PHA 6634 - Medication Therapy Management: An Endocrine Focus
Summer 2014 - 3 Semester Credit Hours

Course Purpose:
The course is intended to familiarize students with the provision of MTM in patients with endocrine disorders that range from common to complex. The student will gain hands-on practice in the core elements of MTM for patients with endocrine disorders, including conducting a comprehensive medication therapy review, generating a personalized medication record, designing a medication-related action plan, making pharmacotherapy interventions, and documenting the MTM service. The curricular threads of advanced pharmacotherapy knowledge, communication skills, and essential MTM business principles will be emphasized.

Course Faculty and Office Hours

Course Coordinator:
Karen R. Sando, Pharm.D., BCACP, CDE
Clinical Assistant Professor
Office Phone: 352-273-6224
Email: ksando@cop.ufl.edu

Office Hours
Preferred contact method: email

Course Facilitators:
Pam Roehrl, B.S., M.S., Pharm.D.
Email: proehrl@cop.ufl.edu
Karen Riley, Pharm.D., BCPS, CGP, BCACP, CDE
Email: kdriley@ufl.edu

Course Faculty:
Please see Appendix A for a list of faculty involved in this team-taught course.

Place and Time of Class Sessions
Lectures are prerecorded and posted on the course website in the Sakai eLearning system. Lectures may be viewed at the student’s convenience. The course has one 1.5-hour live online learning session each week. Live sessions are conducted via Adobe Connect and will meet on Sunday evenings from 8 to 9:30 PM EST or on Monday evenings from 9 to 10:30 PM EST, depending on the assigned section.
How This Course Relates to the Learning Outcomes You Will Achieve in the MS-MTM Program:

This course prepares the MS-MTM student to accomplish the following abilities and the related Student Learning Outcomes (SLOs) upon graduation:

- **Knowledge SLO**: Demonstrate comprehensive knowledge related to a specific discipline within the pharmaceutical sciences.
- **Problem-Solving/Critical Thinking SLO**: Demonstrate the ability to evaluate a problem that is related to a discipline within the Pharmaceutical Sciences.

This course is one of a series that will develop problem-solving and critical thinking skills and prepare the student to demonstrate comprehensive knowledge in the area of medication therapy management.

Course Objectives

Upon successful completion of this course, the student will be able to demonstrate the ability to perform the following with respect to endocrine disorders:

1. Recognize areas of pharmacotherapy knowledge essential to the provision of MTM services.
2. Identify clinical practice guidelines and current scientific literature pertaining to the provision of MTM services.
3. Evaluate scientific literature for use in providing up-to-date, evidence-based, and cost-effective MTM services.
4. Communicate effectively with patients when providing MTM services.
5. Identify barriers to patient communication and design strategies to overcome those barriers.
6. Conduct a targeted or comprehensive medication therapy review (MTR).
7. Identify drug-related problems and recommend rational solutions based on a mastery of pharmacotherapy.
8. Create a personalized medication record for an individual patient receiving MTM services.
9. Design a medication-related action plan, taking into account patient abilities and preferences.
10. Educate patients regarding techniques to improve adherence, decrease the risk of adverse drug reactions, and maximize appropriate and safe medication use.
11. Communicate interventions effectively to physicians and other healthcare colleagues.
12. Document MTM services in a manner sufficient for following patient progress, monitoring patient outcomes, and completing billing statements.
13. Utilize sound business principles in the provision of MTM services

Pre-Requisite Knowledge and Skills

The student must have successfully completed Foundations of MTM I and II

Course Structure & Outline

Course Structure
The course is offered in a blended learning format that utilizes a combination of face-to-face classroom instruction, on-line learning, and hands-on experiential activities. To meet the standards for course credit assignment this three-credit course requires a minimum of 48 hours of classroom instruction or the equivalent. Since the face-to-face classroom instruction is less than 48 hours, a number of alternative instructional activities comprise the remainder of the equivalent content and serve to fulfill the curricular equivalency standard. Using a combination of live classroom instruction and alternative methods of instruction ensures that the requirements for course credit assignment are fulfilled. An outline of the course activities and their respective contribution to course credit assignment can be found in the accompanying course schedule document.

Course Outline/Activities

Refer to Appendix B and C. The course schedule will also be posted separately on Sakai.

Textbooks


Instructors may require additional readings such as clinical guidelines, review articles, book chapters, or websites. They may also provide additional resources to supplement the lecture material. Required or recommended readings will be listed under assignments and responsibilities on the course schedule. The readings will be available under the resources tab on the course website.

Active Learning Requirements

- Discussion board posting (3) **All postings need to be done before 6 pm Sunday evening prior to the Adobe Connect Session. 50 points will be deducted for late submissions.**
- Weekly live online learning sessions (5)
- Diabetes Device Presentation (1)
- Collaborative Practice Agreement (Endocrine Focus) (1)
- Case studies - comprehensive medication review (1)

Feedback to Students

Students will be provided written feedback on all assignments via the eLearning system. In general, written feedback can be expected within one week of assignment submission. In addition, students may schedule an appointment with the instructor if they wish to obtain more detailed verbal feedback. Feedback on exams and quizzes will be available via the eLearning system after 12 noon on the day following the exam or quiz.

Student Evaluation & Grading

Course Evaluation Methods
Written Assignments 25%
  • Device Education/Presentation - 5%
  • Comprehensive Medication Review - 10%
  • Endo Collaborative Practice Agreement - 10%

Quizzes 10%
  • Week 2 - 5%
  • Week 5 - 5%

Class participation 15%
  • Discussion board - 5%
  • Adobe Connect sessions - 10%

Exams 50%
  • Midterm exam - 25%
  • Final exam - 25%

Grading Scale
Additional information on minus grades is available on the University of Florida website: http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html.

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<thead>
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<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
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<td>93-100</td>
</tr>
<tr>
<td>A-</td>
<td>90.0-92.9</td>
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<tr>
<td>B+</td>
<td>86.6-89.9</td>
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<tr>
<td>B</td>
<td>83.3-86.5</td>
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<tr>
<td>B-</td>
<td>80.0-83.2</td>
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<tr>
<td>C+</td>
<td>76.6-79.9</td>
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<tr>
<td>C</td>
<td>73.3-76.5</td>
</tr>
<tr>
<td>C-</td>
<td>70.0-73.2</td>
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<tr>
<td>D+</td>
<td>66.6-69.9</td>
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<tr>
<td>D</td>
<td>63.3-66.5</td>
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<tr>
<td>D-</td>
<td>60.0-63.2</td>
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<tr>
<td>E</td>
<td>&lt;60</td>
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Class Attendance Policy

Attendance at the weekly Adobe Connect sessions is mandatory and participation in the group discussion is required. Because there are 3 opportunities to attend the Adobe Connect sessions, students who know they will miss an Adobe Connect session should contact the facilitator as soon as possible and arrange to attend another Adobe Connect session. Upon approval of the facilitator only, students may make up a missed session by completing a brief written assignment for a maximum of 2 out of the 5 sessions. Failure to get approval for the missed session prior to the session will result in a mark of zero for the Adobe session. Written documentation of the session content must be submitted to the facilitator no later than 1 week past the missed session.

Quiz/Exam Policy

Online Examinations
The quizzes, midterm, and final examination will be administered online. Online examinations may consist of multiple choice, short answer and/or case-based questions. Thus, online examinations necessitate skills in typing and using a computer. If you do not have strong keyboard skills, please do not delay in contacting the course coordinator. With early intervention you can be directed to
Staff members who are equipped to review your needs. Please note that it takes time to build these skills and this is not something that can be done at the last minute. To maintain the highest standards of academic integrity, high stakes online examinations may require the use of a proctoring system. More information on the proctoring system may be found at: http://www.proctoru.com/

Missing Exams and Make-Up Exam Policy
Scheduled exams should only be missed for REAL EMERGENCIES. A student who misses an exam should notify the course coordinator via email within 24 hours. Students with an excused absence may be allowed to take a make-up exam. Make-up exams should be arranged with the course coordinator and administered within two weeks of the original exam date.

Posting of Exam Grades
Exam grades will be posted within one week of the exam. Notice will be provided to the students if there will be a delay in posting of exam grades.

Exam Rebuttals
Students have one week after posting of the exam grades to challenge any exam question. No appeals will be accepted after one week. Written appeals must include the following: the question number, an evidence-based rationale for why the student feels their response is accurate. The exam will be regraded, in full, by a third party. Note: the score of a fully regraded exam may increase, decrease, or stay the same. The regraded score will be considered final.

Policy on Old Quizzes and Assignments
Students will not be provided with old quizzes, exams, or assignments.

Assignment Deadlines
Late Assignments
Please submit online assignments early to avert last minute issues with technology. Late submission of assignments will result in a point deduction and may result in a zero grade, depending on the assignment. Students who experience technical difficulty when submitting assignments electronically must notify the course coordinator as soon as possible.

General College of Pharmacy Course Policies
The College of Pharmacy has a website that lists course policies that are common to all courses. This website covers the following:

1. University Grading Policies
2. Academic Integrity Policy
3. How to request learning accommodations
4. Faculty and course evaluations
5. Student expectations in class
6. Discussion board policy
7. Email communications
8. Religious holidays
9. Counseling & student health
10. How to access services for student success

Please see the following URL for this information:

Complaints

Should you have any complaints with your experience in this course please contact your course coordinator. If unresolved, contact the COP Senior Associate Dean-Professional Affairs. For unresolved issues, see: http://www.distancelearning.ufl.edu/student-complaints to submit a complaint.

University of Florida College of Pharmacy is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. This course is accredited for 10 hours (1.0 CEUs). ACPE Accreditation number is posted on the course website. To receive credit for this course, you must receive a passing grade and complete the evaluation form.

Other Course Information
Appendix A: Directions for Contacting Faculty & Course Faculty List
Appendix B. Schedule of Course Activities/Topics
Appendix C. Assignments and Learning Responsibilities
Appendix A: Directions for Contacting Faculty & Course Faculty List

Directions for Contacting Course Faculty
All questions on lecture material and course communication will occur through the discussion board on the course website. Discussion boards will be organized by lecture topic and questions should be posted in the appropriate location. The discussion board will be reviewed and questions answered within 3 business days after the posting. If you do not receive a response within 3 business days after posting, please email the course coordinator who will then contact lecture faculty directly. Please see “Course Communication” Section for additional information about communicating with faculty.

Course Coordinator

Karen R. Sando, Pharm.D., BCACP, CDE
Dr. Sando joined the UF faculty in September 2010. She earned an Associate of Arts in Pre-Pharmacy at St. Petersburg College in 2004. She went on to the University of Florida and graduated in 2008 with a Doctor of Pharmacy. After completing pharmacy school, she completed a residency specializing in Ambulatory Care at the University of Florida. After her residency, she worked for Shands Jacksonville in the UF Family Medicine clinic conducting pharmacy services in anticoagulation, pain management, and diabetes. Dr. Sando currently is the coordinator for clinical pharmacy services for Area Health Education Centers (AHEC). She offers pharmacist-run services in diabetes, anticoagulation, hypertension, hyperlipidemia, and smoking cessation at UF Health Family Medicine at Old Town. Dr. Sando also serves as a preceptor for 4th year pharmacy students on ambulatory care rotation. She also directs a PGY-2 Pharmacy Residency Program in ambulatory care.

Instructors

Stacey Baggett, Pharm.D., BCPS
Stacey Baggett received her Doctor of Pharmacy degree in 2007 from Midwestern University – College of Pharmacy in Glendale, Arizona, as well as a Bachelor of Science degree in Biochemistry from Purdue University in 2004. Dr. Baggett is currently a Regional Coordinator for Experiential Programs for the University of Florida College of Pharmacy and Clinical Assistant Professor at the College’s Orlando campus. Her practice experience is primarily as a Clinical Pharmacy Specialist at Holmes Regional Medical Center in Melbourne, Florida, with a focus on Infectious Diseases and Anticoagulation. She has precepted students in Adult Medicine and Ambulatory Care, as well as PGY-1 residents in Internal Medicine and Infectious Diseases, and has lectured for the MTM and WPPD programs. Dr. Baggett is a Board Certified Pharmacotherapy Specialist and her interests include student and preceptor development, infectious diseases, and internal medicine.

Eric Dietrich, Pharm.D., BCPS
Dr. Dietrich is a Clinical Assistant Professor within the Department of Pharmacotherapy and Translational Research. His work involves providing aid in discharge planning and transitional care management, including making post-discharge follow-up home calls. He also established the High Risk Clinic at Family Medicine at Main Street for patients with uncontrolled high-risk diabetes. Dr. Dietrich’s research interests include interventions aimed at reducing hospital readmission rates as well as outcomes-based research for chronic diseases such as diabetes and hypertension. Dr. Dietrich’s wife, Nicole, is a Critical Care pharmacist at the VA.
Paul Doering, M.S.
Paul Doering is a Distinguished Service Professor, Emeritus in the Department of Pharmacotherapy and Translational Research at the University of Florida’s College of Pharmacy. For 28 years he was the Director or Co-Director of the statewide Drug Information and Pharmacy Resource Center at the Health Sciences Center, University of Florida. Over the years, Professor Doering has received numerous honors and awards. He was awarded Teacher of the Year five separate times and in 2007 he was named a member of the University of Florida’s Academy of Distinguished Teaching Scholars. Paul is now enjoying his “retirement” years and is continuing his work with students and pharmacists through lectures, seminars, and other such things.

Carol Motycka, Pharm.D.
Carol Motycka became the Director of the Jacksonville Campus in July 2002 to help build the University of Florida College of Pharmacy program in Jacksonville. She was later appointed Assistant Dean of the Campus where she spends her time teaching, caring for patients, counseling, and administrating. Carol graduated from the University of Florida with her Pharm.D. in 1998. She then completed a residency in Ambulatory Care at Florida Hospital in Orlando. Following the residency, Carol was hired as the Pharmaceutical Care Coordinator for Florida Hospital DeLand. At Florida Hospital, she developed an asthma and anticoagulation clinic and an Ambulatory Care Rotation. Carol also served as a faculty member for NOVA Southeastern University College of Pharmacy and Seminole Community College in the College of Allied Health from 1999-2002. As the Assistant Dean for the Jacksonville Campus, Carol is proud to be a part of the innovative program with the University of Florida.

Nicole Shrankel, Pharm.D.
Dr. Shrankel is the co-founder and CCO of MTMCare, Inc. based in Hood River, OR. Dr. Shrankel started her career in a large hospital in Portland Oregon. She later moved to a small rural community hospital and served as a clinical pharmacist there for a decade. During that time, Dr. Shrankel went back to school and earned her Pharm D, created pharmacy services to an outpatient dialysis center, and set-up an anticoagulation clinic. She reached a point when she wanted a career change and went through the process of establishing a MTM-based business.

James R. Taylor, Pharm. D., CDE
Dr. Taylor is a Clinical Associate Professor in the Department of Pharmacotherapy and Translational Research at The University of Florida. He received his doctor of pharmacy degree from Ohio Northern University. Upon graduation, he completed an ASHP accredited Pharmacy Practice Residency at The Veterans Affairs Medical Center in Huntington, West Virginia. Subsequently, he completed a Family Medicine Residency at The University of Florida. Dr. Taylor joined the faculty at The University of Florida in July 1998. Dr. Taylor maintains an active clinical pharmacy practice site. He serves as the Pharmacy Director for the UF and Shands Hematology Anticoagulation Clinic. He also serves as the Director of the Pharmaceutical Skills Labs for The UF College of Pharmacy. He has given numerous professional presentations on diabetes, anticoagulation and other primary care topics. He has also published extensively on diabetes, anticoagulation and other primary care topics. Finally, he has served as Principal Investigator and Co-Principal Investigator for a number of clinical studies.

Katherine Vogel Anderson, Pharm.D., BCACP
Dr. Vogel Anderson earned her Bachelor of Science degree in biochemistry, with a minor in math, from the Florida State University in 1999. In 2003, Dr. Vogel Anderson graduated with her Doctor of Pharmacy degree from the University of Florida College of Pharmacy. Following this, Dr. Vogel Anderson completed a primary care pharmacy residency at the Malcom Randall Veterans Affairs Medical Center in
Gainesville. After her residency, Dr. Vogel Anderson accepted a clinical pharmacy specialist position at the same VA, where she specialized in anticoagulation management. After five years she transferred to the VA geriatric primary care clinic, where she managed anticoagulation, hypertension, and diabetes, among other disease states, as part of a multi-disciplinary healthcare team. Dr. Vogel Anderson joined the Gainesville UF faculty in 2010. In addition to her teaching responsibilities, Dr. Vogel Anderson practices at the UF Health Internal Medicine clinic where she provides anticoagulation management, medication therapy management, and diabetes management. She is the director of an ASHP-accredited PGY-1 Pharmacy Practice residency program.

Karen Whalen, Pharm.D., BCPS, CDE
Dr. Whalen received her Doctor of Pharmacy degree from the University of Florida. She then completed a Pharmacy Practice Residency at the Moses Cone Health System in Greensboro, North Carolina. Subsequently, she completed a Primary Care Residency at the James A. Haley Veterans’ Hospital in Tampa, Florida. Dr. Whalen joined the faculty of the University of Florida College of Pharmacy in 2008 as Assistant Director of the St. Petersburg Campus. Currently, she is a Clinical Associate Professor in the Department of Pharmacotherapy and Translational Research and Director of the MS-MTM Program. Prior to joining the faculty at University of Florida, Dr. Whalen was an Associate Professor of Pharmacy Practice at Nova Southeastern University for twelve years. Dr. Whalen is a Board Certified Pharmacotherapy Specialist and a Certified Diabetes Educator. She is an active in local, state, and national pharmacy associations, and is a past president of the Florida Pharmacy Association.
### Appendix B. Schedule of Course Activities/Topics

<table>
<thead>
<tr>
<th>Week</th>
<th>Module</th>
<th>Lecture Topic</th>
<th>Lecturer</th>
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</thead>
</table>
| 1    | Introduction to Endocrine  | 1.1 Course Intro/Expectations
                              | 1.2 Meet the Experts
                              | 1.3 Practice Perspectives  | Sando
                              | 1.4 Intro to Diabetes                 | Whalen
                              | 1.5 Med Mgmt in Type 2 DM – Part I | Whalen
                              | 1.6 Med Mgmt in Type 2 DM – Part II  | Whalen
                              | 1.7 Diabetes MTM Cases               | Whalen        |
|      | Diabetes                   | 2.1 Insulin Mgmt – Part I                          | Sando          |
|      |                            | 2.2 Insulin Mgmt – Part II                         | Sando          |
|      |                            | 2.3 Insulin Pumps                                  | Sando          |
| 2    | Diabetes                   | 3.1 Device for Diabetes I                          | Taylor         |
|      |                            | 3.2 Devices for Diabetes II                        | Taylor         |
|      |                            | 3.3 Lifestyle Modifications for DM                 | Sando          |
|      |                            | 3.4 Complications of Diabetes                      | Taylor         |
|      |                            | 3.5 Transitions of Care - Diabetes                 | Dietrich       |
| 3    | Diabetes                   | 4.1 Example Diabetes Visits                         | Sando/Whalen   |
|      |                            | 4.2 Literature Thread – Meta Analysis               | Doering        |
|      |                            | 4.3 Obesity                                         | Motycka        |
| 4    | Obesity                    | 5.1 Contraception I                                | Whalen         |
|      |                            | 5.2 Contraception II                               | Whalen         |
|      |                            | 5.3 Menstrual Disorders                            | Whalen         |
| 5    | Women’s Health             | 5.4 PCOS                                           | Whalen         |
|      |                            | 6.1 Menopause                                      | Vogel Anderson |
|      |                            | 6.2 Thyroid                                        | Baggett        |
|      |                            | 6.3 Endocrine MTM Cases                            | Whalen         |

### Exam Schedule

- **Midterm Exam:** July 11, 2014
- **Final Exam:** August 1, 2014
## Appendix C. Assignments and Learning Responsibilities

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<th>Week</th>
<th>Reading Assignment</th>
<th>Learning Responsibility</th>
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<tr>
<td>1</td>
<td>Review course syllabus&lt;br&gt;ADA Standards of Care (Exec Summary)&lt;br&gt;AACE Consensus Algorithm for Type 2 Med Mgmt of Type 2 DM (ADA/EASD)</td>
<td>View all lectures for week 1&lt;br&gt;Complete assigned readings&lt;br&gt;<strong>Discussion board posting</strong>&lt;br&gt;Adobe Connect session 1.5 hours</td>
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<tr>
<td>2</td>
<td>Insulin Regimens in Type 1&lt;br&gt;Texas Insulin Algorithm&lt;br&gt;Practical Insulin Strategies in Type 2&lt;br&gt;Diabetes in Control – Insulin Initiation</td>
<td>View all lectures for week 2&lt;br&gt;<strong>Discussion board posting</strong>&lt;br&gt;Complete assigned readings&lt;br&gt;Adobe Connect session 1.5 hours&lt;br&gt;<strong>QUIZ</strong></td>
</tr>
<tr>
<td>3</td>
<td>ADA Consumer Guide on Devices&lt;br&gt;ADA Nutrition Position Statement&lt;br&gt;ADA Guidelines (pp. S36-S49)</td>
<td>View all lectures for week 3&lt;br&gt;Complete assigned readings&lt;br&gt;Adobe Connect session 1.5 hours&lt;br&gt;<strong>Complete assignments</strong>&lt;br&gt;• Device presentation&lt;br&gt;<strong>MIDTERM EXAM</strong></td>
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<tr>
<td>4</td>
<td>Nissen rosiglitazone meta-analysis&lt;br&gt;Lincoff pioglitazone meta-analysis&lt;br&gt;ACC-AHA Obesity Guidelines&lt;br&gt;DiPiro 9e Ch 121 - Obesity</td>
<td>View all lectures for week 4&lt;br&gt;Complete assigned readings&lt;br&gt;Adobe Connect session 1.5 hours&lt;br&gt;<strong>Complete assignments</strong>&lt;br&gt;• Comprehensive med review</td>
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<tr>
<td>5</td>
<td>ACOG Practice Bulletin 73&lt;br&gt;PCOS article&lt;br&gt;[Ref: DiPiro 9e Ch 62, 63]</td>
<td>View all lectures for week 5&lt;br&gt;Complete assigned readings&lt;br&gt;<strong>Discussion board posting</strong>&lt;br&gt;Adobe Connect session 1.5 hours&lt;br&gt;<strong>QUIZ</strong></td>
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<tr>
<td>6</td>
<td>NAMS position statement on HTA&lt;br&gt;AACE Thyroid Guidelines&lt;br&gt;[Ref: DiPiro 9e Ch 58, 65]</td>
<td>View all lectures for week 6&lt;br&gt;Complete assigned readings&lt;br&gt;<strong>Complete assignments</strong>&lt;br&gt;• Endo collaborative practice document&lt;br&gt;<strong>FINAL EXAM</strong></td>
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*Contribution to course credit assignment

All assignments will be released on Sakai at least two weeks prior to due date. Reading assignments not contained in the required text will be posted in the Resource folder designated for that week of class. **All assignments should be completed on an individual basis unless otherwise specified.**