The Parasitology/Mycology week during Rotation II is an Independent Study Module that is guided by an online Blackboard course (part of CLS 419 – Clinical Microbiology II). During this week, you will be expected to complete reading assignments; view mini-lecture PowerPoint presentations; do study questions, case studies, laboratory assignments, and self-assessment quizzes; and take a final written examination and practical. It will be your responsibility to complete all tasks assigned in a timely manner. It will be the responsibility of the parasitology/mycology instructor, Carol Larson MSEd, MT(ASCP) or other designated instructors, to answer questions as they arise (via email or phone) and to monitor your progress throughout the week.

Starting on Monday (or before) – please review all Parasitology and Mycology student laboratory notes. To assist in this review, please go to the Blackboard course – CLS 419 – Clinical Microbiology II, click on “Assignments”, and then click on the “Student Laboratory Parasitology” and “Mycology” folders. Here you will find links to the PowerPoint lectures that were given in student lab.

In this handout is a suggested schedule for you to follow each day. There is some flexibility in the schedule and you are at liberty to carry out the tasks in a different sequence if you so desire. Just make certain that you do not get behind in your daily work, or you will not be able to perform well on the exam and practical on Friday. No new material will be presented on Thursday so you can use that day to catch up on any uncompleted tasks or focus on reviewing all materials. Case studies and lab activities can be worked on as a group if you have other students working with you during the week.

I will do a review session via telephone on Thursday. The time will be set when I contact you via email during this week.

If you have questions at any time, please email Carol Larson at larsonc@unk.edu (I will respond between 8am and 5pm M-F as quickly as possible, my lunch is usually 12-1pm and I teach a class on Monday afternoons during spring semester at UNK) or call me at 308-865-1524. In addition you can post your question to the Blackboard discussion board for other students to assist you, visit with another student who is taking the parasitology/mycology course the same week as you are, or ask one of your clinical instructors at your site.

As you work through the assignments and prepare for the exams, please refer to the Parasitology and Mycology Objectives OFTEN!! There is a wealth of information relating to these topics that is too much to cover during this one-week module, so use your objectives to narrow down what to study. Focus on key points of identification and how to use the overall parasitology and mycology processes for identification.

Answer keys to worksheets will be posted on Blackboard. Please do not view answers until your worksheets are completed.
**Day** | **Assignments**
---|---
**Prior to Monday** | **Review** your Parasitology & Mycology student lab notes, worksheets and case studies. All PowerPoint (ppt) presentations used during student lab are posted on Blackboard (see below) in the Microbiology II Course.

Blackboard CLS419  Clinical Microbiology II course (http://my.unmc.edu) - Click on:
- Assignments: "Clinical Rotations - Parasitology" folder
- Assignments: "Mycology (Student Lab & Rotation Materials)" folder

All of the Parasitology & Mycology objectives provided in your student lab notes will be covered during this week.

**Resources:**

**Mycology:**
- Mahon & Manuselis textbook, pages 710-754
- Pneumocystis article posted on Blackboard
- Univ. of Washington cd-rom / website (www.medtraining.org/ltl/) (use handout “Mycology Tutor, U of WA” found in the Appendix of this manual to help find assigned sections and keep track of what you have studied)
- Additional Resources:
  - Koneman pages 983-1069
  - Bailey & Scott pages 711-797
  - Other textbooks / atlases available at clinical site

**Parasitology:**
- Mahon & Manuselis textbook, pages 755-831
- Univ. of Washington cd-rom / website (www.medtraining.org/ltl/) (use handout “Parasitology Tutor, U of WA” found in the Appendix of this manual to help find assigned sections and keep track of what you have studied)
- Zeibig textbook (provided at your clinical site)
- Additional Resources:
  - Koneman pages 1071-1176
  - Bailey & Scott (11th edition) pages 604-710
  - Centers for Disease Control Parasitology cd-rom / website (www.dpd.cdc.gov/DPDx/)
  - Other textbooks / atlases available at clinical site
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<td><strong>Monday</strong></td>
<td><strong>Mycology:</strong>&lt;br&gt;Do the following as found in the Assignments - Mycology Folder on Blackboard CLS 419 course.&lt;br&gt;- Review ppt for “Introduction to Mycology” and do study questions&lt;br&gt;- Do mini-lecture ppt “Yeast” and study questions&lt;br&gt;- Do mini-lecture ppt “Opportunistic molds” and study questions&lt;br&gt;- Do mini-lecture ppt “Mycology Culture Process” and study questions&lt;br&gt;- View Mycology Tutor (Univ. of WA) cd-rom sections:&lt;br&gt;  - <strong>Introduction</strong> (overview, safety)&lt;br&gt;  - <strong>Fungal Detection:</strong> Direct techniques (India ink, KOH, Calcofluor, Gram stain, histologic stains) &amp; Isolation Techniques&lt;br&gt;  - <strong>Organism ID - Yeast:</strong> macroscopic, microscopic, biochemicals&lt;br&gt;  - <strong>Organism ID - Molds:</strong> macroscopic, microscopic, conidiogenesis&lt;br&gt;  - <strong>Opportunistic Fungi</strong>&lt;br&gt;<strong>Parasitology:</strong>&lt;br&gt;Do the following as found in the Assignments – Parasitology Folder on Blackboard CLS 419 course.&lt;br&gt;- Review notes, study questions and ppt for “Introduction to Parasitology”, “Protozoa – Amoebas” and “Protozoa - Flagellates”&lt;br&gt;- View Parasitology Tutor (Univ. of WA) cd-rom sections:&lt;br&gt;  - <strong>Introduction</strong> (overview, test selection)&lt;br&gt;  - <strong>Stool Parasites:</strong> Diagnostic techniques, Protozoa (overview, amoeba, flagellates), and Artifacts&lt;br&gt;  - <strong>Blood Parasites:</strong> Extracellular Parasites - Trypanosomiasis&lt;br&gt;  - <strong>Other Sites:</strong> CSF, Eye, Genital, and Skin&lt;br&gt;- Do case studies in Zeibig textbook, pages 32-33, 57, 75, 282, 283, 284-285, and 290-291</td>
<td><strong>Mycology:</strong>&lt;br&gt;- Look at gram stain slides of yeast (#1-2)&lt;br&gt;- Look at LPCB preps of opportunistic molds (#3-7)&lt;br&gt;- Record all results on Mycology Lab Worksheet - document slides looked at and forms seen.&lt;br&gt;&lt;br&gt;<strong>Parasitology:</strong>&lt;br&gt;- Make a saline and iodine <strong>wet prep</strong> from vial #V1 and look for cyst forms of <em>Entamoeba coli</em>. This vial contains fecal material and must be mixed well before sampling! The procedures are included in the Appendix in your manual.&lt;br&gt;- View <strong>trichrome stained slides</strong> of the amoeba (cyst and trophozoite forms) and flagellates provided in the study slide box (#20-24)&lt;br&gt;- Look at a stained blood smear for <em>Trypanosoma</em> species (#25)&lt;br&gt;- Record all results on Parasitology Lab Worksheet - document slides looked at, parasites and forms seen.</td>
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| Tuesday  | **Mycology:** Do the following as found in the Assignments - Mycology Folder on Blackboard CLS 419 course.  
* Do mini-lecture “Dermatophytes” and study questions  
* View Mycology Tutor (Univ. of WA) cd-rom sections:  
  o Disease Associations - Superficial Mycoses – Dermatophytosis  
  o REVIEW previous day’s materials.  

**Parasitology:** Do the following as found in the Assignments – Parasitology Folder on Blackboard CLS 419 course.  
* Review notes, study questions, and ppt for “Miscellaneous Protozoa” and “Malaria & Babesia”  
* View Parasitology Tutor (Univ. of WA) cd-rom sections:  
  o **Stool Parasites:** Protozoa - Ciliate, Coccidia, and Microsporidia  
  o **Blood Parasites:** Diagnostic Techniques, Intracellular Parasites, and Artifacts  
* Do case studies in Zeibig textbook, pages 95-97, 125, and 286-287  
* REVIEW previous day’s materials.  | **Mycology:**  
* Look at LPCB preps of dermatophytes (#8-10)  
* Review gram stain slides of yeast (#1-2)  
* Review LPCB preps of opportunistic molds (#3-7)  
* Record all results on **Mycology Lab Worksheet** - document slides looked at and forms seen.  

**Parasitology:**  
* Look at prepared modified acid fast stain for *Cryptosporidium* (#26)  
* Look at Giemsa stained blood smears of malaria (#27-28)  
* Record all results on **Parasitology Lab Worksheet** - document slides looked at, parasites and forms seen.  |
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| Wednesday| **Mycology:** Do the following as found in the Assignments - Mycology Folder on Blackboard CLS 419 course.  
- Do mini-lecture ppt “Subcutaneous Fungi” and do study questions  
- Do mini-lecture ppt “Systemic Dimorphic Fungi” and do study questions  
- View Mycology Tutor (Univ. of WA) cd-rom sections:  
  - **Disease Associations** - Subcutaneous Mycoses  
  - **Disease Associations** – Systemic Mycoses  
- REVIEW previous days’ materials. |
|          | **Parasitology:** Do the following as found in the Assignments – Parasitology Folder on Blackboard CLS 419 course.  
- Review notes, study questions, and ppt for “Nematodes”, “Cestodes” and “Trematodes”  
- View Parasitology Tutor (Univ. of WA) cd-rom sections:  
  - **Stool Parasites:** Helminths - Overview, Nematodes, Cestodes, Trematodes  
  - **Blood Parasites:** Extracellular Parasites - Filariasis  
  - **Other Sites:** Cyst Fluid and Urine  
- Do case studies in Zeibig textbook, pages 156-157, 176, 198-199, 218, 288, 289, and 292-293  
- REVIEW previous days’ materials. | **Mycology:**  
- Look at LPCB preps of subcutaneous fungi (#11-13)  
- Look at LPCB preps and other stained slides of systemic dimorphic fungi (#14-16)  
- Review gram stain slides of yeast (#1-2)  
- Review LPCB preps of opportunistic molds (#3-7)  
- Review LPCB preps of dermatophytes (#8-10)  
- Record all results on **Mycology Lab Worksheet** - document slides looked at and forms seen.  
**Parasitology:**  
- Make a saline and iodine wet prep from vial #V2 and look for ova of *Ascaris*. This vial contains fecal material and must be mixed well before sampling! The procedures are included in the Appendix in your manual.  
- Look at Giemsa stained blood smears of microfilaria (#29)  
- Record all results on **Parasitology Lab Worksheet** - document slides looked at, parasites and forms seen. |
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| **Thursday** | **Mycology:**  
Do the following as found in the Assignments - Mycology Folder on Blackboard CLS 419 course.  
- Take exam on Mycology Tutor (Univ. of WA) website / cd-rom  
- Do the Mycology Case Study Review on Blackboard with accompanying handout  
- Take the **Mycology Review Quiz** on Blackboard (not graded)  
- **Review** all objectives and study questions  

**Parasitology:**  
Do the following as found in the Assignments – Parasitology Folder on Blackboard CLS 419 course.  
- Take exam on Parasitology Tutor (Univ. of WA) website / cd-rom  
- Do the Parasitology Case Study Review on Blackboard with accompanying handout  
- Do case studies in Zeibig textbook, pages 278-279 and 280-281  
- Take the **Parasitology Review Quiz** on Blackboard (not graded)  
- **Review** all objectives and study questions | **Mycology:**  
- **Review** all yeast/mold slides (#1-16)  

**Parasitology:**  
- **Review** all parasitic wet preps and slides (#20-29 and #V1 and V2) |
| **Friday** | **Review!**  
Take written examination over parasitology and mycology | **Review!**  
Take practical examination over parasitology and mycology |