PREPARING PHARMACISTS FOR THE FUTURE:
A NEW CURRICULUM

In Fall 2015, the College of Pharmacy will implement a new Pharm.D. Curriculum designed to prepare graduates for patient-centered care in 21st century practice.

The curricular innovations include:
1) courses which integrate science and clinical content
2) a co-curriculum which focuses on the personal and professional development of individual students
3) milestone assessments which document readiness for practice

Across the first three years of the curriculum, students will develop practice skills through a sequence of courses which use simulations requiring students to apply and integrate what they are learning across all courses.

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Figure 1 highlights new elements of the curriculum.

CURRICULUM STRUCTURE – BLOCKS WITH MILESTONE ASSESSMENTS

Unlike the traditional curriculum in which all courses are one semester (16 weeks) in length, courses are in “blocks” in the new curriculum with lengths varying between 1 week and 10 weeks. Between the major blocks, time is allocated for capstone assessments, personal development, and remediation if needed.

The times for assessment and remediation will document learners are progressively developing the expected knowledge, skills, attitudes and values. These “milestone assessments” will document the learner is “ready” for the Community Introductory Pharmacy Practice Experience (IPPE) at the end of year 1 and for Hospital IPPE at the end of year 2, and “ready” to begin Advanced Pharmacy Practice Experiences (APPEs) at the end of year 3. Students must be “team-ready” and “practice-ready” by graduation and this will be assessed during year 4.

Context-based Curricular Integration
Promote better understanding and retention:
Integration of Basic & Clinical Sciences
A. Material is learned in the context in which it will be used in practice
B. Skills labs will simulate practice – provide simultaneous development of knowledge, skills, attitudes and professional values

Personal & Professional Development of Students
A. Development of soft-skills (interpersonal communication skills and personal attributes such as self-awareness, leadership, teamwork, flexibility, and an innovative mindset)
B. Development of self-directed learning skills so graduates are prepared for lifelong learning

Capstone/Milestone Assessments
A. Document students are progressively achieving the learning outcomes
B. Milestone at Year 3 will document student readiness for clinical rotations in final year
C. Milestone at Year 4 will document students are “Team Ready” and “Practice Ready”
The first year of the new curriculum begins with a six-week block focusing on patient-centered care, public health and wellness, and personal and professional development. During the patient-centered care course, students will begin learning about professional communications. Current students and alumni advocated for such early introduction of patient care skills.

### Building the Foundation

The first year includes two “blocks” introducing foundational principles. A course on “Drug Delivery Systems” will include content on dosage forms. Pathophysiology and patient assessment will be learned in an integrated course in these blocks. Medicinal chemistry and pharmacology principles will also be learned in an integrated course. Another integrated course will teach principles of pharmacokinetics, pharmacogenomics, and dosing in special populations.

### Preparing for Community IPPE

The last “block” in the first year will include a patient-care course focusing on self-care and herbalss, a course introducing healthcare systems including medication use systems, and a personal and professional development course which introduces legal and ethical concepts. These courses will prepare students so they are ready to complete a 4 week Community IPPE during summer semester.
The second and third year of the new curriculum focuses on patient care through a series of courses with each focusing on a body system. During most blocks in this phase, there is only one course which is 3-6 weeks in length and focuses on 1-2 body systems. For example, during the Patient Care III course students will learn how to care for patients having cardiovascular and pulmonary disorders. Students will learn pharmacology, medicinal chemistry, pharmacotherapy, and other pertinent content in an integrated manner. Teams of science and clinical faculty members will teach this course and use patient cases so learning is in the context of actual practice. Students will also develop their skills by using evidence-based literature and pharmacoeconomic studies to make patient care decisions during each Patient Care course. Students will also apply knowledge and skills related to pharmacokinetics, dosage forms, cultural awareness, and communications. Coursework in year two will include sterile compounding and skills related to practice in the hospital setting. As noted above, students will complete a 4-week Community IPPE during the summer of the first year. During the summer of the second year, students will complete a 4-week Hospital IPPE.
Opportunities for elective coursework and experiences across years 2 and 4, which culminate in earning a certificate in an interest area, allows graduates an opportunity to distinguish themselves. There is a continuous sequence of coursework and co-curricular experiences focusing on the student’s personal and professional development across the entire four years. Also continuous across the entire four-year curriculum are interprofessional learning experiences which prepare the graduate to be a collaborative interprofessional team member.

Students will begin their Advanced Pharmacy Practice Experiences (APPEs) at the end of the third year. The APPEs will continue to be 11 months in length. The biggest change to the fourth year is students will complete all required didactic courses before initiating APPE rotations. This means the rotation cycle will start in May and end in April versus the current cycle which begins in March and ends in February. Future newsletters will highlight revisions to the IPPEs and APPEs.

Figure 2 outlines the envisioned strengths of graduates who complete the new curriculum.

**OPPORTUNITIES FOR INDIVIDUAL DEVELOPMENT AND DISTINGUISHMENT**

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Figure 2 outlines the envisioned strengths of graduates who complete the new curriculum.

**THE FOURTH YEAR – FIRST APPE MOVING FROM MARCH TO MAY**

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The 2015 Curriculum is designed to prepare graduates to provide excellent patient-centered care and also who exemplify the following strengths:

1. Collaborative interprofessional team member
2. Evidence-based problem-solver
3. Facilitator of change in the US healthcare system by being proactive and adaptable
4. Self-directed learner who is prepared to be a lifelong learner
5. High personal standards of professional behavior
6. Exemplary soft skills including self-awareness, innovative and entrepreneurial thinking, and leadership.
“IT TAKES A VILLAGE”

Dean Johnson appointed a Curriculum Revision Task Force which was charged to propose a new curriculum. Reggie Frye, Pharm.D., Ph.D. served as Chair of the Curriculum Revision Task Force and included many individuals and groups which had a significant impact in the development of this new curriculum. For example, our preceptors completed a survey which provided valuable input during Task Force discussions. Recent alumni participated in focus group discussions and surveys, and these results provided particular insight about preparing graduates for practice. Likewise, current students participated in focus group discussions and surveys. The College also held Curriculum Revision Forums allowing Task Force members to share their thoughts and seek input from faculty members and others. The input of everyone was instrumental in envisioning how to better prepare students for practice experiences and graduates for practice.

We are excited about the new curriculum and will look to each of you to provide feedback on how we are doing in the preparation of our students and encourage you to send your feedback to Denise Klinker, Director of Experiential Programs, at any time.

“...The new curriculum benefits our students by improving foundational knowledge and skills through the integration of common concepts into each training module. Additionally, accountability measures in the form of assessments are incorporated to ensure competency. Inclusion of these variables strengthen the learning model and results in fundamentally sound pharmacists.”

– Ken Klinker, PharmD
Clinical Specialist, Infectious Diseases
UF Health Shands Hospital
Curriculum Revision Task Force Member

DEADLINES TO SUBMIT MIDPOINT GRADES

- January 16th
- March 13th
- May 15th

- February 13th
- April 10th
- June 12th

MID-POINT EVALUATION ON-TIME COMPLETION RATE

ON TIME: 26%
7 DAYS AFTER DEADLINE: 46.7%
14 DAYS AFTER DEADLINE: 59.7%
Journal Club is sometimes viewed as an unpleasant task by both pharmacy students and preceptors. In some cases, both parties may be concerned their level of understanding of statistics is nowhere near the caliber needed to differentiate whether a clinical trial used the most appropriate statistical test to reach their conclusions. They may understand the basics, but often times clinical trials use statistical tests unfamiliar to students, preceptors, or both. Journal Club then feels like a chore which both parties try to get over with as quickly as possible.

Statistical Expert Not Needed

Many preceptors choose not to incorporate a Journal Club because of memories from when they were students, and others incorporate them but wish it could be done in a different format. The good news is Journal Club can indeed take on many different forms. Students and preceptors should remember the true point of Journal Club should be for the student to understand how to critically evaluate medical literature, rather than be tested on statistical know-how.

Getting Started

It is suggested preceptors start the rotation with a “Getting To Know You” exercise which can be done verbally or via email. It is important preceptors assess the student’s level of knowledge and understanding of critical literature review to help guide the preceptor on what to do next. Some common questions for assessing the student’s baseline include “What did you learn in school about literature review?”, “Which formats of Journal Club have been utilized on your other rotations?”, and “What topics have you already presented for journal club?” This will allow you to tailor the Journal Club experience to one which will be mutually beneficial to both the student and the preceptor.

Journal Club Format

Next, preceptors should determine what kind of format they wish to use for conducting a Journal Club. The student can present to the preceptor and a roomful
of pharmacists using PowerPoint or other multimedia, submit a written summary, or participate in a roundtable or informal discussion of the article. Regardless of the format, the student will be expected to discuss all of the pertinent details of the article: objectives, methodology, statistics, results, and conclusions.

Focus on the Relevance to Current Practice

Too often, however, Journal Club becomes merely a regurgitation of the article or trial, and neither the student nor the preceptor truly benefit from the presentation. One seemingly minute yet widely impactful advice a preceptor can give a student prior to creating the presentation is to iterate the Journal Club presentation is not just presenting the article, but presenting the article as an editor of the journal. They should present the important information and its relevance with an “Editor’s Hat” on, rather than as a reporter merely reciting the facts.

Finally, regardless of the practice setting or literature reviewed, there are several universal discussion points and topics which should be included in every Journal Club. These include:

• “Would the findings in this study compel you to change your practice?”
• “Did this article or study evaluate an outcome patients care about?”
• “Are the results both clinically and statistically significant?”
• “What is the bottom line? What has this study added to our current knowledge base in this area?”

In conclusion, Journal Club can be a positive and beneficial learning experience for both students and preceptors. You, the preceptor, are in full control of how to run the Journal Club and choose the most comfortable format which will ensure the most benefit for you and the student. In the end, the most important takeaway from a Journal Club is a student has practiced how to critically evaluate medical literature which, in turn, will ultimately help them become a better clinician.

DID YOU KNOW?

UF Preceptors have free access to pre-prepared Journal Club activities via the Pharmacist’s Letter? The Preceptor Training & Resource Network section of the Pharmacist’s Letter provides Journal articles to review and includes an Instructor Key and a Student Handout to assist with facilitating a discussion. The Journal Club information can be found by following these steps:
2) Either Login with your user login information or sign up for free access by clicking on “I’m new to Pharmacist’s Letter – sign me up for Preceptor CE and Resources!”
Communication skills cannot be perfected in a classroom, they must be practiced to become fully developed. Simulated scenarios can help develop technique, but real world situations are needed to polish the skill and to, most importantly, build the student’s confidence in their ability. During the first 3 years pharmacy students learn the basics of medicinal chemistry, pharmacology, pharmacokinetics, and pharmacotherapy. Students also partake in simulated situations where they counsel students or faculty acting as patients or prescribers. Even though the students learn the basics about how to effectively communicate with patients and prescribers, the only way to develop this skill is to practice in the real world. Patients and prescribers have different personalities and different viewpoints on the pharmacist’s role in healthcare. Prescribers viewpoints range from those who are highly resistant to pharmacist recommendations to those blindly accepting whatever the pharmacist suggests. Each of these types necessitates a different approach. Same holds true for patients. Because of these differences, students require multiple interactions with patients and prescribers to build the skills and confidence necessary for a practicing pharmacist.

**Interprofessional Experience and Direct Patient Contact are Required by ACPE**

During the fourth year the students have required rotations with a specific set of objectives to reach the goals set by the college for graduation. These goals center around the skills needed to be an effective and self-reliant pharmacist. One objective involves demonstrating the student’s ability to express one’s knowledge to prescribers with “confidence, clarity, and respect” to develop a patient’s health care plan. Offering interprofessional experiences and direct patient contact is an expectation of not only
the College of Pharmacy, but also the Accreditation Council for Pharmacy Education (ACPE) during the required rotations Ambulatory Care and Adult Medicine. ACPE requires students to be exposed to multiple interprofessional experiences and direct patient contact in the majority of their APPE rotations. As is expected, some preceptors are hesitant to give the student the responsibility of communicating recommendations whether to a prescriber or a patient. However, if they do not get experience during their rotations then there is no other opportunity for the student to practice this important skill.

**Tips for Becoming More Comfortable with Student Communication to Patients and Prescribers.**

To provide some oversight while allowing the student to carry the brunt of the responsibility of communicating the following can be tried:

1. Require the student to write out the recommendation exactly as they would say it to the prescriber. This forces them to think of how to approach the situation.
2. Ensure the student has a back-up recommendation in case the first one is denied.
3. Have the student practice verbalizing the recommendation to you or another pharmacist. The pharmacist can then pose potential questions which the patient or prescriber may ask.
4. Be present during the recommendation process so you can step in if the interaction does not go smoothly.
5. If the recommendation is given over the phone, listen in through another line or listen to the student’s side of the conversation. You can also place the patient or prescriber on speaker phone if your site offers enough privacy.
6. For the first recommendation, pick a patient or prescriber who is more approachable or more experienced with teaching/precepting.

Students look forward to their fourth year with excitement and trepidation hoping they will finally feel like a pharmacist. The ability to effectively and confidently communicate with patients and prescribers is one of the required skills of a pharmacist no matter the setting.

**DID YOU KNOW?**

You can view your 2013/2014 Evaluations in PharmAcademic™ by clicking on the Summaries link from the home screen.”
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ANNOUNCEMENTS

We are excited to announce the new “Experiential Education Enhancement Award” for preceptors and sites who have creative ideas to improve experiential education and need financial support to put them into practice.

This year we will award up to $20,000 to winning preceptors/sites.
Sites which precept a minimum of 30 student months per year, including both IPPE and APPE students, will be eligible to apply. The application and detailed information will be distributed to all preceptors in the next few weeks. We are very excited to see the great ideas you, our preceptors, will come up with!