

Integrating Traditional & Innovative Teaching Techniques in Pharm.D. Distance Programs

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Massachusetts College of Pharmacy & Health Sciences (MCPHS): Distance Education Programs (Boston campus)

- **Doctor of Pharmacy Post BS Pharmacy Pharm.D. Pathway:** started in 2004
- **Master of Applied Natural Products:** started in 2008

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Distance Education Programs

- Adult learners with busy schedules
- Advantages:
 - convenience of delivery
 - flexible learning opportunities
 - interactivity
- Requirements:
 - good time management skills
 - ability to work independently
 - good computer skills

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Doctor of Pharmacy Post BS Pharmacy Pharm.D. Pathway

- The program for licensed practicing pharmacists
- Goal: to earn a Pharm.D. degree while continuing to practice
- Can be completed in 2 years
- 3-day on-campus Orientation + 1-day (Saturday) on campus every semester

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Master of Applied Natural Products

- Director of the program: Lana Dvorkin-Camiel, Pharm.D.
- Program for candidates with baccalaureate degree
- 2 options:
 - Graduate Certificate in Applied Natural Products
 - Master of Applied Natural Products

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Master of Applied Natural Products

- Can be completed in 5 semesters
- Goal: to develop expertise in the area of natural products
- Blended learning format: 5-day hands-on campus experience+ online course work

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Library Participation

- Doctor of Pharmacy Post BS Pharmacy Pharm.D. Pathway
 - **Drug Literature Resources & Evaluation course:** online supported course version
 - Course coordinator: Kathy Grams, Pharm.D.

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a. I Goals and objectives

1. Determine the nature and specific aspects of a drug information request or drug related problem including obtaining appropriate background information.
2. Recognize and apply knowledge of the type of content available in tertiary, secondary and primary information sources.
3. Use computerized abstracting, indexing and information databases to access primary medical and pharmacy literature.
4. Formulate a search strategy for on-line or electronically stored biomedical and pharmacy literature.
5. Interpret and evaluate the literature with consideration given to study design and methods, study population, statistical applications and clinical significance of the reported data and conclusions.
6. Use appropriate written and verbal communication techniques to respond to information requests.
7. Apply literature retrieval and evaluation skills to specific clinical patient situations involving drug related issues.

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Drug Literature Resources & Evaluation: Library Participation

- Direct instruction: on-campus class (3 hours)
- Hands-on during the class
- Topics covered:
 - Library web page and electronic resources
 - Secondary databases (Medline, Embase, IPA)
 - Computerized tertiary databases (Micromedex, Lexi-Comp, Clinical Pharmacology, etc.)

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Library Participation

- Master of Applied Natural Products
 - Applied Natural Products I- Herbal Supplements
 - On-campus class (3 hours)
 - Resources for information on herbal therapies:
 - Computerized tertiary databases (Natural Medicine, Natural Standard, etc.)
 - Internet sites (Herbal Drugs subject guide)

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Upon successful completion of this program, a graduate with a Master of Applied Natural Products will be able to achieve a number of Educational Objectives and Outcomes.

- Based on the literature, evaluate the roles and responsibilities of the health care practitioners regarding the utilization of natural products.
- Examine and discuss the manufacturing processes and properties of different natural product dosage forms that are required for safe and efficacious therapy.
- Examine the legal and regulatory issues involving natural products including DQPC regulations and regulatory systems for these supplements outside the U.S.
- Apply the knowledge of the recognized indications for the most commonly used natural products; learn correct botanical, pharmacopetal, chemical and common names; describe the pharmacology, pharmacognosy and toxicology of the plants, correct dosing regimen, and appropriate duration of treatment; and identify the drug, food, or disease interactions associated with the use of most commonly used natural products.
- Conduct appropriate counseling and provide consults to health care providers when presented with socio-economic and cultural differences of clients who use natural products.
- Utilize a wide range of the natural product information resources (literature, software, internet).
- Synthesize the concept of individual variability, the need for patient-centered care, the dynamic balance of internal and external factors and other components that comprise functional medicine.
- Analyze study designs, evaluate the information based on the evidence available, and develop knowledge necessary for creation and use of the information databases.
- Develop and characterize a personal philosophy of practice including the use of natural products through research on topics of the student's interests.
- Using the information and skills obtained during the program, prepare and present a Case Study project.

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Blackboard

- Easy access
- Uniformity in organization of course components
- Tools for communication, assessment, statistics
- Lectures and other materials posted on a course site; can be accessed during a certain period of time rather than at a specific time.

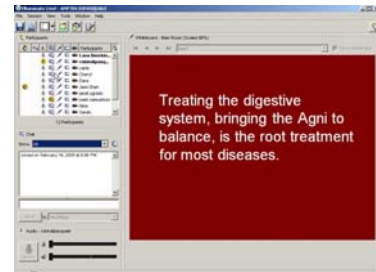
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Elluminate Live



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Elluminate Live



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Articulate Presenter



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Articulate Presenter



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Results

- Reaching out to distance learners
- Blended learning environment beneficial for students
- Increasing library visibility and the use of resources
- Collaboration

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Future Plans- Questions, More Questions...

- Is traditional library instruction effective in distance education courses?
 - Pre- and post surveys?
 - Statistics?
- Using Elluminate & Articulate software for library instruction?
- More hands-on exercises?

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