

In the Name of God



**Hamadan University of Medical Sciences and Health Services
Educational Deputy of the University
Center for Studies and Development of Medical Sciences Education**

Theory/Practical Lesson Plan Form

Dear Colleagues,

As the teaching-learning process is one that cannot achieve its objectives without planning, it is essential to develop a lesson plan at the beginning of the educational process (as a roadmap and guide for instructors and students). Therefore, it is requested that esteemed instructors exercise utmost care in completing the lesson plan.

Course and Instructor Details (Completion of all items in this section is mandatory)

- **Course Title:** Parasitology 2
- **Instructor Name:** Dr. Faezeh Foroughi Parvar
- **Course Coordinator:** Dr. Faezeh Foroughi Parvar
- **Department Head:** Dr. Seyed Amir Ghiasian
- **Type and Credit Hours:** Theoretical 2 credits , Practical credits
- **Field and Level of Student Study:**Bachelor's in Laboratory Sciences.....
- **Teaching Location:**Classroom 5, Paramedical Department.....

Session	Title	Learning Objectives	Domain of Learning	Teaching Method	Duration	Teaching Aids	Evaluation Method
۱	General Concepts and Classification of Protozoa	<ol style="list-style-type: none"> 1. Define types of symbiotic relationships 2. Define parasites 3. Name important protozoan phyla 4. Describe physiology, respiration, nutrition, and reproduction in protozoa 5. Explain immune mechanisms against parasitic protozoa 	Cognitive	Memorization , Lecture, Q&A	90-100 minutes	Computer with internet access, data projector, display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers	Class assessment through questions, final exam
۲	Plasmodium	<ol style="list-style-type: none"> 1. State the importance and distribution of malaria in Iran 2. Name human malaria Plasmodium species 3. Explain the malaria cycle 4. Describe clinical symptoms of malaria at the onset of infection 5. Analyze the stages of a malarial attack 	Cognitive	Memorization , Lecture, Q&A	90-100 minutes	Computer with internet access, data projector, display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers	Class assessment through questions, final exam
۳	Continuation of Plasmodium	<ol style="list-style-type: none"> 1. Identify clinical symptoms specific to each Plasmodium type 2. Describe immunity in malaria 3. Explain laboratory diagnosis of malaria 4. Describe prevention and control programs for malaria 5. Explain malaria treatment methods 	Cognitive	Memorization , Lecture, Q&A	90-100 minutes	Computer with internet access, data projector, display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers	Class assessment through questions, final exam
۴	Toxoplasma	<ol style="list-style-type: none"> 1. Explain the morphology of Toxoplasma gondii 2. Describe the life cycle of Toxoplasma gondii 	Cognitive	Memorization , Lecture, Q&A	90-100 minutes	Computer with internet access, data projector, display	Class assessment through questions, final exam

		<p>3. Explain the clinical presentation of toxoplasmosis and differentiate between acute and chronic phases</p> <p>4. State immunity in toxoplasmosis</p> <p>5. Analyze diagnostic methods for toxoplasmosis</p> <p>6. Discuss treatment and prevention</p>				<p>screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers</p>	
5	Leishmania and Trypanosomes	<p>1. Describe the various morphological stages of Leishmania</p> <p>2. Name different forms of leishmaniasis</p> <p>3. Name diagnostic methods for Leishmania</p> <p>4. Describe prevention and control in leishmaniasis</p> <p>5. Discuss treatment for different forms of leishmaniasis</p> <p>6. Analyze various forms of Trypanosoma</p> <p>7. Name different types of Trypanosomiasis</p> <p>8. Discuss the life cycle of Trypanosoma in African and American forms</p> <p>9. Explain clinical symptoms in different stages of African and American Trypanosomiasis</p> <p>10. Critique diagnostic methods for American Trypanosomiasis</p> <p>11. Discuss prevention methods for African and American Trypanosomiasis separately</p>	Cognitive	Memorization , Lecture, Q&A, Flipped Classroom for sections 6-11	90-100 minutes	<p>Computer with internet access, data projector, display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers, pre-class file for sections 6-11, microlearning design for sections 6-11</p>	Class assessment through questions, final exam
6	Entamoeba histolytica	<p>1. Describe the morphological stages of Entamoeba histolytica</p>	Cognitive	Memorization , Lecture, Q&A	90-100 minutes	<p>Computer with internet access, data projector,</p>	Class assessment through questions, group

		<p>2. Explain the evolutionary process of Entamoeba histolytica</p> <p>3. State the role of innate and acquired immunity against Plasmodium</p> <p>4. Describe clinical symptoms of amoebiasis</p> <p>5. State diagnostic methods for amoebiasis</p> <p>6. Introduce control and prevention methods</p>				display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers	division for question design, final exam
Y	Free-Living Opportunistic Amoebas, Balantidium	<p>1. Explain the naming of free-living amoebas</p> <p>2. Describe the evolutionary process of Naegleria fowleri</p> <p>3. State the clinical symptoms of Naegleria fowleri infection</p> <p>4. Explain treatment and prevention</p> <p>5. Name different infections caused by Acanthamoeba</p> <p>6. Describe the evolutionary process of Acanthamoeba</p> <p>7. Explain clinical symptoms of Acanthamoeba in skin, eye, and brain forms</p> <p>8. Discuss treatment and prevention</p>	Cognitive	Memorization, Lecture, Q&A	90-100 minutes	Computer with internet access, data projector, display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers	Class assessment through questions, final exam
8	Giardia and Trichomonas	<p>1. Describe the morphology of different stages of Giardia lamblia</p> <p>2. Explain clinical symptoms of giardiasis</p> <p>3. State diagnostic methods for Giardia</p> <p>4. Describe the morphological features of</p>	Cognitive	Memorization, Lecture, Q&A	90-100 minutes	Computer with internet access, data projector, display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers	Class assessment through questions, final exam

		Trichomonas 5. State diagnostic methods for Trichomonas vaginalis 6. Introduce risk groups for trichomoniasis and prevention methods					
9	Cryptosporidium, Isospora, Cyclospora, and Sarcocystis	1. Describe the morphological features of Cryptosporidium, Isospora, Sarcocystis, and Cyclospora 2. Explain the evolutionary process of intestinal coccidia 3. State diagnostic methods for intestinal coccidia 4. Describe clinical symptoms of human coccidiosis separately 5. Explain treatment and prevention	Cognitive	Memorization, Lecture, Q&A	90-100 minutes	Computer with internet access, data projector, display screen, flash drive, Microsoft Office software (PowerPoint and Word), whiteboard, markers	Class assessment through questions, final exam

Notes:

- Each session is designed to last approximately 90-100 minutes.
- The teaching methods primarily include lectures, question and answer sessions, and in some cases, flipped classroom techniques.
- Evaluation is conducted through class assessments and final exams.

Grading Scheme

Type of Assessment	Assessment Tools	Points out of Total
Class Attendance and Participation	Short answer questions, Multiple choice questions, Fill-in-the-blank questions	2
Final Exam	Multiple choice exam, Short answer exam, Matching questions	18
Total		20

Reference

1. Neva FA, Brown HW. Basic clinical parasitology. Appleton & Lange; 1994.
2. Markell EK, Voge M. Medical parasitology. Eastbourne, UK; WB Saunders Company; 1981.

¹ Assessment tools can include items such as descriptive exams, short answer questions, fill-in-the-blank questions, multiple choice questions (MCQs), projects, oral exams, and more.