

A photograph of a classroom with several students sitting at desks. In the foreground, a young man in a blue polo shirt is looking at a laptop. Behind him, a young woman with blonde hair is looking down at a book or paper. Other students are visible in the background, some looking towards the camera and others looking down. The lighting is warm and focused on the students.

ACADEMIC INITIATIVES

PENN DENTAL MEDICINE FURTHERS NEW ASPECTS
IN CURRICULUM, TECHNOLOGY, AND WELLNESS

SINCE ITS FOUNDING, Penn Dental Medicine has welcomed new students to campus to learn and train in a program considered among the best in the nation. And just as the dental field, patient care, technology, and lifestyles have changed significantly over the years, so too has Penn Dental Medicine continued to evolve and innovate to keep its competitive edge.

This year is no exception. New curricula and programs that were introduced in the last year, including a new track for the Master of Science in Oral Biology and technology advances that provide iPads for all DMD students, are moving forward in new ways. This summer's orientation program for the Class of 2020 increased from one to two weeks to incorporate new elements such as student wellness, an introduction to basic sciences, and a case study in ethics that serves as a preview for a new three-year series of ethics courses.

Together, these initiatives create a living and learning community at Penn Dental Medicine that adapts and builds on new knowledge and information to provide the best possible dental education and prepare students for their roles as dental health providers and professionals.

"Universities today have evolved, they are places where people live, work and play; there's a whole new dimension in addition to academics, and we have to deal with new challenges," said Dr. Uri Hangorsky, Associate Dean for Academic Affairs and Student Life, Clinical Professor of Periodontics and Director of PASS. "These new initiatives will help students in various ways to succeed and thrive at Penn Dental Medicine."

Following are highlights of some of the recent academic initiatives at Penn Dental Medicine.

NEW THREE-YEAR ETHICS CURRICULUM ESTABLISHED

Starting this year, Penn Dental Medicine is introducing a series of three ethics courses to provide students with knowledge of fundamental concepts in principles of professionalism and ethical decision-making, with an emphasis on care-based discussions.

The courses, Professionalism and Ethics in Dental Medicine (PEDM), will be offered in the spring semester for first-, second- and third-year classes. The one-half-credit required courses are the first of their kind at the School.

"This is a new initiative that utilizes lectures, seminars, online discussions, and reflection papers to address issues related



to doctor-patient relationships, academic integrity, and professional communication," said Dr. Kathleen Boesze-Battaglia, Professor, Department of Biochemistry and Chair of the Ethics Committee. "The classes will provide a forum for discussing, debating, and understanding parameters of professional and ethical behavior and their impact on patients, colleagues, the public, and the profession."

Each course will address different issues to reflect the experiences and stages of the students in their dental education. The first-year course will focus on academic integrity, inclusion, and teamwork as well as how professional and ethical behavior in preclinical years translates to ethical clinical practice.

The second year will focus on preparing students to enter clinical practice and build relationships with patients, colleagues, and

faculty; and developing a moral framework for clinical decision-making.

Third-year students will tackle issues that will help with their transition to dental professionals, such as licensure, residency applications, mentorship, and real-world clinical practice dilemmas.

At the end of this series of courses, students will have to demonstrate understanding of key concepts, including professional communication with patients, faculty and staff, and the professional use of social media, as well as issues relating to diversity and inclusion.

"We wanted to instill in our students the impetus to focus on ethical decision-making from day one," Dr. Boesze-Battaglia says.

"We have assumed many of these concepts are common practices, but found that a formal discussion-based forum is valuable in reinforcing a culture of cooperation with high ethical and professional standards."

To underscore the importance of this issue, first-year students were presented with an ethics case study at

an orientation session led by several Penn Dental Medicine students pursuing dual DMD/Master's of Bioethics degrees and/or serving on the Ethical Review Board. These students played a critical role in designing the new ethics courses, as did faculty members Dr. Joan Gluch, Division Chief and Professor of Clinical Community Oral Health, and Associate Dean for Academic Policies; Dr. Olivia Sheridan, Associate Professor of Clinical Preventive and Restorative Sciences, and Assistant Dean for Admissions; and recent Penn Dental Medicine graduate Dr. Tanya Strauss (GR'15, D'16).



EXPANDED FIRST-YEAR ORIENTATION

The Penn Dental Medicine Class of 2020 went through a jam-packed orientation schedule in August that included a new focus on wellness, including healthy living and navigating the challenging world of social media; short academic courses in preparation for the rigorous academic demands of their program; and an introduction to professionalism through a new three-year ethics curriculum.

The new Introduction to Dental Medicine Orientation Course, developed by Dr. Bruce Shenker, Professor, Department of Pathology, and Dr. Jonathan Korostoff, Professor of Periodontics and Director of the Master of Science in Oral Biology Program, included eight short courses of one to two hours each taught by Penn Dental Medicine faculty on such topics as the implications of the basic sciences on clinical dentistry, the cell in health and disease, basics of head and neck anatomy, impact of systemic disease on dental therapy, and how patients are viewed.

While students were not graded, after the lectures were completed, they were given a final exam that introduced them to the online ExamSoft platform used throughout the curriculum. The test is intended to familiarize students with ExamSoft multiple choice questions and provide feedback on how well they learned the material and also areas in which they may need more preparation.

The goal is to introduce students to the first-year curriculum, particularly with the new curriculum in place since last year, as well as to the academic environment and expectations at Penn Dental Medicine.

“We wanted to address the transition to dental school, which is very different from the undergraduate environment in terms of academic rigor and density of materials,” says Susan Schwartz, Assistant Dean for Academic Services and Student Life. “That rigor takes a little getting used to, and our faculty wanted to create a

program for students to make that transition easier.”

At orientation, students also got a preview of the new ethics curriculum through a case study presented by Dr. Boesze-Battaglia and several upper-class dental students. And keeping up with the times, students also participated in a short session on appropriate professional use of social media, a topic that will be expanded on in the ethics courses.

“Social media lives forever, and we need to talk about it,” says Dr. Hangorsky, noting that issues include promoting civil interactions with others and urging caution about sharing inappropriate posts or photos that could be damaging to the student or dental professional.

First-year students also benefited from increased attention to wellness issues at orientation, with sessions dedicated to such things as dealing with stress, nutrition, counseling and psychological services

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at Penn, sexual violence prevention and support services, and a workout session and introduction to the fitness facilities at Pottruck Gym.

“We realized a major issue in dental education is the stress that students are experiencing,” Dr. Hangorsky says. “Mental health is very much on everybody’s mind. We have to deal constantly with new challenges, and with student well-being beyond academics.”

Indeed, the focus on wellness will extend beyond the orientation program, with the start of a wellness club, where students regularly will be able to take part in such activities as meditation, mindfulness, yoga, and other exercises, and address issues related to work-life balance, nutrition, health, and safety.

“It’s a different world and we need to respond to it,” Schwartz says. “We’re helping students achieve more work-life balance, deal with the stress of professional education, and behave morally and ethically as they move forward.”



MOVING FORWARD WITH THE NEW CURRICULUM

With the new curriculum in place, second-year students this year will take new multi-disciplinary integrated courses focused on organ systems, an oral pathology/diagnostic radiology course, and a new module focused on orofacial pain. They also will perform patient exams, dental cleanings and oral hygiene instruction with recall patients.

Meanwhile, existing courses in endodontics and periodontics have been revised “to further enhance student understanding of these important clinical disciplines,” says Dr. Faizan Alawi, Assistant Dean for Curriculum and Associate Professor of Pathology.



Dr. Alawi was named Assistant Dean in August 2015 to oversee the development and implementation of the new curriculum, which was developed over several years by the School's faculty and initiated with last year's entering class. Those students — now in their second year — will be the first to inaugurate the revised curriculum each year as they move through the program.

The new curriculum emphasizes the integration of scientific and clinical information, grouping courses into integrative course streams rather than discipline-specific courses. It also features enhanced small group and case-based learning, and offers more opportunities for primary patient care and clinical rotations in the first two years of study.

In another change this year to advance these goals, third- and fourth-year clinical rotation schedules have been assigned in a block-style format to help further promote continuity of patient care and administrative efficiency.

"We continue to compile a variety of data to critically assess the new curriculum, and expect to begin reporting this data over the next few months," Dr. Alawi says. For now, he says, minor changes were made to the first-year curriculum based on faculty and student feedback from last year's implementation of the curriculum, including presenting some modules earlier in the year to ensure students have access to information they need for later courses.

Meanwhile, Dr. Alawi says work will soon be on revising the third-year curriculum for implementation in the 2017-2018 academic year, which he expects will include a series of courses focused on clinical problem-based learning and critical thinking.

MASTER OF SCIENCE IN ORAL BIOLOGY EVIDENCE-BASED LEARNING TRACK

Since it was first offered last fall, six students have enrolled in the new evidence-based learning track of the Master of Science in Oral Biology (MSOB) clinical program, says Dr. Joseph DiRienzo, Professor, Department of Microbiology and Coordinator of the new track. The first students in this track are expected to graduate next spring.

In the evidence-based learning track, students develop a formally structured and critically evaluated literature review focused on an important oral health-related research topic or clinical question. A thesis composed of an in-depth systematic review of the literature and a manuscript reporting the results of the systematic review are required for graduation.

For example, Dr. Adrien Hamedi (GD'19), also in the periodontics/orthodontics residency program, has selected as his thesis topic a review of surgically assisted rapid palatal expansion, including bone-borne versus tooth-borne appliances. His thesis advisor is Dr. Lee Carrasco, Associate Professor of Clinical Oral & Maxillofacial Surgery/Pharmacology.

The MSOB program also offers its long-established research track, which currently enrolls 17 students who are interested in integrating more extensive research opportunities into their postgraduate education.

For now, both tracks of the MSOB are open only to students concurrently enrolled in a postgraduate specialty training program at Penn Dental Medicine, but there are plans to offer the new MSOB track more widely.

"The short-term goal of this new track is to provide our students with an alternate, rigorous non-laboratory-based research option for obtaining a MSOB degree," Dr. DiRienzo says. "The future goal is to broaden the availability of the MSOB program by offering the

evidence-based learning track to students outside the School of Dental Medicine."

Those who might be interested in the program include foreign dentists in the U.S. who are interested in a master's degree, he said, as well as students enrolled in other University of Pennsylvania programs.

The evidence-based learning track could be made more widely available within a few years, Dr. DiRienzo says, allowing time to develop additional courses and a larger pool of faculty thesis advisors to serve a larger student population.

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— DR. JOSEPH DIRIENZO

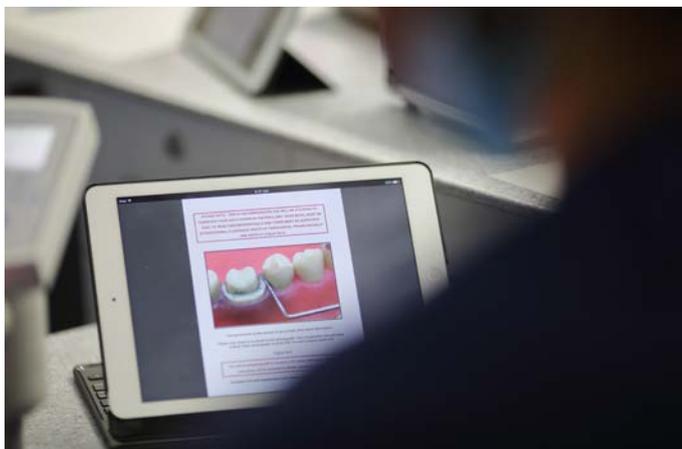


ACADEMIC INITIATIVES

UPDATE ON TECHNOLOGY INITIATIVES AT PENN DENTAL MEDICINE

For the first time last year, all Penn Dental Medicine DMD students were given iPads and required to bring them to class as part of an initiative that has unified the technology for courses, textbooks, and testing onto the iPad platform. At orientation in August, iPads were distributed to the Class of 2020.

With all students on a uniform platform, the Learning Technology Team is moving forward with the goal of converting the majority of textbooks into iBooks, says Chia-Wei Wu, Director of Learning Sciences and Technologies. As of the start of this academic year, 24 books across all four years of study are available as iBooks, as are a majority of clinical manuals and course documents, he says. In comparison, in 2014 there was only one iBook for Penn Dental Medicine students: the Endodontics Preclinical Manual.



The iBook platform enables students and faculty to access a variety of related course content, including instructional videos, course schedules, laboratory sign-up

The service enables faculty to enrich course content by incorporating text, photos, and charts as well as animation and other graphics into one seamless video.

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sheets, and published articles. And, in response to feedback, the Learning Technology Team has added new interactive features — note-taking and MediaSite video embedding — to the two newest iBooks, enabling students to take notes and watch videos without switching between applications.

The iPads also support the electronic ExamSoft testing system through which all

PDM testing is done, simplifying the testing and grading process.

Feedback from students and faculty members has been very positive, Wu says. "Students love it; they can bring the iPad to the laboratory without a thick manual, and use iBooks to search for information quickly."

In support of the School's overall commitment to blended learning and the new curriculum, the Learning Technology Team also has established a studio for producing instructional videos and lectures available for all faculty; helped develop an assessment tool on the PaGamO gamification platform; and established online learning modules.

Another benefit is that instructors can ask students to watch video lectures on their own and devote more class time to in-depth discussions. He says numerous faculty members so far have used the new production facilities to record lectures.

Wu also recently gave a presentation to faculty on using the interactive Poll Everywhere application that allows them to get real-time feedback from students on how well they understand the material being presented. "To provide a more effective learning experience, you have to adapt course material for a new generation," Wu says. "They are learning in a different way than we did in the past." ■

— By Debbie Goldberg

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