Form: Course Syllabus	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
	Number and Date of Revision or Modification	
	Deans Council Approval Decision Number	2/3/24/2023
	The Date of the Deans Council Approval Decision	23/01/2023
	Number of Pages	06

1.	Course Title	Clinical Reasoning in Physiotherapy
2.	Course Number	1801708
3.	Credit Hours (Theory, Practical)	3 credit hours
	Contact Hours (Theory, Practical)	3 theory, 2 practical
4.	Prerequisites/ Corequisites	None
5.	Program Title	MSc in Physiotherapy / Neuro-musculoskeletal
6.	Program Code	1801
7.	School/ Center	The University of Jordan
8.	Department	School of Rehabilitation Sciences
9.	Course Level	Postgraduate
10.	Year of Study and Semester (s)	2024-2025/ first semester
11.	Other Department(s) Involved in Teaching the Course	NA
12.	Main Learning Language	English
13.	Learning Types	✓Face to face learning ☐Blended ☐Fully online
14.	Online Platforms(s)	✓Moodle ✓Microsoft Teams
15.	Issuing Date	October 2022
16.	Revision Date	October 2024

17. Course Coordinator:

Name: Jennifer Muhaidat	Contact hours: Monday & Wednesday 1:30-2:30
Office number: 321	Phone number: 23215
Email: j.muhaidat@ju.edu.jo	

18. Other Instructors:

NA

19. Course Description:

This course aims to provide students with theoretical and practice-based knowledge on the nature of clinical reasoning and the process of clinical decision-making in physiotherapy practice. A focus of the course will be on the place of interests and motivations in shaping the behavior and decisions of therapists and patients in relation to collaborative decision making, patient-centered care, multidisciplinary decision making, shared decision making, language, communication, and decision aids that involve clients. Students will be required to apply clinical reasoning skills to a range of conditions using case studies to inform clinical decision-making. They will select and evaluate an actual patient to practice clinical reasoning on and provide justification on their decisions and how that reflected in the practice.

20. Program Intended Learning Outcomes: (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program)

1. Develop the skills needed to adopt the evidence-based practice in the field of physiotherapy for neurological and musculoskeletal disorders.
2. Utilize clinical reasoning knowledge and skills to guide assessment, measurement, and providing care to clients with neuromusculoskeletal conditions.
3. Criticize and adopt physiotherapy theories, approaches, and frameworks in the practice of physiotherapy.
4. Build the ability to work and communicate effectively with clients, peers, and healthcare providers.
5. Adhere to the ethical and professional standards in research and clinical practice according to the national and international standards of physiotherapy practice.
6. Develop critical thinking and problem-solving skills to implement research projects that improve clinical practices.
7. Engage in continuous professional development activities.

21. Course Intended Learning Outcomes: (Upon completion of the course, the student will be able to achieve the following intended learning outcomes)

1. Debate various clinical reasoning models and frameworks
2. Analyze clinical case scenarios using clinical reasoning models
3. Solve ethical dilemmas in clinical practice through clinical reasoning
4. Discuss the interaction between evidence-based practice and clinical reasoning
5. Reflect and self-assess clinical practice using reflection models
6. Plan future actions to improve clinical reasoning

Course ILOs	The learning levels to be achieved					
	Remembering	Understanding	Applying	Analysing	evaluating	Creating
CL1				✓		
CL2				✓		
CL3				✓		
CL4		✓				
CL5					✓	
CL6			✓			

22. The matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program:

SLOs SLOs of the course	SLO (1)	SLO (2)	SLO (3)	SLO (4)	SLO (5)	SLO (6)	SLO (7)
1. Debate various clinical reasoning models and frameworks			x				
2. Analyze clinical case scenarios using clinical reasoning models		x					
3. Solve ethical dilemmas in clinical practice through clinical reasoning						x	
4. Discuss the interaction between evidence-based practice and clinical reasoning	x						
5. Reflect and self-assess clinical practice using reflection models	x						
6. Plan future actions to improve clinical reasoning							x

23. Topic Outline and Schedule:

Week	Topic	ILO/s Linked to the Topic	Learning Types (Face to Face/ Blended/ Fully Online)	Platform Used	Synchronous / Asynchronous Lecturing	Evaluation Methods	Learning Resources
1	Introduction to the course Introduction to clinical reasoning in Physiotherapy	1	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
2	Self-assessment and reflective practice	2, 5	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Selected articles
3	Clinical reasoning models: ICF	1,2,5	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Higgs et al., 2019 Selected articles
4	Clinical reasoning models – HOAC II	1,2,5	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
5	Clinical reasoning and standardized tests and statistics	2,4,5,6	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
6	Ethics and clinical reasoning	2-6	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017

							Selected articles
7	Collaborative and transdisciplinary reasoning	2-5	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
8	**Midterm theory exam**						
9	Evidence-based practice and clinical reasoning	2,4	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
10	Using guidelines, scores and aids in reasoning	2,4,5,6	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
11	Cognitive biases and errors in reasoning	1,2,3,5,6	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
12	Clinical reasoning and virtual services	2-6	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
13	Selected clinical cases in Neurology Physiotherapy	2-6	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017 Selected articles
14	Selected Clinical cases in Orthopedic Physiotherapy	2-6	Face to face	MS teams/ e-learning	Synchronous	Written exams Discussions Portfolio	Musolino and Jensen, 2020 Higgs et al., 2019 Cooper and Frain, 2017

						Selected articles

24. Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	ILO/s Linked to the Evaluation activity	Period (Week)	Platform
Midterm exam	30	Weeks 1-7	1-6	Week 8	Face to face
Project See appendix 1 for details	30		1-6	Part I week 10 Part II week 12	E-learning
Final examination	40	Weeks 1-15	1-6	To be announced by the registrar	Face to face

25. Course Requirements:

Each student needs access to a computer, tablet, or mobile phone.
Each student needs to ensure they have adequate internet connection, access to course platforms such as E-learning, and MS teams.
Each student needs to have a copy of the required references.

26. Course Policies:

A- Attendance policies:

- Students are expected to be on time.

- Repeated tardiness or leaving early will not be accepted.

- Students who miss class (or any portion of class) are responsible for the content. Online classes will be recorded and uploaded on Microsoft Teams. It is the student's responsibility to review the material of classes they missed.

- Attendance will be taken on every class throughout the semester.
- Absence of more than 15% of all the number of classes) requires that the student provides an official excuse to the instructor and the dean.
- If the excuse was accepted, the student is required to withdraw from the course.
- If the excuse was rejected, the student will not be allowed to sit for the final exam according to the regulations of The University of Jordan.

B- Absences from exams and submitting assignments on time:

- The instructor will not do any make-up exams.
- Exceptions for make-up exams and late submission of class assignments will be made on a case-by-case basis for true personal emergencies that are described as accepted in the regulations of the University of Jordan (e.g., documented medical, personal, or family emergency).
- It is the student's responsibility to contact the instructor within 24 hours of the original exam time to schedule a make-up exam.
- Late submission of assignments will result in deduction of 2 points for each day of delay.
- Makeup for the final exam may be arranged according to the regulations of The University of Jordan.

C- Health and safety procedures:

- Make sure to have sanitization measures ready for each lab.
- Use proper body mechanics to avoid any work-related strains or stress.
- Students will not be in direct contact with patients during this course.

D- Honesty policy regarding cheating, plagiarism, and misbehavior:

- Students are expected to observe all University guidelines pertaining to academic misconduct.
- Any work submitted by a student for academic credit must be the student's own work. Submission of work taken directly from another source (e.g., book, journal, internet, or another student work) will be considered plagiarism and the student/group will get a zero grade on that homework. In addition, if copying occurred, both the student who copied the work and the student who gave material to be copied (if applicable) will receive a zero for the assignment.
- All submitted work will be checked for the use of Artificial Intelligence resources. Usage of such resources should not exceed the percentage set in the homework guidelines.
- Students are expected to do work required for homework on their own. Asking other instructors at the University, staff, or other students to assist in or do any part of the assignment will negatively affect their grade on that assignment. The course instructor is the person the student needs to talk to if she/he has any difficulties pertaining to an assignment or project and is strongly encouraged to schedule an appointment with the instructor if such difficulties arise during the semester.
- Course materials prepared by the instructor, together with the content of all lectures and review sessions presented by the instructor are the property of the instructor. Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited.
- Any forms of academic misconduct will be handled according to the University of Jordan guidelines.

E- Grading policy:

- Grading for this course will be determined based upon the accumulation of points for variety of assignments and exams.
- All work will be evaluated on completeness, organization, clarity of information, and the integration and application of the material.

F- Available university services that support achievement in the course:

- The University of Jordan provides many services to support social, health, and mental well-being of students in general and students with disabilities in specific. Students are advised to visit the Deanship of Students Affairs to learn more about those services.
- If you are a student with a disability for which you may request accommodations, please notify the instructor as soon as possible (email is acceptable) so the appropriate accommodations for this course can be made. Also, notify the staff of Services for Student with Disabilities (Deanship of Students Affairs) as soon as possible.

27. References:

A- Required book(s), assigned reading and audio-visuals:
- Musolini and Jensen (2019) Clinical Reasoning and Decision Making in Physical Therapy: Facilitation, Assessment and Implementation. Slack
- Higgs, Jensen, Loftus and Christensen (2019). Clinical reasoning in the health professions. Elsevier.
- Cooper and Frain (2017). ABC of clinical reasoning. Wiley Balckwwell.

B- Recommended books, materials, and media:
- Atkinson HL, Nixon-Cave K (2011). A tool for clinical reasoning and reflection using the International Classification of Functioning, Disability, and Health (ICF) framework and patient management model. Physical therapy, 91 (3): 416-430.
- Rothstein, Echternach and Riddle (2003). The Hypothesis-Oriented Algorithm for Clinicians II (HOAC II): A Guide for Patient Management. Physical therapy, 83 (5): 455-470.
- Additional articles posted on e-learning.
- Furze, Gale, Black, Cochran and Jensen (2015). GailClinical Reasoning: Development of a Grading Rubric for Student Assessment. Journal of Physical Therapy Education, 29(3):p 34-45.

28. Additional information:

Students with disabilities:
- If you are a student with disability, please contact the course coordinator at the beginning of the term to inform them of any needs or adjustments you might have.
- According to University regulations, some students with disabilities can be allowed additional time during exams. This extra time is granted by an official letter from the University administration. Please discuss with the course coordinator your need for such extra time at the start of the term.
- All information you provide to the course coordinator will be dealt with confidentially.

Course material and copy rights:
- All material prepared by the course coordinator for the purposes of this course are the intellectual property of the course coordinator. It is only intended for the personal use of students for their individual learning.

Name of the Instructor or the Course Coordinator:	Signature:	Date:
Jennifer Muhaidat	JM	6.10.2024
Name of the Head of Quality Assurance Committee/ Department	Signature:	Date:
Mais AlDoghmi	MD	…24/10/2024
Name of the Head of Department	Signature:	Date:
Mais AlDoghmi	MD	
		…24/10/2024
Name of the Head of Quality Assurance Committee/ School or Center	Signature:	Date: 24/10/2024
………Prof. Kamal Hadidi.	KAH	
Name of the Dean or the Director	Signature:	Date: 24/10/2024
Prof. Kamal Hadidi	KAH	

Appendix 1
Project details

This project aims to encourage students to develop a critical reflection on their clinical practice to identify their clinical reasoning abilities. Moreover, this project aims to enhance critical thinking and clinical reasoning skills using real-life client cases.
This project is divided into three parts.

Part I: Reflection and self-assessment (20%)

This part of the project aims to grant students experience in reflecting on their actions. Each student will reflect on his/her clinical decisions in assessing and designing intervention plans for one case that they have worked with. Each student will use the Gibbs reflection model discussed during the course and perform a self-assessment using the SWOT analysis.
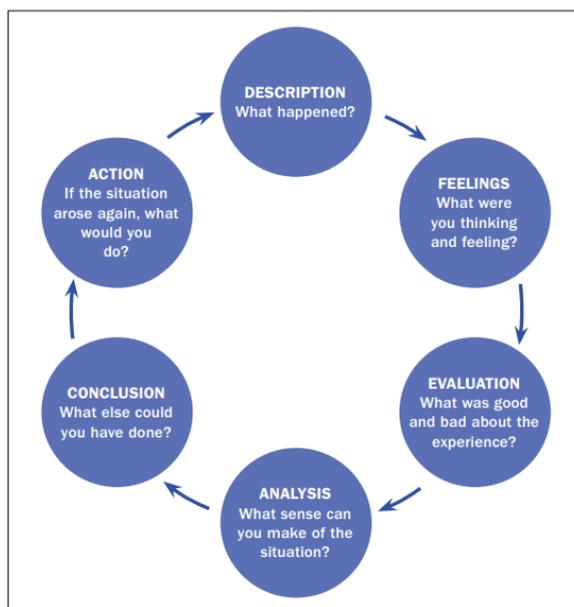
Use the reflection on action model:

Figure 1. Gibbs Reflective Cycle (1988)

You will submit a written account that includes the reflection elements described by Gibbs supported by evidence. You need to provide a detailed description of the case and the clinical decisions that you have made, provide insight into your feelings and thoughts, evaluate what was good and what was bad, analyze why things happened the way they did, what else could you have done and what future steps would you take. Support your arguments with evidence.

Perform a SWOT analysis to assess your strengths, weaknesses, opportunities and threats associated with your work with this case.

Figure 1. Usual layout for SWOT analysis.

Each student will develop and action plan to improve their clinical reasoning skills using the following proforma.

Strategies through which you formalize your ideas about necessary actions you need to take in order to achieve your desired goals.

Be sure to make your action plan **SMART**:

Specific: Be clear about your objectives / goals.

Measurable (or at least assessable): Will you know when you have achieved each goal?

Achievable: Are the goals achievable? Are they compatible with each other?

Realistic: Be realistic about the goals and the time scales.

Time specific: Be clear about when you want to achieve each goal, it is always possible to revise time scales if problems occur.

Action Planning Proforma

Goals	Proposed evidence of achievement of goals	Who / what help is needed	Date to achieve goal by

Grading criteria for part I (25 converted to 20%)

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Use of Gibbs' cycle	The student demonstrates excellent understanding of the Gibbs' reflective cycle and includes all elements of the cycle	The student demonstrates good understanding of the Gibbs' reflective cycle and includes most elements of the cycle	The student demonstrates fair understanding of the Gibbs' reflective cycle and includes some elements of the cycle	The student demonstrates poor understanding of the Gibbs' reflective cycle and does not use elements of the cycle or appropriately
Depth of reflection	The student demonstrates a conscious and thorough understanding of the incident described and does not diverge from the topic	The group student a adequate understanding of the incident described and does not diverge from the topic	The student demonstrates lack of understanding of the incident described and mostly does not diverge from the topic	The student demonstrates a lack of understanding of the incident described and frequently diverges from the topic

11-12

Use of evidence	The student supports all required sections with suitable evidence	The student supports most required sections with suitable evidence or all sections with mostly suitable evidence	The student supports some required sections with suitable evidence or uses mostly unsuitable evidence	The student does not support the required sections with suitable evidence or uses unsuitable evidence throughout
SWOT analysis	The student correctly identifies several points under each SWOT item	The student correctly identifies some points under each SWOT item	The student inaccurately identifies points under each SWOT item	The student only covers some items of the SWOT analysis and misses many
Action plan development	The student develops an action plan that covers all elements provided in the proforma. The goals are SMART Help needed is properly identified and the date set is realistic	The student develops an action plan that covers most elements provided in the proforma. The goals are mostly SMART, the help needed is mostly identified and the he dates are mostly realistic	The student develops an action plan that covers some elements provided in the proforma. The goals are somewhat SMART, the help needed is somewhat identified and the dates are rarely realistic	The student develops an action plan that covers few or none of the elements provided in the proforma. The goals not SMART. Help needed is rarely identified and the dates are not realistic

Part II: Clinical reasoning using the ICF model (10%).
Each student will use the ICF model to demonstrate how he/she would work with a current case. Students should demonstrate sufficient understanding of all sections of the chosen model and apply it to the case.

A written account with details about the case and how the model has been sued should be submitted.

The Clinical Reasoning Grading Rubric developed by Furz et al. (2005) will be sued to grade this part.
https://journals.lww.com/jopte/fulltext/2015/29030/clinical_reasoning__development_of_a_grading.6.aspx

Furze, Gale, Black, Cochran and Jensen (2015). GailClinical Reasoning: Development of a Grading Rubric for Student Assessment. Journal of Physical Therapy Education, 29(3):p 34-45.