



HK*3401 Human Anatomy: Dissection

Fall 2022

Section(s): C01

Department of Human Health and Nutritional Sciences

Credit Weight: 0.75

Version 1.00 - September 06, 2022

1 Course Details

1.1 Calendar Description

First part of the two-semester course HK*3401/2. A two-semester lecture and laboratory course in human anatomy which includes a detailed study of the skeleton, upper and lower limbs, thorax, abdomen, pelvis, perineum, head, neck and central nervous system. The labs involve hands-on dissection. This is a two-semester course offered over consecutive semesters. When you select it you must select HK*3401 in the Fall semester and HK*3402 in the Winter semester. A grade will not be assigned to HK*3401 until HK*3402 has been completed.

Co-Requisites:

BIOM*3200 or HK*3810

Restrictions:

HK*3401, HK*3402 Registration in the BSC. Major in Human Kinetics or Bio-Medical Science. Instructor consent required.

1.2 Course Description

This is a laboratory-based course that provides students with a regional study of the back, upper limb, thorax and abdomen. A detailed understanding of the relevant osteology and muscles present in these anatomical regions provides the framework for which the pathways and relationships of blood vessels and nerves are examined. Students will learn to progressively layer anatomical structures, from deep to superficial, and/or follow their pathways from proximal to distal. It is with this fundamental understanding of anatomical structures and their relationships, that students will consider applications and/or potential effects of perturbations of anatomy. Both lecture and laboratory components of HK*3401 will be in person / face-to-face during the F22 semester.

1.3 Timetable

Lectures Monday, Wednesday, Friday: 8:30 – 9:20 ROZH 101

Laboratories HK*3401	Tuesday 10:00 - 11:50	BMED 1610
	Tuesday 12:30 - 14:20	BMED 1610
	Tuesday 15:00 - 16:50	BMED 1610
	Thursday 10:00 - 11:50	BMED 1610
	Thursday 12:30 - 14:20	BMED 1610
	Thursday 15:00 - 16:50	BMED 1610

1.4 Final Exam

Exam time and location is subject to change. Please see WebAdvisor for the latest information.

Wednesday December 7, 2022

14:30 - 16:30

Location: TBA

2 Instructional Support

2.1 Instructional Support Team

Instructor:	Lorraine Jadeski
Email:	ljadeski@uoguelph.ca
Telephone:	+1-519-824-4120 x53740

Office: OVC 2617
Office Hours: Wednesday 10:00 - 11:00 (OVC 1610), or by appointment

2.2 Teaching Assistants

Teaching Assistant (GTA): Ryan Babensee
Email: rbabense@uoguelph.ca
Office Hours: Office hours: by appointment

Teaching Assistant (GTA): Julia Bunko
Email: jbunko@uoguelph.ca
Office Hours: Office hours: by appointment

Teaching Assistant (GTA): Lily Hopkinson
Email: lhopki03@uoguelph.ca
Office Hours: Office hours: by appointment

Teaching Assistant (GTA): Aoife McMahon
Email: amcmah02@uoguelph.ca
Office Hours: Office hours: by appointment

3 Learning Resources

3.1 Required Resources

Essential Clinical Anatomy (Textbook)

Essential Clinical Anatomy, 6th Edition, Anne M. Agur and Arthur F. Dalley

AN Anatomy Atlas (Other)

Atlases available in Bookstore:

- Grant's Atlas of Anatomy, 15th Edition, Anne M. Agur and Arthur F. Dalley
- Atlas of Anatomy, 4th Edition, Gilroy, MacPherson and Ross
- Color Atlas of Anatomy: A Photographic Study of the Human Body, 9th Edition, Rohen, Yakochi and Litjen-Drecoll

Lab Coat (Equipment)

You are required to wear a white laboratory coat in all laboratory sessions (available in bookstore), and wear clothing that covers your legs and feet: long pants and suitable shoes (closed-toed/ensure whole foot is covered) are required. Please be aware that you are not permitted to enter the laboratory if you are not suitably attired.

Gloves (Equipment)

Gloves (nitrile; non-latex) and dissection instruments are provided in the laboratory.

Courselink (Website)

<https://courselink.uoguelph.ca>

This course will make use of the University of Guelph's course website on D2L (via Courselink). Consequently, you are responsible for all information posted on the Courselink page for HK*3401.

3.2 Additional Resources**Undergraduate Calendar (Website)**

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/>

Is the source of information about the University of Guelph's procedures, policies and regulations, which apply to undergraduate programs.

3.3 Note

Your course instructor (lcj) highly recommends that you use Moore's Essential Clinical Anatomy, and at least one anatomy atlas as a reference tools for HK*3401. Older editions the recommended text (Moore's Essential Clinical Anatomy), or any any of the recommended atlases of anatomy are suitable for use in the course.

Image Bank Access: Students registered in University of Guelph Programs have access to images available from Thieme Medical Publishers, Inc. © Copyright 2019. Please read carefully, and adhere to the terms of use set by the publisher.

<http://www.thiemeteachingassistant.com/>

Off Campus Access to Thieme Image Bank:

<https://subzero.lib.uoguelph.ca/login?URL=http://www.thiemeteachingassistant.com/>

<http://www.thiemeteachingassistant.com.subzero.lib.uoguelph.ca/Terms%20of%20Use>

Mini-Skeleton: Students registered in HK*3401 have the opportunity to purchase mini-skeletons (34 inches high) at a special price using a coupon code provided by Anatomy Warehouse (<https://anatomywarehouse.com>). Ordering instructions will be provided via email, and posted on CourseLink.

4 Learning Outcomes**4.1 Course Learning Outcomes**

By the end of this course, you should be able to:

1. Identify and describe the relationships of major anatomical structures present in the back, spinal cord, upper limb, thorax and abdomen.
 2. Identify the proximal and distal attachments of muscles present in the back, upper limb, thorax and abdomen; infer the action(s) of muscles based on their osteological attachments.
 3. Explain the coordinated activity of muscles in producing movements of the body.
 4. Understand and describe the pathway of nerves, from their points of origin as rami of spinal nerves, to their distribution sites; apply your knowledge of the origin and pathway of nerves to determine which structures they innervate.
 5. **Understand and describe the pathway of blood vessels, from their points of origin from the heart, to their distal branches.**
 6. Provide schematic representations of structures present in the back, upper limb, thorax and abdomen, and the relationships of these structures.
 7. Use your knowledge of: a) structures present in the back, upper limb, thorax and abdomen, b) their relationships, and c) the pathway of nerves and blood vessels, to consider applications of anatomy, and assess the impact of perturbations of anatomy.
 8. Demonstrate oral competency, with an emphasis on providing salient information in a peer-teaching exercise.
 9. Work actively, in a small team-based learning group; work together in a respectful and collaborative manner.
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5 Teaching and Learning Activities

5.1 Course Schedule

Laboratory Week	Laboratory Topic	Suggested Textbook Readings
Laboratory 1	Introduction,	Terminology: 3 – 7
September 13 - 15, 2022	Laboratory Group Member Assignment,	Vertebral Column: 46 - 54; 60 - 65

Back 1

		Spinal Cord and Meninges: 29 - 31; 69 - 75
Laboratory 2	Back 2	
September 20 - 22, 2022	Vertebral Column and Spinal Cord:	Clinical Box: 75 Lumbar Puncture, Epidural Anesthesia
	Vertebral Canal; Spinal Cord and Meninges	Muscles of Back: 76 - 85
	Superficial, Intermediate and Deep Back	Osteology of Pectoral Girdle: 92 - 96
	Scapular Region	Posterior Axio-appendicular and Scapulohumeral Muscles: 113 - 117
Laboratory 3	Upper Limb 1	Osteology: 92 - 98
September 27 - 29, 2022	Pectoral Region	Anterior Axio-appendicular Muscles: 112 - 113
	Axilla: Walls, BP, Axillary Artery	Axillary Region and Brachial Plexus: 117 - 129
Laboratory 4	Upper Limb 2	Osteology: 92 - 98
October 4 - 6,	Arm, Cubital Fossa and	Arm: 130 - 134

2022

Anterior Forearm

Cubital Fossa: 136

Anterior Forearm: 136 - 140

Laboratory 5

Upper Limb 3

Hand: 150 - 157

October 13 and
18, 2022

Hand and Posterior
Forearm

Posterior Forearm: 140 - 143

Laboratory 6

Review Laboratory

Test 1

October 20
and 25, 2022

Back and Spinal Cord; Upper Limb

**Online component of practical test:
Wednesday October 26 or Friday October
28, 2022 (during class time);**

**In-lab component of practical test:
Thursday October 27, 2022 (students sign
up for timeslot);**

**Written: Saturday October 29, 2022 at 9:30
- 11:30.**

Laboratory 7	Thorax 1	Thoracic Wall and Apertures: 184 - 189
November 1 and 3, 2022		Movements of Thoracic Wall: 189 - 190
		Muscles, Nerves and Vasculature of Thoracic Wall: 196 - 200
Laboratory 8	Thorax 2	Mediastinum: 217 - 218
November 8 -10, 2022		Middle Mediastinum: 218 - 233
		Superior Mediastinum: 239 - 244
		Posterior Mediastinum: 244 - 248
Laboratory 9	Abdomen 1	Peritoneum and Peritoneal Cavity: 272 - 276
November 15 - 17, 2022		Abdominal Viscera and Blood Supply: 278 - 294
Laboratory 10	Abdomen 2	Anterolateral Abdominal Wall: 255 - 258
November 22 - 24, 2019		Inguinal Region: 263 - 271

Laboratory 11

Review Laboratory

Test 2

November 29 -
December 1,
2022

Thorax and Abdomen

**Written: Wednesday December 7, 2022 at
2:30 - 4:30;**

**Practical: Thursday December 8, 2022
(students sign up for time slot).**

6 Assessments

6.1 Methods of Assessment

ASSESSMENT: Value Date

Learning Course Activity

	(% of Final Grade)		Outcomes
Written Test 1	12.5%	Saturday October 29, 2022 9:30 - 11:30 ROZH 101	Back, Spinal Cord, Upper Limb: Labs 1 – 6 and associated lectures
Practical Test 1	12.5%	Online and In-lab Components Practical - Online: Wednesday October 26 or Friday October 28, during class time Practical - In-lab: Thursday October 27 (students sign up for time-slot) OVC 1610	Back, Spinal Cord, Upper Limb: Labs 1 – 6 and associated lectures
Written Test 2	12.5%	Wednesday December 7, 2022 2:30 - 4:30 Location: TBA	Thorax and Abdomen: Labs 7 – 11 and associated lectures
Practical Test 2	12.5%	Thursday December 8, 2022	Thorax and Abdomen:

OVC 1610 (students sign up for time-slot)

Labs 7 – 11 and associated lectures

Content Quizzes	20%	Monday September 19, 2022 (4 x 5% each) Monday October 3, 2022 Monday November 14, 2022 Monday November 21, 2022	1 – 7, 9	Labs 1 – 11 and associated lectures
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Content quizzes will be held online using Respondus.

Content quizzes will be available on CourseLink between 8:00 and 21:00 on quiz days.

Group Assignment 1A and 1B - Visualize Anatomy	5%	Students prepare schematic representation of the concept of 'Formation of a Spinal Nerve': Distribution of Sensory Versus Motor Information and Segmental Innervation.	8 - 9	Labs 1 – 2 and associated lectures
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Group Assignment 1A - Individual Drawing: Due Monday September 26, 2022 at noon (completion mark only);

Group Assignment 1B - Group Drawing: Due Friday September 30, 2022 at noon (5%).

Group Assignment 2A, 2B and 2C - Interpret Anatomy	10%	Students prepare schematic representation of the Brachial Plexus .	1 – 7, 9	Labs 3 - 4 and associated lectures
<p>Group Assignment 2A - Individual Drawing: Due Wednesday October 5, 2022 at noon (completion mark only);</p>				
<p>Group Assignment 2B - Group Drawing: Due Friday October 7, 2022 at noon (5%);</p>				
<p>Group Assignment 2C - Online Quiz: students interpret schematic representation of the brachial plexus; quiz held during class time (5%).</p>				
<p>Quiz will be held online using Respondus.</p>				
<p>Quiz will be available on CourseLink between 8:00 and 21:00 on Friday October 7, 2022.</p>				
Group Assignment 3A and 3B - Communicate Anatomy	15%	Student presentation groups (4 per 8 - 9 group) will prepare a teaching-based presentation using Powerpoint slides with voice-over. Presentation topic: Summary of the Brachial Plexus .	Student groups present on: The Brachial Plexus - A Summary.	
<p>Group Assignment 3A - Draft Presentation: Due Friday October 14, 2022 at noon (completion mark</p>				

only);

Group Assignment 3B - Final

Presentation: Due Friday November 4, 2022 at noon (15%).

Please Note: Dates and times of assignment submission due dates will be strictly adhered to; a penalty of 10% per day will apply to late submissions.

7 Course Statements

7.1 Grading

If you are absent from classes during the semester, you will be expected to make up missed lecture and laboratory material on your own.

8 Department of Human Health and Nutritional Sciences Statements

8.1 Academic Advisors

If you are concerned about any aspect of your academic program:

- Make an appointment with a program counsellor in your degree program. [B.Sc. Academic Advising](#) or [Program Counsellors](#)

8.2 Academic Support

If you are struggling to succeed academically:

- Learning Commons: There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist. <http://www.learningcommons.uoguelph.ca/>

- Science Commons: Located in the library, the Science Commons provides support for physics, mathematic/statistics, and chemistry. Details on their hours of operations can be found at: <http://www.lib.uoguelph.ca/get-assistance/studying/chemistry-physics-help> and <http://www.lib.uoguelph.ca/get-assistance/studying/math-stats-help>

8.3 Wellness

If you are struggling with personal or health issues:

- Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance. <https://www.uoguelph.ca/counselling/>
- Student Health Services is located on campus and is available to provide medical attention. <https://www.uoguelph.ca/studenthealthservices/clinic>
- For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations. <http://www.selfregulationskills.ca/>

8.4 Personal information

Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) <http://www.e-laws.gov.on.ca/index.html>. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes.

For more information regarding the Collection, Use and Disclosure of Personal Information policies please see the Undergraduate Calendar.

(<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/intro/index.shtml>)

8.5 Course Offering Information Disclaimer

Please note that course delivery format (face-to-face vs online) is subject to change up to the first-class day depending on requirements placed on the University and its employees by public health bodies, and local, provincial and federal governments. Any changes to course format prior to the first class will be posted on WebAdvisor/Student Planning as they become available.

9 University Statements

9.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

9.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

9.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

9.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

9.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

9.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community—faculty, staff, and students—to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

9.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

9.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars
<https://www.uoguelph.ca/academics/calendars>

9.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

9.10 Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g.. final exam or major assignment).

9.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campus/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campus/spaces/#ClassroomSpaces>

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.
