum average of 75-79% (B+).

Preference is given to candidates who have had completed an undergraduate course in human anatomy (or equivalent). Candidates that have established a level of anatomy training comparable to the courses offered in the first year of the program , as assessed by the Program Director, can be accepted into a 1 year version of the Master's Program with a focus on applied teaching and scholarship courses. Candidates are also encouraged to document research or scholarly abilities (via research reports, abstracts, or presentations) in a Letter of Intent.

Note: International candidates must check the admission equivalencies (<https://www.uottawa.ca/study/graduate-studies/international-equivalencies/>) for the diploma they received in their country of origin.

Language Requirements

Applicants must be able to understand and fluently speak the language of instruction (French or English) in the program to which they are applying. Proof of linguistic proficiency may be required.

Applicants whose first language is neither French nor English must provide proof of proficiency in the language of instruction.

Note: Candidates are responsible for any fees associated with the language tests.

Notes

- The admission requirements listed above are minimum requirements and do not guarantee admission to the program.
- Admissions are governed by the academic regulations (<https://www.uottawa.ca/about-us/leadership-governance/policies-regulations/>) in effect for graduate studies

Program Requirements Master's with Coursework and Research Project option

Compulsory Courses:

ASE 5101	Anatomy I: Anatomy of the Musculoskeletal System	3 Units
ASE 5102	Anatomy II: Anatomy of the Abdomen: Gastrointestinal, Renal and Reproductive Systems	3 Units
ASE 5103	Anatomy III: Anatomy of the Head, Neck Thorax	3 Units
ASE 5105	Applied Anatomy I	3 Units
ASE 5106	Applied Anatomy II	3 Units
ASE 5107	Histology and Embryology	3 Units
ASE 5112	Introduction to Applied Research in Medical Education	3 Units
ASE 5909	Applied Point-of-Care US and Anatomy Bootcamp	3 Units

MED 8166	Professionalism and Professional Skills	
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Optional Courses

6 course units from:

ASE 5110	Scholarly Communication	
ASE 5111	Advanced Applied Research Methods in Medical Education	
EDU 5105	Inter-Professional Education in the Health Professions	
EDU 5202	Teaching Strategies for Health Professions Education	
EDU 5230	Leadership in Educational Organizations	
EDU 5261	Curriculum Design for Health Professions Education	
EDU 5286	Technology and Health Professions Education	
EDU 5298	Assessment Strategies for Health Professions Education	
EDU 5299	Program Evaluation: Methods and Practice	

Seminar

ASE 5166	Seminar in Health Professions Education	3 Units
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Research Project

ASE 7998	Education Scholarship: Research Project	6 Units
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Master's with Coursework option

Compulsory courses

ASE 5101	Anatomy I: Anatomy of the Musculoskeletal System	3 Units
ASE 5102	Anatomy II: Anatomy of the Abdomen: Gastrointestinal, Renal and Reproductive Systems	3 Units
ASE 5103	Anatomy III: Anatomy of the Head, Neck Thorax	3 Units
ASE 5107	Histology and Embryology	3 Units
ASE 5112	Introduction to Applied Research in Medical Education	3 Units

ASE 5909	Applied Point-of-Care US and Anatomy Bootcamp	3 Units
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MED 8166	Professionalism and Professional Skills	
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Seminar

ASE 5998	Review and Synthesis in Anatomical Sciences Education	3 Units
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Minimum Requirements

Minimum passing grade of C+ in all courses.

For the Research Project course (ASE 7998), a passing grade of Satisfactory is required.

Research

Research at the University of Ottawa

Located in the heart of Canada's capital, a few steps away from Parliament Hill, the University of Ottawa ranks among Canada's top 10 research universities. Our research is founded on excellence, relevance and impact and is conducted in a spirit of equity, diversity and inclusion.

Our research community thrives in four strategic areas:

- Creating a sustainable environment
- Advancing just societies
- Shaping the digital world
- Enabling lifelong health and wellness

From advancing healthcare solutions to tackling global challenges like climate change, the University of Ottawa's researchers are at the forefront of innovation, making significant contributions to society and beyond.

Research at the Faculty of Medicine

"The Faculty of Medicine has a long history of conducting both basic and clinical research of the highest quality. Many of our high profile research projects are conducted in partnership with affiliated-teaching hospitals and research institutes. These partnerships lead to biomedical discoveries that have a significant impact on health care. In the process they educate the next generation of Canadian scientists. Our research activity also attracts significant investment, which stimulates the Ottawa economy."

- Dr. Bernard Jasmin, Dean of the Faculty of Medicine

Facilities, Research Centres and Institutes at the Faculty of Medicine

- Centre for Neural Dynamics (<http://www.neurodynamique.uottawa.ca/>)
- University of Ottawa Centre for Neuromuscular Disease (<https://med.uottawa.ca/neuromuscular/>)
- Centre for Research in Biopharmaceuticals and Biotechnology (<http://www.med.uottawa.ca/crbb/eng/>)
- Canadian Partnership for Stroke Recovery (<https://canadianstroke.ca/>)
- Kidney Research Centre (<http://www.ohri.ca/centres/KRC/default.asp>)
- University of Ottawa Skills and Simulation Centre (<https://uossca.ca/>)
- Medical Devices Innovation Institute
- Ottawa Institute of Systems Biology (<https://med.uottawa.ca/oisb/>)

- University of Ottawa Brain and Mind Research Institute (<https://www.uottawa.ca/brain/>)

For more information, refer to the list of faculty members and their research fields on Uniweb (<https://uniweb.uottawa.ca/>).

IMPORTANT: Candidates and students looking for professors to supervise their research project can also consult the website of the faculty or department (<https://www.uottawa.ca/en/faculties/>) of choice. Uniweb does not list all professors authorized to supervise research projects at the University of Ottawa.

Courses

ASE 5101 Anatomy I: Anatomy of the Musculoskeletal System (3 units)

Focus on musculoskeletal anatomy. Student-centered, hands-on learning will be emphasized, where students will develop their expertise in a practical (human anatomy laboratory) setting that includes cadaveric dissection.

Course Component: Theory and Laboratory

ASE 5102 Anatomy II: Anatomy of the Abdomen: Gastrointestinal, Renal and Reproductive Systems (3 units)

Focus on the anatomy of the gastrointestinal, renal, and reproductive systems. Student-centered, hands-on learning will be emphasized, where students will develop their expertise in a practical (human anatomy laboratory) setting that includes cadaveric dissection.

Course Component: Theory and Laboratory

ASE 5103 Anatomy III: Anatomy of the Head, Neck & Thorax (3 units)

Focus on the anatomy of the nervous, cardiovascular, and respiratory systems. Student-centered, hands-on learning will be emphasized, where students will develop their expertise in a practical (human anatomy laboratory) setting that includes cadaveric dissection.

Course Component: Theory and Laboratory

Prerequisite: ASE 5101, ASE 5102.

ASE 5105 Applied Anatomy I (3 units)

Application of anatomical knowledge and pedagogical expertise developed in their first year of study by serving as teachers in classroom and laboratory settings. Emphasis on professional behaviors in teaching environment and in context of working with anatomical donors. Regions dissected will include the upper limb, lower limb, back, abdomen, and pelvis.

Course Component: Theory and Laboratory

Prerequisites: ASE 5101, ASE 5102, ASE 5103.

ASE 5106 Applied Anatomy II (3 units)

Application of anatomical knowledge and pedagogical expertise developed in their first year of study by serving as teachers in classroom and laboratory settings. Emphasis on professional behaviours in teaching environment and in context of working with anatomical donors. Regions dissected will include head, neck, and thorax.

Course Component: Theory and Laboratory

Prerequisites: ASE 5101, ASE 5102, ASE 5103.

ASE 5107 Histology and Embryology (3 units)

Focus on the histology and embryology of all major body systems. Student-centered, hands-on learning will be emphasized, where students will develop their histology expertise in a laboratory setting (microscopy). These activities will be complemented with didactic and virtually delivered histology and embryology content.

Course Component: Lecture

ASE 5110 Scholarly Communication (3 units)

Introduces students to frameworks and strategies to enhance scholarly communication, in the service of securing resources or disseminating information. Focus will be on communications with academics, decision makers, learners, and lay audiences.

Course Component: Lecture

ASE 5111 Advanced Applied Research Methods in Medical Education (3 units)

Provides students with situated instruction, including practical components, in applied research approaches and techniques. The goal is to develop advanced knowledge and skills in study design, data collection, analysis, and interpretation.

Course Component: Lecture

ASE 5112 Introduction to Applied Research in Medical Education (3 units)

Introduces students to the dominant research traditions and approaches that inform applied research in medical education. Guides students in the development of a research question and prepares students to take a critical stance as to the selection of a research approach, highlighting the affordances and constraints of a selected research tradition.

Course Component: Lecture

ASE 5166 Seminar in Health Professions Education (3 units)

Critical examination of selected topics in health professions education based on research and disciplinary issues.

Course Component: Seminar

ASE 5501 Anatomie I : anatomie de l'appareil locomoteur (3 crédits)

Exploration de l'anatomie de l'appareil locomoteur. Apprentissage pratique centré sur l'étudiant misant sur le perfectionnement des connaissances (dans un laboratoire d'anatomie humaine) au moyen de la dissection cadavérique.

Volet : Théorie et laboratoire

ASE 5502 Anatomie II : anatomie de l'abdomen : appareils digestif et rénal et système reproducteur (3 crédits)

Exploration de l'anatomie de l'appareil digestif, de l'appareil rénal et du système reproducteur. Apprentissage pratique centré sur l'étudiant misant sur le perfectionnement des connaissances (dans un laboratoire d'anatomie humaine) au moyen de la dissection cadavérique.

Volet : Théorie et laboratoire

ASE 5503 Anatomie III : anatomie de la tête, du cou et du thorax (3 crédits)

Exploration de l'anatomie du système nerveux, de l'appareil cardiovasculaire et de l'appareil respiratoire. Apprentissage pratique centré sur l'étudiant misant sur le perfectionnement des connaissances (dans un laboratoire d'anatomie humaine) au moyen de la dissection cadavérique.

Volet : Théorie et laboratoire

Préalables: ASE 5501, ASE 5502.

ASE 5505 Anatomie appliquée I (3 crédits)

Application des connaissances d'anatomie et de l'expertise en pédagogie acquises en première année à titre d'enseignant en classe et en laboratoire. L'accent sera mis sur le professionnalisme dans un contexte d'enseignement et de travail avec des corps humains. Régions disséquées : membres supérieurs, membres inférieurs, dos, abdomen et pelvis.

Volet : Théorie et laboratoire

Préalable: ASE 5501, ASE 5502, ASE 5503.

ASE 5506 Anatomie appliquée II (3 crédits)

Application des connaissances d'anatomie et de l'expertise en pédagogie acquises en première année à titre d'enseignant en classe et en laboratoire. L'accent sera mis sur le professionnalisme dans un contexte d'enseignement et de travail avec des corps humains. Régions disséquées : tête, cou et thorax.

Volet : Théorie et laboratoire

Préalables: ASE 5501, ASE 5502, ASE 5503.

ASE 5507 Histologie et embryologie (3 crédits)

Porte sur l'histologie et l'embryologie de tous les principaux systèmes du corps humain. Une approche d'apprentissage pratique et centrée sur l'étudiant sera mise en avant, pour permettre aux étudiants de renforcer leur expertise en histologie dans un contexte de laboratoire (microscopie). Ces activités s'accompagneront d'un contenu d'histologie et d'embryologie dispensé de façon virtuelle.

Volet : Cours magistral

ASE 5510 Communications savantes (3 crédits)

Ce cours présente aux étudiants les cadres et les stratégies permettant d'améliorer la communication savante, dans le but d'obtenir des ressources ou de diffuser de l'information. L'accent sera mis sur la communication avec les universitaires, les décideurs, les apprenants et les publics non initiés.

Volet : Cours magistral

ASE 5511 Recherche avancée en éducation médicales (3 crédits)

Ce cours offre aux étudiants un enseignement en situation, comprenant des éléments pratiques, sur les approches et les techniques de recherche appliquée. L'objectif est de développer des connaissances et des compétences avancées en matière de conception d'études, de collecte de données, d'analyse et d'interprétation.

Volet : Cours magistral

ASE 5512 Introduction à la recherche appliquée en éducation médicale (3 crédits)

Ce cours présente aux étudiants les traditions et les approches de recherche dominantes qui influencent la recherche appliquée dans l'enseignement médical. Oriente les étudiants dans le développement d'une question de recherche et les prépare à adopter une position critique dans la sélection de l'approche de recherche, en soulignant les possibilités et les contraintes d'une tradition de recherche sélectionnée.

Volet : Cours magistral

ASE 5909 Formation d'anatomie et écho ciblée appliquées / Applied Point-of-Care US and Anatomy Bootcamp (3 crédits / 3 units)

Les étudiants synthétiseront leurs connaissances fondées sur l'anatomie cadavérique lors de séances en laboratoire autogérées. Leurs connaissances seront ensuite mobilisées lors d'activités d'échographie ciblée (PoCUS), dans le cadre desquelles les étudiants auront la possibilité d'approfondir leurs connaissances de cette technologie pratique d'imagerie clinique dans des séances en petits groupes. / Students will synthesize their cadaveric-based anatomy knowledge in self-directed laboratory sessions. This knowledge will be then employed in Point-of-Care Ultrasound (POCUS) activities, where students have the opportunity to develop their skills with this clinical imaging technology in hands-on, small group learning sessions.

Volet / Course Component: Théorie et laboratoire / Theory and Laboratory

Préalables : ASE 5501, ASE 5502, ASE 5503. / Prerequisites: ASE 5101, ASE 5102, ASE 5103.

ASE 5998 Étude et synthèse de l'enseignement sciences anatoniques / Review and Synthesis in Anatomical Sciences Education (3 crédits / 3 units)

Identification de lacunes actuelles en matière d'enseignement en sciences anatomiques et domaines de recherche et innovation actuelles et futures pouvant répondre aux besoins éducationnels spécifiques. / Identification of current gaps in anatomical sciences education and areas where current and future scholarship and innovation can address specific educational needs.

Volet / Course Component: Séminaire / Seminar

ASE 59981 Review and Synthesis in Anatomical Sciences Education (Part 1 of 2)

Identification of current gaps in anatomical sciences education and areas where current and future scholarship and innovation can address specific educational needs. (Part 1 of 2)

Volet / Course Component: Séminaire / Seminar

ASE 59982 Review and Synthesis in Anatomical Sciences Education (Part 2 of 2) (3 crédits / 3 units)

Identification of current gaps in anatomical sciences education and areas where current and future scholarship and innovation can address specific educational needs. (Part 2 of 2)

Volet / Course Component: Séminaire / Seminar

Prerequisite: ASE 59981.

ASE 7998 Recherche en éducation : projet de recherche / Education Scholarship: Research Project (6 crédits / 6 units)

Exploration de la recherche en enseignement ou en innovation pédagogique fondée sur l'enseignement moderne de l'anatomie. / Focus on educational research or teaching innovation based on enhancing modern anatomy education.

Volet / Course Component: Recherche / Research

EDU 5105 Inter-Professional Education in the Health Professions (3 units)

Examination of educational research, theory and practice related to the professional interdependence of work in the health concentration; study of the impact of interdisciplinary professional principles on teaching and learning strategies, curricular design, and evaluation strategies.

Course Component: Lecture

EDU 5190 Introduction to Research in Education (3 units)

Introduces students to understanding and applying research in education: researching a topic, critical reading, overview of various types of applied research.

Course Component: Lecture

EDU 5202 Teaching Strategies for Health Professions Education (3 units)

Exploration of the concepts, strategies, and methods of instruction for the education of health professionals; examination of how instruction supports health professionals' learning.

Course Component: Lecture

Reserved for students enrolled in Health Professions Education.

EDU 5286 Technology and Health Professions Education (3 units)

Study of the impact of computer technology on communication and instructional techniques for health professions education; exploration of distance education, on-line learning, and low and high fidelity simulation.

Course Component: Lecture

EDU 5505 Formation interprofessionnelle dans le domaine de la santé (3 crédits)

Étude des théories et pratiques reliées à l'interdépendance professionnelle du travail et de l'éducation dans le domaine de la santé. Étude de l'impact des principes interdisciplinaires et interprofessionnels sur les stratégies d'enseignement, d'apprentissage et d'évaluation ainsi que sur l'élaboration des programmes d'études.

Volet : Cours magistral

EDU 5590 Introduction à la recherche en éducation (3 crédits)

Initiation à la consultation et à l'utilisation de la recherche en éducation : documentation d'une problématique; lecture critique; initiation aux différents types de recherche appliquée.

Volet : Cours magistral

EDU 5630 Leadership en milieu éducatif (3 crédits)

Étude des théories du leadership. Examen des ressources personnelles des leaders et de leur impact dans la pratique. Analyse de la vision, des valeurs et des pratiques de leadership pour la réussite éducative.

Volet : Cours magistral

EDU 5653 Théories et modèles de l'apprentissage (3 crédits)

Analyse des principales théories de l'apprentissage. Étude des applications de ces théories aux pratiques éducatives.

Volet : Cours magistral

EDU 5661 Conception de programmes en enseignement en santé (3 crédits)

Étude des fondements et des pratiques en matière de conception de programmes d'études pour les professionnels de la santé.

Volet : Cours magistral

EDU 5698 Stratégies d'évaluation des apprentissages en enseignement en santé (3 crédits)

Étude des modèles utilisés pour évaluer les domaines de compétence clinique au cours de la formation des professionnels de la santé, tant au niveau des études de premier cycle que des études supérieures. Analyse des examens écrits et oraux et d'épreuves portant sur l'accomplissement de tâches.

Volet : Cours magistral

EDU 5699 Évaluation des programmes (3 crédits)

Étude des notions de base sur la conception et la gestion de programmes. Analyse des aspects théoriques et pratiques de l'évaluation des programmes. Examens des modèles d'évaluation, de la planification du projet d'évaluation, de la rédaction du rapport d'évaluation et de la méta-évaluation.

Volet : Cours magistral