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PHA5020 History of Pharmacy

Fall 2021

2 Credit Hours – [Satisfactory/Unsatisfactory]

This course introduces students to the history and development of the Profession of Pharmacy with special emphasis placed on the history of pharmacy in Florida. Students will explore the growth of professionalism and professional organizations, commercial and industrial growth, development of education, governance of pharmacy, establishment of literature, and the development of the pharmaceutical sciences. Using primary sources and narratives, students will foster an interest in history of pharmacy and understand the impact that visionary leaders and entrepreneurs have made on the development of the profession by analyzing the personal and professional characteristics of these pharmacy heroes.

Teaching Partnership Co-Leaders

Janet Schmittgen, Pharm.D.

- Email: jschmittgen@cop.ufl.edu
- Office: HPNP 2335
- Phone: 352-273-9547
- Cell or text 614-805-1608
- Office Hours: By appointment ONLY.

See Appendix A. for Course Directory of Faculty and Staff Contact Information.

Entrustable Professional Activities

This course will prepare you to perform the following activities which the public entrusts a Pharmacist to perform:

1. EPA D1. Demonstrate soft-skills in daily practice including interprofessional team collaboration (eg, interpersonal communication, professionalism, cultural sensitivity, innovative mindset).
2. EPA D2. Exhibit commitment to patients and the community by serving as an advocate and leader
3. EPA D3. Demonstrate responsibility for personal and professional development.

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Course-Level Objectives

Upon completion of this course, the student will:

1. Interpret and analyze historical pharmacy data and information from historical sources and references.
2. Provide an appropriate historical context of historical sources and references.
3. Demonstrate appropriate historical compounding techniques using traditional pharmaceutical methods.
4. Document written laboratory reports using traditional techniques for pharmaceutical compounding.
5. Develop a monograph for a Patent Medicine product and discuss how patent medicines developed and how they helped influence the development of modern medicine.
6. Describe how past pharmacists with an entrepreneurial mindset helped to shape the profession of pharmacy and what pharmacists today can learn from their success.
7. Create a professional biographical sketch and written reflection on a pharmacy hero who influenced and helped shape the Pharmacy Profession.
8. Describe attributes of a past pharmacy leader that you would like to personally develop and/or you feel apply to a need in the pharmacy profession today
9. Utilize historical resources (primary, secondary, tertiary) and tools to prepare a research project/presentation on a relevant topic in the history of pharmacy.
10. Formulate written materials, interviews, and presentations regarding the history of pharmacy.
11. Present a historical research project that includes a perspective of what pharmacists today can learn from the past.
12. Apply wisdom about pharmacy's past to guide evolving changes in the pharmacy profession.

Course Pre-requisites

1. Completion of all Year 1 Pharm.D. program coursework including milestones.

Course Co-requisites

1. None

Required Textbooks/Readings

1. Higby, G., Cowen, D. and Sonnedecker, G. Drugstore Memories: American Pharmasists Recall Life Behind the Counter 1824-1933. American Institute of the History of Pharmacy, 2002. 1st ed. ISBN-978093129238
 - o Not available in Access Pharmacy: FREE with a \$30 membership to AIHP - see order form
2. Higby, G. and Stroud, E. American Pharmacy (1852-2002): A Collection of Historical Essays. 1st Ed. American Institute of the History of Pharmacy, 2005. 1st ed. ISBN-9780931292392
 - o Not available in Access Pharmacy: FREE with a \$30 membership to AIHP - see order form
<https://pharmacy.wisc.edu/wp-content/uploads/3freebooks.pdf>

The UF HSC library staff can assist you with questions or issues related to accessing online library materials. For assistance contact your College of Pharmacy librarian or visit the [HSC Library Website](https://www.library.health.ufl.edu/) at this URL: <http://www.library.health.ufl.edu/>

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Suggested Textbooks/Readings

1. Gramling, L.G., "A History of Pharmacy in Florida", Ewing Printing, Gainesville, FL, 1973
2. Sonnedecker, "Kremers and Urdang's History of Pharmacy, 4th Edition, J.B. Lippencott Company, 1976
3. United States Pharmacopeial Convention, Inc. The United States Pharmacopeia 14th Revision. Mack Publishing, Easton, PA. 1950.
4. American Pharmaceutical Association Committee on National Formulary. National Formulary Seventh Edition. American Pharmaceutical Association, Washington 7, D.C. 1942.
5. Osol. Remington's Pharmaceutical Sciences 16th Edition. Mack Publishing Company, Easton, PA. 1980.

Other Required Learning Resources

None

Materials & Supplies Fees

None

Student Evaluation & Grading

Evaluation Methods and How Grades are calculated.

This course is pass/fail. In order to pass the course, you must receive an overall course grade of **75%**.

Assessment Item	Grade Percentage
Quizzes (Reflections) (2@5% ea.)	10%
Homework Assignments (3 @ 10% ea.)	30%
Lab Reports and Product Grade (2 @ 5% ea.)	10%
Presentation Project (80% or higher is a requirement for successful completion)	40%
Final Reflection	10%
Total	100%

Educational Technology Use

The following technology below will be used during the course and the student must have the appropriate technology and software.

1. ExamSoft™ Testing Platform
2. Canvas™ Learning Management System

For technical support, navigate to [Educational Technology and IT Support Contact Information](http://curriculum.pharmacy.ufl.edu/current-students/technical-help/) at this URL:
<http://curriculum.pharmacy.ufl.edu/current-students/technical-help/>

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Pharm.D. Course Policies

The Policies in the following link apply to this course. Review the [Pharm.D. Course Policies](http://curriculum.pharmacy.ufl.edu/current-students/course-policies/) carefully, at this URL: <http://curriculum.pharmacy.ufl.edu/current-students/course-policies/>

Course-Specific Policies

The Policies in the following link apply to Skills Lab courses. Review the [Skills Lab Policies](http://curriculum.pharmacy.ufl.edu/current-students/course-policies/skills-lab-policies/) carefully at this URL: <http://curriculum.pharmacy.ufl.edu/current-students/course-policies/skills-lab-policies/>

Makeup Assignments

Makeup assignments may be required for excused absences from all Active Learning Sessions. Students will be required to complete the makeup assignment within one week of the missed session.

Late Assignments

Enter course late assignment policy here.

Respect for Diversity

The University of Florida College of Pharmacy strives to stimulate a culture that promotes diversity and inclusion within an exceptional community of students, faculty, and staff. It is our intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit.

We intend to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let us know ways to improve the course's effectiveness for you personally or for other students or student groups.

If any of our class meetings conflict with any of your religious events, an excused absence will be provided when requested using the standard UF COP process as detailed in the [UF COP Course policies](#).

If you feel that you have experienced or witnessed any bias/treatment that falls short of these expectations, you may submit a report through the UF [COP Student Mistreatment Report](#).

Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

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Appendix A. Course Directory

Teaching Partnership Leaders/Course Directors:

Janet Schmittgen, Pharm.D.

Email: jschmittgen@cop.ufl.edu

Office: HPNP 2335

Phone: 352-273-9547

Office Hours: By appointment ONLY.

Questions to Ask:

- Concerns about performance
- Guidance when there are performance problems (failing grades)
- General questions about content

Instructional Designers:

Kathryn Rush

Email: krush@cop.ufl.edu

Office: HPNP 4309

Phone: 352 – 273 - 6284

Skylar Johnson

Email: skylarjohnson@cop.ufl.edu

Office: HPNP 4309

Phone: 352 – 273 - 5719

Academic Coordinator Gainesville Campus:

Ashleigh Langford

- Email: lynn8597@cop.ufl.edu
- Office: HPNP 4312
- Phone: (352) 273 - 6002

Absence/Tardy Email: absent2pd@cop.ufl.edu or absent3pd@cop.ufl.edu

(Visit the course policy site for further instructions)

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Educational Coordinators

McKenzie Wallen

- Email: mwallen@cop.ufl.edu
- Office: Jacksonville Campus
- Phone: (904) 244 - 9590

Andrea M Arredondo

- Email: aarredondo1@cop.ufl.edu
- Office: Orlando Campus
- Phone: (407) 313 - 4087

Questions to Ask:

- Issues related to course policies (absences, make up exams, missed attendance)
- Absence/tardy requests (Only the Academic Coordinator handles absence requests)
- Questions about dates, deadlines, meeting place
- Availability of handouts and other course materials
- Assignment directions
- Questions about grade entries in gradebook (missing grades, incorrect grade)
- Assistance with ExamSoft® (Distance campus students may contact the Educational
- Coordinator for use of Exemplify and assistance during exams. The Academic Coordinator is the contact person for issues related to grading and posting of ExamSoft grades.

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Appendix B: Course Outline

Please routinely check your campus calendar and the Canvas course site for any messages about changes in the schedule including meeting dates/times, deadlines, and room changes.

Date Recommended Dates for Independent Study	Mod#	Unit Topic	Contact Hours [hr.]a	Faculty Author	Learning Objective Covered
	1	Module 1	2.75hr	Schmittgen	1-2
12/01/21	1.1	Watch: Introduction to History of Pharmacy	0.5hr	Schmittgen	
12/01/21	1.2	Watch: Guide to Reading Historical Pharmacy Texts	<0.25hr	Thomas	1-2
12/01/21		Read: American Pharmacy; Introduction and Practice p. ix-xi,1-17.	1.0hr		
12/01/21		Read: Drugstore Memories Preface & Introduction p.vii-ix, 1-5,George Thurber p.24-35	1.0hr		
12/01/21		Read: Guidelines for Reading Historical Texts	<0.25hr		
12/01/21 10:00am-10:30am		Zoom Session: Discuss Class and Assignments	0.5hr		
	2	Module 2	2.5hr	Palmieri	1-2, 6
12/02/21	2.1	Watch: Tools of the Apothecary	0.5hr	Palmieri-Historical Video	
12/02/21	2.2	Watch: Patent Medicines	0.5hr	Palmieri-Historical Video	
12/02/21		Read: American Pharmacy; Pharmaceutical Sciences p.19-35	0.75hr		
12/02/21		Read: Drugstore Memories Carrie Emily Howard p.100-102, Celia Frumer Handelman p.143-144.	0.25hr		
12/02/21		Read: Tools of the Apothecary by George Griffenhagen	0.5hr		

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Date Recommended Dates for Independent			Contact Hours	Faculty	Learning Objective
	3	Module 3	3.0hr	Schmittgen	1-2, 5-6
12/03/21	3.1	Watch: Art of Compounding, Materia Medica – Online Video Quiz embedded	0.5hr	Schmittgen	
12/03/21	3.2	Watch: Compounding Technique Online Lectures	0.5hr	Mobley	
12/03/21	3.3	Watch: Life as a Pharmacist Video	1.0hr	Schmittgen-Historical Video Interview	
12/03/21		Read: Scoville, W.L. The Art of Compounding selected readings	0.5hr		
12/03/21		Read: Drugstore Memories James Winchell Forbes p.47-53 Edward Parrish p.61-63, 1860-1933	0.5hr		
12/03/21		Read: Introduction p.65-69, Shine Phillips 120-125, Jacob Eisen p.138-141	0.5hr		
12/03/21 12:00pm		Assignment: Patent Medicine Monograph (Upload to Canvas and bring to class)			
12/03/21 10:15am- 12:05pm		Active Learning Session 1: Class Discussion and Workshop-Zoom Session <ul style="list-style-type: none"> • In-Class Reflective Discussion; George Thurber Reading • TBL Application: Objects and Tools • Patient Medicines 	2.0hr		
12/03/21 11:59pm		Post Session Reflective Quiz #1			
	4	Module 4	2.5hr	Schmittgen	3-4

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Date Recommended Dates for Independent			Contact Hours	Faculty	Learning Objective
12/08/21	4.1	Watch: Law and Regulation	1.0hr	Schmittgen	
12/08/21		Read: American Pharmacy Governance of Pharmacy p. 75- 86	1.0hr		
12/08/21		Read: Read: Drugstore Memories James Winchell Forbes p.47-53 Edward Parrish p.61-63, 1860- 1933 Read: Introduction p.65-69, Shine Phillips 120-125, Jacob Eisen p.138-141			
12/08/21		Assignment: Students will sign up for a pharmacy hero on the Pharmacy Hero Discussion Board by posting their pharmacy hero by Friday, December 4th by 11:59 pm. Choice of pharmacy hero is first come, first serve. Two students may not choose the same hero.			
	5	Module 5	2.75hr	Schmittgen	1-2, 5-6
12/09/21	5.1	Watch: History of Pharmacy Education Requirements – Online Video Quiz embedded	1.0hr	Schmittgen	
12/09/21	5.2	Watch: Rise of Professional Organizations	0.5hr	Schmittgen	
12/09/21		Read: American Pharmacy; Pharmaceutical Education p. 37- 53	0.75hr		
12/09/21		Read: Pharmacy Organizations p.87-108	0.25hr		
12/09/21		Read: Drugstore Memories J. Brown Baxley p. 15-17, Robert Shoemaker p. 17-20, Charles, Pancoast p.20-23 C.V. Emich p.41, Alpheus P. Sharp p.37-	0.5hr		

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Date Recommended Dates for Independent			Contact Hours	Faculty	Learning Objective
		38			
12/09/21 10:15am- 12:05pm	4	Active Learning Session 2: <i>Compounding-Zoom Session</i> TBL Application: • Compound -Pill, Powder	2hr	Schmittgen	
12/09/21 11:59pm		Laboratory Report Due-Upload to Canvas			
	6	Module 6	2.25hr	Schmittgen, Schentrup	1-2, 6
12/10/21	6.1	Watch: Drug Development	0.75hr		
12/10/21	6.2	Watch: History of Pharmacy in Florida	0.5hr		
12/10/21		Read: American Pharmacy; Pharmaceutical Industry p.55-73	0.25hr		
12/10/21		Read: Drugstore Memories Roy Bird Cook p. 125-127 George Seyfarth p. 133-137, Hubert H. Humphrey p.141-143	0.5hr		
12/10/21 12:00pm		Assignment: Pharmacy Heroes Bio-sketch (Upload to Canvas and bring to class)			
12/10/21 10:15am- 12:05pm	6	Active Learning Session 3: Zoom Session- <i>Pharmacy Heroes</i> • In-Class Quiz 2 • TBL Application: Pharmacy Heroes, Drug Development, Materia Medica	2.0hr	Schmittgen	
12/10/21 11:59pm		Post Session Reflective Quiz #2			

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Date Recommended Dates for Independent			Contact Hours	Faculty	Learning Objective
12/13/21 11:00am		Assignment: Presentation Project – Submit link to project on Canvas			
12/13/21 No Class Meeting		Active Learning Session 4: Virtual Poster Session Abohe Sparke Presentations-(Online viewing- NO CLASS)	2.0hr	Schmittgen	9-12
12/14/21 10:15am- 12:05pm		Active Learning Session 5-Zoom Session: Adobe Spark Presentation Discussion	2.0hr	Schmittgen	9-12
12/14/21 11:59pm		Assignment: Reflection on the History of the Profession of Pharmacy			
		Total Contact Hours in Course:	30.0hr		

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Appendix C. Patent Medicines

Students are assigned a Patent Medicine to research and develop a Patent Medicine Monograph. They will explain the product; recommended uses of the product, ingredients and purpose of each ingredient, company that developed and manufactured the product, how the product was advertised and marketed. What contributed to their success? Evaluation of the product for possible safety issues or effectiveness.

Appendix B. Assessment of Patent Medicine Monograph Rubric

	Exemplary 10	Accomplished 7	Developing 5	Beginning 3
Organization	Information presented in logical, interesting sequence, is historically significant to the pharmacy profession	Information in logical sequence, somewhat significant to the pharmacy profession	Difficult to follow presentation-- student jumps around or material is unrelated to the pharmacy profession	Cannot understand presentation--no sequence of information
Subject Knowledge	Demonstrates full knowledge by answering all class questions with explanations and elaborations	At ease with expected answers to questions but does not elaborate	Uncomfortable with information and is able to answer only rudimentary questions	Does not have a grasp of the information. Cannot answer questions about subject
Identification of Monograph Criteria (if available)	Identifies Time Period of Product if known. Identifies Manufacturer of Product. Identifies recommended uses of product. Identifies all ingredients and purpose of each. Identify advertising and marketing of product and what contributed to success. Entrepreneurial considerations. Pharmacy Ephemera associated with product. Ethical Considerations of Product and company. Determines if product is safe and effective.	Identifies most criteria available for the Patent Medicine Monograph and explains the Patent medicine. May be missing additional details of items such as cost or marketing.	Identifies limited criteria for monograph. Missing ingredient purposes or details from the monograph that are available to the student.	Does not identify criteria on patent medicine.

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Appendix D. Heroes of Pharmacy

Each student will write a two page biographical sketch of a hero of pharmacy. Please address how they helped shape or influence the profession of pharmacy. What are the attributes that make this person a leader in the field? How might the modern pharmacy student go about attaining/demonstrating such attributes? How does the individual feel about his own ability to grow as a leader? Students will also turn in a one-page slide with a picture of their pharmacy hero and several highlighted attributes. The biosketch and the slide will be turned into the assignment link on canvas. Students will bring assignment to our second Discussion/Workshop and we will hold a discussion about how these heroes helped influence the profession.

<http://www.harveywhitney.org/lectures/>

	Exemplary 10	Accomplished 7	Developing 5	Beginning 3
Organization	Information presented in logical, interesting sequence, is historically significant to the pharmacy profession	Information in logical sequence, somewhat significant to the pharmacy profession	Difficult to follow presentation-- student jumps around or material is unrelated to the pharmacy profession	Cannot understand presentation-- no sequence of information
Subject Knowledge	Demonstrates full knowledge by answering all class questions with explanations and elaborations	At ease with expected answers to questions but does not elaborate	Uncomfortable with information and is able to answer only rudimentary questions	Does not have a grasp of the information. Cannot answer questions about subject
Research	Uses a variety of historical sources in reaching accurate conclusions (at least 2 sources that are primary, secondary, or tertiary sources.) All sources are properly cited using an approved format.	Uses a variety of sources in reaching conclusions (does not use 2 sources or does not use a variety of sources that are primary, secondary, or tertiary in nature)	Presents only evidence that supports a preconceived point of view (uses 1 source or citations are incomplete)	Does not justify conclusions with research evidence (no sources cited)
Class Participation and Presentation	Participates in discussion and presents material in an effective manner	Participates in discussion and presents material in a generally effective manner	Somewhat participates in discussion and presents material	Does not participate in discussion or present material
Total Points				

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Appendix E. History of Pharmacy Final Reflection

Students will complete a two-page reflection on the history of the Profession of Pharmacy and how this information may impact and influence your practice as a leader and entrepreneur in pharmacy. Why study the history of pharmacy? How does the history of pharmacy help the modern pharmacist grow as a leader and entrepreneur?

Criteria	10	7	3	Total Points for Each Category
Content	Demonstrates a complete and thorough reflection on History of Pharmacy and how this may impact and influence their future practice	Demonstrates a partial reflection on History of Pharmacy and how this may impact and influence their future practice	Demonstrates minimal reflection on History of Pharmacy and how this may impact and influence their future practice	
Mechanics	Sentence structure, grammar and mechanics enhance the effectiveness of communication	Sentence structure, grammar and mechanics generally enhance the effectiveness of communication	Sentence structure, grammar and mechanics are lacking and do not enhance the effectiveness of communication	
Organization	Writer expresses relationships between ideas, careful and subtle organization enhances effectiveness of communication	Writer generally expresses relationships between ideas, somewhat careful and subtle organization enhances effectiveness of communication	Writer does not generally express relationships between ideas or careful and subtle organization is lacking and does not enhance effectiveness of communication	
Details	Rich supporting details enhance the effectiveness of communication	Some supporting details enhance the effectiveness of communication	Minimal supporting details enhance the effectiveness of communication	
Citations	Material requiring citation is appropriately cited and enhances the content	Material requiring citation is cited but does not enhance the content	Material requiring citation is not cited appropriately or is missing and does not enhance content	
Total Points				

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Appendix F. Presentation Project

Students will work in groups and complete a presentation using Adobe Spark (or equivalent technology), in which, they will research a historically important topic in the Profession of Pharmacy. They will reflect on how this historical aspect of Pharmacy has affected the Pharmacy Profession and led to the development of modern pharmacy practices. They will also discuss how visionary leaders and entrepreneurs have made an impact on the development of the profession with respect to this topic.

Assessment Rubric for History of Pharmacy Adobe Spark Presentations

	Exemplary 10	Accomplished 7	Developing 5	Beginning 3
Organization	Information presented in logical, interesting sequence, is historically significant to the pharmacy profession	Information in logical sequence, somewhat significant to the pharmacy profession	Difficult to follow presentation-- student jumps around or material is unrelated to the pharmacy profession	Cannot understand presentation--no sequence of information
Subject Knowledge	Demonstrates full knowledge by answering all class questions with explanations and elaborations	At ease with expected answers to questions but does not elaborate	Uncomfortable with information and is able to answer only rudimentary questions	Does not have a grasp of the information. Cannot answer questions about subject
Graphics	Explain and reinforce screen text and presentation, information is in sufficient detail but not overwhelming	Relate to text and presentation, lacks sufficient detail or overwhelming amount of detail	Occasionally uses graphics that rarely support text and presentation	Uses superfluous graphics or no graphics
Research	Uses a variety of historical sources in reaching accurate conclusions (at least 5 sources that are primary, secondary, or tertiary sources.) All sources are properly cited using an approved format.	Uses a variety of sources in reaching conclusions (does not use 5 sources or does not use a variety of sources that are primary, secondary, or tertiary in nature)	Presents only evidence that supports a preconceived point of view (uses 1 or 2 sources or citations are incomplete)	Does not justify conclusions with research evidence (no sources cited)
Oral Presentation Elocution/Eye Contact	Maintains eye contact and pronounces all terms precisely. All audience members can hear.	Maintains eye contact most of the time and pronounces most words correctly. Most audience members can hear presentation	Occasionally uses eye contact, mostly reading presentation, and incorrectly pronounces terms. Audience members have difficulty hearing	Reads with no eye contact and incorrectly pronounces terms. Speaks too quietly
Total Points				