**LBCC Diagnostic Imaging Program**

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## PHARMACOLOGY and ETHICS FOR IMAGING PROFESSIONALS

Winter 2022

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| **Instructor:** | Jennifer Clayton |
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| **Office Hours:** | By appointment; please email to set up a mutually convenient time. |

**REQUIRED TEXT**

*Pharmacology and Drug Administration for Imaging Technologists, Second Edition by Steven C. Jensen and Michael P. Peppers (provided)*

*ADDITIONAL TEXTS:*

*Open Educational Resources. Links provided. You will be required to login in order to view this material. Make sure you attempt to utilize various browsers if you aren’t successful in opening the link to the ebook.* [Medical Ethics, Law and Communication at a Glance](https://ebookcentral.proquest.com/lib/linnbenton-ebooks/detail.action?docID=4715714) (Wiley)

**COURSE DESCRIPTION**

**This is an asynchronous course.** It is designed to coordinate with the other courses offered this term; some material may be redundant, but it is the pharmacological mistakes that kill people; so redundancy is an effective tool for remembering.

This course is designed to provide the basic concepts of pharmacology. Concepts of pharmacology including modes of action, uses, modes of excretion, side effects, and patient care required for specific pharmacologic agents will be covered. This course is also designed to provide introductory principles in applying ethical decision models in imaging.

***SCHEDULE:***

* **Students are expected to review weekly recorded lectures. Students are encouraged to set up a specific day and time each week to do this.** It is expected that students will review all lectures and resources.

**COURSE OBJECTIVES**

* Distinguish between chemical, generic, and trade names of select drugs
* Describe pharmacokinetic and pharmacodynamic principles of drugs.
* Explain the action, uses, and side effects for select drugs
* Define the categories of contrast agents and give specific examples for each category.
* Explain the pharmacology of barium and iodine compounds.
* Describe methods and techniques for administering various types of contrast agents.
* Differentiate between the two major sites of intravenous drug administration.
* Identify, describe and document complications associated with intravenous drug therapy and appropriate actions to resolve these complications.
* Identify and describe the various routes of drug administration
* Explain the current legal and ethical status of the radiographer’s role in drug administration
* Define medical ethics as it relates to imaging
* Describe and explain legal terminology related to ethical considerations in the healthcare profession

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| ***Week*** | ***Dates*** | ***Topic*** | ***Reading*** | ***Drug*** | ***Assignment*** | ***Assessment*** |
| 1 | 1/1-  1/9 | Principles of Pharmacology | Ch 1 & 2 | Barium sulfate | Drug Review  **Due 1/9 @ 11:59 p.m.** | Quiz 1  **Due 1/9 @ 11:59 p.m.** |
| 2 | 1/8-  1/16 | Routes of Administration  Infection Prevention & Control | Ch 8 & 9 | Gastroview  Conray & Cystoconray | Drug Review  **Due 1/16 @ 11:59 p.m** | Quiz 2  **Due 1/16 @ 11:59 p.m.** |
| 3 | 1/15-  1/23 | Contrast Agents | Ch 6 & 7 | Magnevist  & Optiray | Drug Review  **Due 1/23 @ 11:59 p.m** | Quiz 3  **Due 1/23 @ 11:59 p.m.** |
| 4 | 1/22-  1/30 | Biopharmaceutics & Pharmacokinetics | Ch 3 | Isovue &  Omnipaque | Drug Review  **Due 1/30 @ 11:59 p.m** | Quiz 4  **Due 1/30 @ 11:59 p.m.** |
| 5 | 1/29-  2/6 | Pharmacodynamics  & Emergency Medications | Ch 4 & 11 | DepoMedrol  Epinephrine & Lidocaine | Drug Review  **Due 2/6 @ 11:59 p.m** | Quiz 5  **Due 2/6 @ 11:59 p.m.** |
| 6 | 2/5-  2/13 | Final Exam Pharm |  |  |  | Pharm Final  **Due 2/13 @**  **11:59 p.m** |
| 7 | 2/12-  2/20 | Intro to Ethics | [ASRT practice Standards](https://www.asrt.org/main/standards-and-regulations/professional-practice/practice-standards-online)  [Medical Ethics, Law and Communication at a Glance](https://ebookcentral.proquest.com/lib/linnbenton-ebooks/detail.action?docID=4715714) (Wiley)  Ch 1-3 | None | Ethical Scenario Review #1  **Due 2/20 @ 11:59 p.m.** | Quiz 7  **Due 2/20 @ 11:59 p.m.** |
| 8 | 2/19-  2/27 | Patient’s Rights | **ASRT article:**  [Medical Ethics and Law in Radiologic Technology](https://media.asrt.org/pdf/drpubs/RADT1115_MedEthics_DR_F.pdf) | None | Ethical Scenario Review #2  **Due 2/27 @ 11:59 p.m.** | Quiz 8  **Due 2/27 @ 11:59 p.m.** |
| 9 | 2/26-  3/6 | Legal Terminology & Documentation | [Medical Ethics, Law and Communication at a Glance](https://ebookcentral.proquest.com/lib/linnbenton-ebooks/detail.action?docID=4715714) (Wiley)Chapter 4, 5, 8-11 | None | Ethical Scenario Review #3  **Due 3/6 @ 11:59 p.m.** | Quiz 9  **Due 3/6 @ 11:59 p.m.** |
| 10 | 3/5-  3/13 | Professional liabilities | [ARRT ethics](https://www.arrt.org/docs/default-source/governing-documents/code-of-ethics.pdf?sfvrsn=71f304fc_14)  [Medical Ethics, Law and Communication at a Glance](https://ebookcentral.proquest.com/lib/linnbenton-ebooks/detail.action?docID=4715714)  Ch 6, 7  ASRT article:  [Medical Ethics in Radiography](https://media.asrt.org/pdf/drpubs/RADT_Vol90_No3_Ethics_DR.pdf)  [Link to professional liability insurance](http://www.hpso.com/our-partners/associations/amercian-society-of-radiologic-technologists) | None | Ethical Scenario Review #4  **Due 3/13 @ 11:59 p.m.** | Quiz 10  **Due 3/13 @ 11:59 p.m.** |
| 11 | 3/13- | Finals Week Ethics |  | None | None | Final Ethics Review Project **Due 3/13 @ 11:59 pm.** |

**COURSE OUTLINE**

**REQUIREMENTS:** **NO LATE WORK WILL BE ACCEPTED.**

1. **RECORDED LECTURES: (0 points)** Students will be required to view recorded lectures when delivered. Note the lecture weeks mentioned during the recording may not correspond with the week in the course.

1. **NOTE CARDS: (5-20 points each week)** Students will be required to create note cards per drug research assignment. The drug information sheets and drug package insert documents will be provided. These note cards will be created in a website called [Quizlet](http://quizlet.com/). Students will be asked to create a quizlet account and create electronic notecards.  **Use your x# for your username and radiology for your password so that I can access your cards each week and grade what you have done.** If you already have an account established, just email me your username and password.
2. **QUIZZES: (5-20 points each)** There will be quizzes for most modules.  These quizzes will be over material covered in the module. Quizzes are timed and may only be taken once. Quizzes are closed note/book. All students are expected to take quizzes with integrity, jeopardizing neither their own work, nor that of others. These quizzes can be completed at any time during the week the module opens, **but must be completed and submitted by 11:59 p.m. on Sundays**.
3. **ETHICAL SCENARIOS: (16 points each)** Students will be required to provide a response to an assigned ethical scenario during weeks 7-10. Each ethical scenario response should address the questions posted in the assignment and should be formatted on Powerpoint or Google slides. Each response is worth a maximum of 16 points and will be used during the final presentation at the end of the term.
4. **FINAL EXAM PHARMACOLOGY: (100 points) 50 questions** The final exam will be comprehensive for pharmacology content and will include material from the text, from the recorded lectures and from all of the researched drugs. It will be closed note, closed book and can be taken on your own anytime during week 6..
5. **FINAL PROJECT ETHICS: (20 points)** For the final project, you will combine your slides in a presentation describing your ethical scenarios and your responses. These recorded presentations will not be presented live. You can utilize Zoom to record your presentation and email me the link. The presentation should be no less than 15 minutes and there is no maximum time cap.  **Presentations less than 15 minutes will receive a zero. This final project is DUE Sunday 3/13 by midnight. The link to your presentation must be emailed to me prior to the deadline.**

[Grading Rubric for Ethics Final Presentation](https://docs.google.com/document/d/1X0UvpqHZinMDo787rTns1b_lJbQ_FJCR5S54ybJDCnw/edit?folder=0AIqqdndta4dZUk9PVA)

**Grading:**

**A = 91.5%-100%**

**B = 82.5%-91.4%**

**C = 74.5%-82.4%**

**F = < 74.5% Less than 74.5% will result in the student being withdrawn from the program and receiving a letter grade of F on their transcripts. The Diagnostic Imaging Program does not utilize the grade D.**

**Syllabus Change Policy**

Syllabus is subject to change as the instructor evaluates the progress of students and their understanding of concepts.

**Course Failure Policy**

Diagnostic Imaging students must complete each course, including this one, within the Diagnostic Imaging program with a grade of at least 75%. A letter grade of F will be applied to the course if a student scores a 74.4% or below. The Diagnostic Imaging program does not utilize the letter grade “D”. Students who can not pass coursework with the minimum standard grade will fail academically, which will then make the student ineligible to proceed in the program. As a result of academic failure, the student will be terminated from the program. Students who fail didactic can only enter the program again through reapplication.

**MOODLE**

We'll be using Moodle for this class. Before logging in for the first time, you will have to claim your account at<https://identity.linnbenton.edu/>. If you have any problems logging into Moodle, please contact the Student Help Desk at 541-917-4630 or email student.helpdesk@linnbenton.edu.

**LBCC Student Code of Conduct**

Students are expected to conduct themselves in a manner that is consistent with the published LBCC Code of Conduct. For further information visit: <http://linnbenton.edu/faculty-and-staff/administrative-information/policies/board-policies-and-administrative-rules/7000-series-student-services/administrative-rule-no-7030-01-student-rights-respon.php>

**Discrimination Policy**

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information visit [http://www.linnbenton.edu/current-students/administration-information/policies/equal-opportunity/statement-of-nondiscrimination/.](https://www.linnbenton.edu/faculty-and-staff/administrative-information/policies/board-policies-and-administrative-rules/1000-series-the-college/administrative-rule-no-1015-01-nondiscrimination-nonharass.php)

**Disability Services Policy**

You should meet with your instructor during the first week of class if:

1. You have a documented disability and need accommodations,
2. Your instructor needs to know medical information about you, or
3. You need special arrangements in the event of an emergency.

If you have not accessed services and think you may need them, please contact the Center for Accessibility Resources at 541-917-4789.

**Statement of Inclusion**

The LBCC community is enriched by diversity. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill. I actively support this right regardless of race, creed, color, personal opinion, gender, sexual orientation, or any of the countless other ways in which we are diverse. (Related to Board Policy #1015)

***Basic Needs Statement:***

*Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support (resources@linnbenton.edu , or visit us on the web* [*www.linnbenton.edu*/RRC](http://www.linnbenton.edu/RRC) *under Student Support for Current Students). Our office can help students get connected to resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.*