

MDPH 618 Anatomy and Physiology for Medical Physics (3 credits)

Course outline and schedule – Fall 2020

2:00-3:30PM Monday and Wednesday

Offered by: Medical Physics Unit ([Faculty of Medicine](#))

Administered by: Graduate Studies

Overview:

Medical Physics : Basic anatomy, physiology and oncology. The review of statistics will focus on study design and hypotheses testing in health studies. Focus on anatomic structures, their relationships, their cross-sectional and planar projections. Imaging and radiation treatment planning methods will be reviewed by anatomic region, as they apply to: central nervous system, head and neck, thorax, abdomen, pelvis and extremities.

Terms: Fall 2020

Instructors: Parker, William A; Popovic, Marija; Serban, Monica; Ybarra, Norma (Fall)

Restriction(s): Only open to students enrolled in the MSc in Medical Radiation Physics program.

Evaluation: Assignments and labs 40%, presentation 20%, final exam

Course Content:

Date	Subject	Instructor
Sep 2, 2020	Introduction to Radiation Treatment and Cancer Treatment	William Parker ¹
Sep 9, 2020	Canadian Cancer Statistics	William Parker ²
Sep 14, 2020	Introduction to Anatomy, Pathology, Histology: Part I	Norma Ybarra ¹
Sep 16, 2020	Introduction to Anatomy, Pathology, Histology: Part II	Norma Ybarra ²
Sep 21, 2020	Introduction to Anatomy for Medical Physics	Marija Popovic ¹
Sep 23, 2020	Imaging – Part I -- Anatomical references for medical imaging –	William Parker ³
Sep 28, 2020	Imaging - Part II - x-ray, CT kV, MV, contrast agents	William Parker ⁴
Sep 30, 2020	Imaging - Part III - Ultrasound, MRI, Nuclear	William Parker ⁵
Oct 5, 2020	Student presentations	All 3 instructors
Oct 7, 2020	Introduction to Eclipse and Treatment planning	William Parker ⁶
Oct 12, 2020	Central Nervous System (CNS) – Part I	Norma Ybarra ³
Oct 14, 2020	Central Nervous System (CNS) – Part II	Norma Ybarra ⁴
Oct 19, 2020	Central Nervous System (CNS) – Part II	Marija Popovic ²
Oct 21, 2020	Central Nervous System (CNS) – Lab	Marija Popovic ³
Oct 26, 2020	Pelvis – Part I	Norma Ybarra ⁵
Oct 8, 2020	Pelvis – Part II	Monica Serban ¹
Nov 2, 2020	Pelvis - Lab	Monica Serban ²
Nov 4, 2020	Thorax– Part I	Norma Ybarra ⁶
Nov 9, 2020	Thorax– Part II	Monica Serban ³
Nov 11, 2020	Gating and motion management	Monica Serban ⁴
Nov 16, 2020	Thorax – Lab	Monica Serban ⁵
Nov 18, 2020	Abdomen– Part I	Norma Ybarra ⁷
Nov 23, 2020	Abdomen – Part II	Marija Popovic ⁴
Nov 25, 2020	Abodmen - Lab	Marija Popovic ⁵
Nov 30, 2020	ENT– Part I	Norma Ybarra ⁸
Dec 2, 2020	ENT– Part II	Marija Popovic ⁶
Dec 7, 2020	ENT - Lab	Marija Popovic ⁷

McGill Policy Statements

Required Course Outline Statements [in keeping with Senate resolutions]

Language of Submission:

“In accord with McGill University’s Charter of Students’ Rights, students in this course have the right to submit in English or in French any written work that is to be graded. This does not apply to courses in which acquiring proficiency in a language is one of the objectives.” (Approved by Senate on 21 January 2009 - see also the section in this document on Assignments and Evaluation.)

Note: In courses in which acquiring proficiency in a language is one of the objectives, the assessments shall be in the language of the course.

The FRENCH TRANSLATION about this right may also be used on your course outline:

« Conformément à la Charte des droits de l’étudiant de l’Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l’un des objets est la maîtrise d’une langue). »

Academic Integrity:

“McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures” (see www.mcgill.ca/students/srr/honest/ for more information). (Approved by Senate on 29 January 2003)

The FRENCH TRANSLATION of the Academic Integrity statement may also be used on your course outline:

« L’université McGill attache une haute importance à l’honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l’on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l’étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site www.mcgill.ca/students/srr/honest/). »

Additional Statements

The following statements are optional and you are encouraged to include them on course outlines as appropriate:

- “The [University Student Assessment Policy](#) exists to ensure fair and equitable academic assessment for all students and to protect students from excessive workloads. All students and instructors are encouraged to review this Policy, which addresses multiple aspects and methods of student assessment, e.g. the timing of evaluation due dates and weighting of final examinations.”
- Instructors may avail themselves of software freely available on the internet that can be used for text-matching. If you intend to use such software, it is suggested that you inform students in writing before the end of the add/drop period of your intention to do so: “Note that to support academic integrity, your assignments may be submitted to text-matching or other appropriate software (e.g., formula-, equation-, and graph-matching).”

- “© Instructor-generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures.”

- “As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the [Office for Students with Disabilities](#), 514-398-6009.”
- “McGill University is on land which has long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinabeg nations. We acknowledge and thank the diverse Indigenous people whose footsteps have marked this territory on which peoples of the world now gather.”

The FRENCH TRANSLATION of the land acknowledgement statement may also be used on your course outline:

« L’Université McGill est sur un emplacement qui a longtemps servi de lieu de rencontre et d’échange entre les peuples autochtones, y compris les nations Haudenosaunee et Anishinabeg. Nous reconnaissons et remercions les divers peuples autochtones dont les pas ont marqué ce territoire sur lequel les peuples du monde entier se réunissent maintenant. »

- “[End-of-course evaluations](#) are one of the ways that McGill works towards maintaining and improving the quality of courses and the student’s learning experience. You will be notified by e-mail when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.”
- In keeping with McGill’s preparedness planning strategies with respect to potential pandemic or other concerns, the Administration suggests that all course outlines contain the statement: “In the event of extraordinary circumstances beyond the University’s control, the content and/or evaluation scheme in this course is subject to change.”
- Additional policies governing academic issues which affect students can be found in the McGill Charter of Students’ Rights (see [document](#)).
- McGill has policies on sustainability, paper use and other initiatives to promote a culture of sustainability at McGill. (See the [Office of Sustainability](#).)
- Guidelines for the use of mobile computing and communications (MC2) devices in classes at McGill have been approved by the APC. Consult the [Guidelines](#) for a range of sample wording that may be used or adapted by instructors on their course outlines.