

Clinical Neuroanatomy



SYLLABUS

VU Amsterdam Summer School

20-31st July 2026

Any general questions for the Summer School support team? Contact amsterdamsummerschool@vu.nl.



Course Details

Title	Clinical Neuroanatomy
Coordinator(s)	dr. G.J. Schenk, dr. P.M. Bouman
Other lecturers	various
Form(s) of tuition	On campus, Anatomy lab
Approximate contact hours	56
Approximate self-study hours	28

Teaching staff (in order of appearance)

Dr. Piet Bouman

Dr. Geert Schenk

Course description

The course will focus on the central nervous system from different viewpoints. At course commencement, study groups will be formed and an introduction to neuroanatomy will be given, to brush up participants' knowledge and to get everyone on the same level. In forming the study groups, we aim to create groups based on background knowledge level and/or profession. Then, the course will continue to approach the brain from an outside-in perspective, starting with neurotrauma in combination with radiology. The next subject will be brain vasculature, and the first week will be finished with an expert session on functional brain networks and their impact on brain functioning.

The second week will consist of expert sessions on cranial nerves and their functioning, followed by a session on neurodegeneration and neuroinflammation from different disease perspectives.

The expert sessions will be followed by dissection lectures in the anatomy lab, in which the day's topic will be covered by inspecting human brains and different examples of e.g., diseases or specific structures.

Course Wednesdays will be used for practical sessions: on the first Wednesday of the course, a practical session will be held in which we will get creative and handcraft anatomical structures using clay. The topic of the second practical will be Transcranial Magnetic Stimulation and its research applications.

For the last Thursday morning, a field trip to anatomical museum Vrolik has been planned, in which participants get a chance to view specimen of different anatomical structures, each with their own story.

After each day, students will be challenged to formulate potential exam questions (with answers) based on the day's subject. During the second week, students will give a short presentation with their study groups, highlighting e.g., a new research insight, fun fact or challenge about the day's subject from a scientific perspective. The days will be structured with facultative Q&A's with the course coordinators.

Altogether, the course covers bench to bedside: students will obtain hands-on in-depth knowledge of the anatomy of the brain on a structural, functional and systemic level, and will be able to relate this knowledge directly to specific symptoms in patients.

Due to its broad nature, this course also provides an excellent opportunity to sharpen or refresh one's anatomical knowledge for any professional working in a brain-related setting. The expert sessions and dissection lectures provide good ground to tailor the course to the participants' personal needs and desires, while offering a possibility to connect and expand your professional network. Thereby, the course would be a good fit for e.g. physical therapists, assistant professors, high school teachers, rehabilitation therapists, etc.

NB the course schedule may change due to experts' availability

Learning objectives

By the end of this course:

- You will be able to name different areas within different brain regions and their function, as well as the cranial nerves, when shown a brain or image thereof
- You will understand connectivity patterns of the various known neuroanatomical systems
- You will be able to deduct possible neuroanatomical damage when presented with clinical symptoms of a (hypothetical) patient
- You will be able to logically infer symptoms following brain damage, on the basis of your understanding of the structure and function of the brain
- You will obtain a mental 3D image of the brain, through which you will be able to relate different anatomical structures and their functioning to each other

Assignments and Assessment

1. After each day of the course, students will formulate a potential exam question with answer on the day's subject. At the end of the course, the students will take an exam which covers the entire course. If good enough, students' questions may be part of the exam. The exam will be pass/fail

2. During the second week of the course, students will prepare preparations on the day's topic in subgroups. The presentations will be assessed together with the other students. In these presentations, the groups are challenged to dive into the literature and find the latest insights, fun facts or highlight a specific part of the subject that they think composes the most challenges in the field.

3. At the last day of the course, students will take an exam which covers the content of the entire course.

4. Attendance is mandatory for the expert sessions and the dissection sections – students are requested to indicate whether or not they are planning to attend the field trip.

Learning goal	Formative assessment	Cognitive level (Bloom)	Summative assessment	Weighing
Naming different areas and their function	Formulated exam questions	Knowledge	Exam	20/40
Understanding connectivity patterns	Formulated exam questions	Comprehension	Exam	20/40
Deducting neuroanatomical damage based on symptoms	Student presentation/formulated exam questions	Application/Evaluation	Exam	40/20/40
Logically inferring symptoms based on damage	Student presentations/formulated exam questions	Analysis/Synthesis	Exam	40/20/40
Mental 3D image of the brain	n/a	Evaluation	Exam	40

Rubrics will be published on canvas at course commencements approaches.

Provisional reading list

For participants to explore:

www.anatomy-neurosciences.com/education

www.neuroanatomy.ca

Course Schedule

July 20st		July 21st	July 22nd	July 23rd	July 24th
10.00 Introduction to course	08.30 - 9.00	Q&A (facultative)	Q&A (facultative)	Q&A (facultative)	Q&A (facultative)
11.00 group forming	9.00 - 9.30	Check-in	Check-in	Check-in	Check-in
12.30-15.00 Introduction to Neuroanatomy	9.30 - 12.30	Expert session Trauma	Practical crafting/drawing	Expert session Vasculature	Expert session Networks by
X	12.30 - 13.30	Lunch break	X	Lunch break	Lunch break
X	13.30 - 16.00	Dissection practical 1	X	Dissection practical 2	13.30 mid- course evaluation
X	16.30 - 17.00	Reflection	X	Reflection	15.00 end

Day	July 27th	July 28th	July 29th	July 30st	July 31st
08.30 - 9.00	Q&A (facultative)	Q&A (facultative)	Q&A (facultative)	X	X
9.00 - 9.30	Check-in	Check-in	Check-in	X	X
9.30 - 12.30	Expert session Cranial Nerves	Expert session Neurodegeneration & Inflammation	TMS practical /crafting practical	Field trip	9.30 Q&A exam
12.30 - 13.30	Lunch break	Lunch break	X	X	10.30 exam
13.30 - 16.00	Dissection practical 3	Dissection practical 4	X	Dissection practical 5	12.30-13.30 lunch break
16.30 - 17.00	Reflection	Reflection	X	Reflection	13.30-15.00 exam discussion, hall of fame, closing

NB Course schedule may be subject to changes

