Course Syllabus
MBNS 753 Clinical Neuroscience
Academic Year 2025

Course ID and Name: MBNS 753 Clinical Neuroscience

Course coordinator: Assoc. Prof. Vorasith Siripornpanich, M.D., Ph.D. (Neurosciences)

Dip. Thai Board of Pediatrics

Dip. Thai Board of Pediatric Neurology

Tel: 02-441-9003-7 ext. 1206, 1311

Email: vorasith.sir@mahidol.edu

Instructors:

1. Assoc. Prof. Vorasith Siripornpanich, M.D., Ph.D.
2. Asst. Prof. Jiraporn Panmanee, Ph.D.
3. Lect. Siraprapa Boobphahom, Ph.D.
4. Lect. Kittiphong Paiboonsukwong, M.D., Ph.D.
5. Guest lecturer from Prasat Neurological Institute
6. Guest lecturer from Srithanya Hospital

Supporting staffs:

1. Ms Kanda Putthaphongpheuk
2. Ms Somsong Phengsukdaeng

Credits: 2 (2-0-4)

Curriculum: Doctor of Philosophy Program in Neuroscience

Semester offering: First semester

Pre-requisites: None

Course learning outcomes (CLOs)

Upon completion of this course, students are able to:

1. Demonstrate and follow the ethical code of conduct and show moral responsibility (PLO1)
2. Explain the fundamental concepts on the clinical characteristics, diagnostic criteria, theories, and treatment of common neurological and psychiatric disorders (PLO2)
3. Integrate theoretical knowledge in basic neuroscience and clinical information for understanding the brain and mental health disorders (PLO2)
4. Perform effectively as a leader and member of the teamwork during clinical case studies and group assignments (PLO4)
5. Demonstrate information technology and interpersonal communication skills through presentation and discussion of interesting topics in clinical fields (PLO5)

Alignment of teaching and assessment methods to course learning outcome:

Course learning outcome	Teaching method	Assessment method
1. Demonstrate and follow the ethical code of conduct and show moral responsibility	(1) Group discussion about problems related to morality and ethics in clinical practice (2) Demonstrate correct method of citing references, with case studies and assignments (3) Assign research tasks, data collection and presentation with emphasis on honesty	(1) Evaluation from class discussion and group activities (2) Evaluation from avoiding plagiarism in report submission
2. Explain the fundamental concepts on the clinical characteristics, diagnostic criteria, theories, and treatment of neurological and psychiatric disorders	(1) Lecture (2) Case-based approach (3) In-class discussion	(1) Written examination (2) Oral examination (3) Reports (4) Class participation

3. Integrate theoretical knowledge in basic neuroscience and clinical information for understanding the brain and mental health disorders	(1) Lecture (2) Hospital visiting (3) Case-based approach and Case discussion (4) In-class discussion	(1) Written examination (2) Oral examination (3) Class participation
4. Perform effectively as a leader and member of the teamwork during clinical case studies and group assignments	(1) Group discussion and assignment (2) Assign case studies for report with complex research questions that allow students to design and plan problem solving method as a group	(1) Evaluation from direct observation during group activity (2) Evaluation from efficiency and efficacy of assigned topics (3) Evaluation of interpersonal skills from colleagues or related persons
5. Demonstrate information technology and interpersonal communication skills through presentation and discussion of interesting topics in clinical fields	(1) Individual assignment implementing mathematical and statistical skills	(1) Presentation of assigned topic with suitable use of information technology, mathematical and statistical analyses in research articles and in student's research project (2) Oral examination

Course description:

Classification of neurological and psychiatric diseases, symptomatology of neurological diseases, headache and migraine headache, common neurological diseases in children and adult, brain developmental disorders, common psychiatric diseases, schizophrenia, mood disorders, neurological examination, investigation for neurological diseases, electroencephalography, psychiatric interview and mental status examination, neuropsychological tests, consciousness and sleep, principle of treatment in neurological and psychiatric diseases, medical ethics

Course schedule:

Date: Monday to Friday, except Thursday

Time: 9.30 am – 3.00 pm

Rooms: A409, Building A, Institute of Molecular Biosciences

TIME SCHEDULE FOR MBNS 753 CLINICAL NEUROSCIENCE

1ˢᵗ SEMESTER 2025

Course Coordinator: Dr.Vorasith Siripornpanich

Lecture room: Room A409, fourth floor, Building A, Institute of Molecular Biosciences

Date & Time	Topic	Class activity	Instructor
Wed 13 Aug 25 9.30-10.00	Course orientation	Lecture Class discussion	Vorasith
Wed 13 Aug 25 10.00-12.00	L1.1: Overview of Clinical Neuroscience, why scientist need to learn? L1.2: Disease categories: ICD and DSM systems	Lecture Class discussion	Vorasith
Wed 13 Aug 25 13.00-15.00	L2: Neurological Examination and Mental Status Examination	Lecture Class discussion	Vorasith
Fri 15 Aug 25 9.30-11.30	L3: Headache and Migraine	Lecture Class discussion	Kittiphong
Mon 18 Aug 25 9.30-11.30	L7: Electrodiagnostic in clinical setting	Lecture Class discussion	Vorasith
Tue 19 Aug 25 9.00-11.00	L6: Hospital Experience: Adult Neurology Clinic* *Prasat Neurological Institute	Observation Case-based discussion	Metha
Fri 22 Aug 25 9.30-11.30	L4: Clinico-anatomical correlation of neurological signs and symptoms	Lecture Class discussion	Sarittha
Mon 25 Aug 25 9.30-11.30	L11: Dementia and Alzheimer's disease	Lecture Class discussion	Jiraporn
Wed 27 Aug 25 9.00-11.00	L9: Hospital Experience: Child Neurology Clinic* *Golden Jubilee Medical Center	Observation Case-based discussion	Vorasith

Wed 27 Aug 25 13.00-15.00	L5.1: Diseases affecting consciousness L5.2: Sleep and sleep disorders	Lecture Class discussion	Vorasith
Fri 29 Aug 25 10.00-12.00	L12: Psychosis and Schizophrenia* *Srithanya Hospital	Lecture Class discussion	Apichart
Fri 29 Aug 25 13.00-15.00	L13: Case studies in Psychiatry* *Srithanya Hospital	Lecture Case-based discussion	Apichart
Mon 1 Sep 25 9.30-11.30	L8: Neuroscience of mood disorders	Lecture Class discussion	Vorasith
Wed 3 Sep 25 9.30-11.30	L14: Medical ethics for clinical research	Lecture Class discussion	Kittiphong
Fri 5 Sep 25 9.30-11.30	L10: Drug design for precision medicine	Lecture Class discussion	Jiraporn
Mon 8 Sep 25 9.30-11.30	L15: Biosensors for clinical medicine	Lecture Class discussion	Siraprapa
Wed 10 Sep 25 9.30-11.30	Student presentation (to be announced)	Class discussion	Jiraporn / Vorasith
Fri 12 Sep 25 9.00-12.00	Case-based approach / Oral examination	-	Vorasith
Mon 15 Sep 25 9.00-12.00	Written examination	-	Somsong

Assessment criteria:

Assessment criteria	Assessment method	Scoring rubrics
Written examination (30%)	(1) Multiple choices questions (2) Short essay questions	Scoring directly from true/false answer

Oral examination or Case-based approach (30%)	(1) Direct observation	Scoring directly from interview skills, thinking process, and conceptual framework
Student Reports (20%)	(1) Reports	Scoring directly from quality of report
Presentation of assigned topic (10%)	(1) Short presentation	(1) Information quality and organization of topic presented (2) Verbal communication and English proficiency (3) Non-verbal communication (4) Visual tools
Class attendance and participation in in-class discussion (10%)	(1) Numbers of classes signed in (2) Direct observation	Scoring directly from times of signing in

Student's achievement will be graded using symbols: A, B+, B, C+, C, D+, D and F based on the criteria as follows:

Percentage	Grade
85 -100	A
80 – 84	B+
70 - 79	B
60 - 69	C+
50 - 59	C
45 - 49	D+
40 – 44	D
< 40	F

Presentation performance evaluation rubric (10% of total score)					
Criteria	**Excellent** (score = 5)	**Very good** (score = 4)	**Adequate** (score = 3)	**Limited** (score = 2)	**Poor** (score = 1)
Information quality and organization of topic presented (including answering the questions) (2.5%)	Main points are explicitly presented with impressive detail and organization. Information is directly linked to the topic of presentation.	Main points are presented with good amount of detail. Information is well-organized and linked to the topic given.	Main points are somewhat clear but could add some more detail. Information is organized and linked to the topic given.	Main points are not clear and lack detail. Information is loosely organized and some are off-topic.	Main points are missed and have no detail. Information is disorganized and off-topic.
Verbal communication and English proficiency (2.5%)	Speaker's voice is very steady, clear and confident. Spoken language is very fluent and grammatically corrected.	Speaker's voice is steady and confident. Spoken language is fluent and mostly grammatically corrected.	Speaker's voice is moderately confident but could be developed. Spoken language is mediocre and has some grammatical errors.	Speaker's voice is unsteady and lacks confident. Use of spoken language needs to be improved, and many errors can be recognized.	Speaker fails to deliver proper presentation orally. Unable to deliver presentation via spoken English language.
Non-verbal communication (2.5%)	Speaker appears to be comfortable and confident. Effective uses of eye contacts and gestures are presented to support the presentation.	Speaker appears to be fairly confident. Eye contacts and gestures are generally used.	Speaker appears to be generally at ease. Moderate use of eye contact and gesture but not very effective.	Speaker appears uneasy, insecure or panicked. Eye contact and gesture are rarely used.	Speaker is obviously uncomfortable for presentation. No eye contact or gesture is presented.
Visual tools (2.5%)	Visual aids are very creative, easy to read and greatly enhance presentation.	Visual aids are typically clear and easy to follow.	Visual aids are good in terms of quality, but some points can be improved.	Limited visual aids are used or difficult to help audiences follow the topic.	No visual aids are used, and presentation is not interested by audiences.

Date revised: July 16th, 2025