University of Arizona College of Medicine–Tucson
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Medical Education Program Highlights
The University of Arizona College of Medicine–Tucson (COM-T) offers an integrative 4-year MD program in the newly constructed, state-of-the-art Health Sciences and Innovations Building (HSIB).

- The curriculum features a 3-semester-long preclerkship phase to allow more time for clinical electives and making a specialty career choice.
- The Commitment to Underserved People (CUP) program is a student-directed, cocurricular program that provides students with clinical learning opportunities in 38 program clinics to serve medically underserved populations statewide.
- The state-funded Rural Health Professions Program (RHPP) matches 26 students per class with physicians working in rural areas throughout Arizona to nurture students' interest in rural health care and primary care careers.
- The Societies Program is a 4-year longitudinal mentoring program designed to assure that students acquire robust clinical skills, develop clinical thinking strategies, and begin professional identity formation. The program encourages meaningful, longitudinal relationships among the groups and their mentors; promotes student well-being; and establishes a sense of community.
- The House Advisory System is made up of 4 Societies Houses, each with 20 Societies groups (mentor and students) from each class. Each of the 4 houses is led by a student affairs dean (house dean), who serves as students' points of contact addressing immediate needs and providing individualized career counseling. The house deans work collaboratively with Societies mentors to ensure student success.
- The COM-T offers 8 distinction tracks. Students engage in additional coursework, mentorship, and a thesis or project to satisfy track requirements; successful completion results in students graduating with distinction in that track. Track offerings are bilingual medical Spanish, community service, global health, integrative medicine, leadership and innovation in health care, medical education, research, and rural health. The college also offers several dual-degree programs: MD–MPH, MD–PhD, MD–MBA, and soon, the MD–MEd program.
- The premedical admissions pathway (PMAP) is a 13-month postbaccalaureate program offering conditional acceptance to medical school for approximately 10 students annually who have had greater than average challenges in becoming competitive medical school applicants.

Curriculum
Curriculum description
The curriculum is organized into 3 phases: preclerkship phase, clerkship phase, and transition to residency (T2R) phase.

- Preclerkship: Students proceed through a series of 7 sequenced blocks. Longitudinal themes via Pathways to Health and Medicine (PHM) and the spiraling curricula are integrated throughout this phase. Concurrently with the blocks, students complete the Clinical Reasoning course and Doctor and Patient course. A primary focus of the phase is to expose students to basic sciences translated to clinical medicine framed in social determinants of health, clinical reasoning, and exposure to patients.
- Clerkship: Begins with the Transition to Clerkship course, followed by the required rotations. Students also complete intersessions within the phase building upon longitudinal curricula in the preclerkship phase, covering such topics as health law, physician wellness, and medical ethics.
- T2R: Includes required rotations in emergency medicine—critical care, a surgical subspecialty, and a subinternship. Students may individualize their T2R curriculum to support their medical specialty choice. Transition to Residency Bootcamp and Basic Sciences in Clinical Medicine are 2 new courses. The bootcamp provides education and training in skills necessary for postgraduate training and includes separate tracks in surgery and medicine. The Basic Sciences in Clinical Medicine course provides a return to evidence-based medicine and opportunities to revisit the basic sciences as they inform clinical decision-making.

See Supplemental Digital Appendix 1—Curriculum Description—at http://links.lww.com/ACADMED/A816.

Curriculum changes since 2010
The most significant curricular change has been the full accreditation of the Phoenix regional campus program separate from COM-T’s program, affording the opportunity to undergo a curriculum modification. After extensive preparation and faculty engagement, in academic year 2017–2018, COM-T’s curriculum transitioned from a 24-month to a 20-month preclerkship phase, including a new 6-week basic sciences capstone course designed to support student preparation for the USMLE Step 1 examination. Areas of overlap and redundancy were streamlined to underscore the developmental and spiral curricular design. The clerkship phase underwent similar rigorous review. In this process, the internal medicine clerkship was divided into inpatient and ambulatory components, the surgery clerkship was increased from 6 to 8 weeks, and the neurology clerkship was increased from 3 to 4 weeks.
Preclerkship block directors emphasized more clinical application and social and behavioral science content, and made greater use of learning technology, including online sources of content, study, and exam preparation. COM-T also formalized USMLE Step 1 preparation into the curriculum. In the clerkship phase, with the successful development of additional clinical sites necessary to accommodate the overlap between students in the legacy and the modified clerkship curricula, COM-T has expanded its faculty resources for clinical instruction. In the T2R phase, the Transition to Residency bootcamp and the Basic Sciences in Clinical Medicine courses were developed based on student feedback, national trends in graduate medical education, and results of the AAMC Graduate Questionnaires preceding the curricular transition.

Assessment
The medical education program objectives were designed based on the ACGME domains of competence.

See Supplemental Digital Appendix 2—Medical Educational Program Objectives and Assessment Methods—at http://links.lww.com/ACADMED/A816.

Since 2010, more opportunities are available for formative and summative assessment, which include:

- Block self-assessments through interactive home-grown and vended, online modules and practice exams
- More diagnostic practices exams for USMLE Step 1 preparation
- OSCEs administered in the required clerkships
- Formative narrative assessment of clinical skills sessions in the Bootcamp and Basic Sciences in Clinical Medicine courses in the T2R phase

The year 2 OSCE and end-of-clerkship OSCE have been maintained. Additional improvement changes have resulted in increased uniformity in student assessment strategies among the clerkships. Also, COM-T has piloted the introduction of Entrustable Professional Activities into its student assessment and curricular evaluation approach while expanding the use of OSCEs in the clerkships.

Pedagogy
The recent curriculum modification provided an opportunity to integrate more active learning strategies since 2010 to achieve the program objectives. Pedagogical approaches used throughout the curriculum include flipped classroom, case-based learning, independent and self-directed learning, reflective writing and journaling, portfolio review, simulations, and standardized/simulated patients. In addition, the preclerkship phase content is also delivered through team-based learning, virtual labs, and in small- and large-group discussions. Lectures are podcasted for students as additional reference material. The learning in the clerkship phase is based on preceptorship and clinical experience in ambulatory and inpatient settings throughout the rotations. The new simulation center and teaching clinic in the HSIB provides more space to expand patient care–based interprofessional education.

Clinical experiences
COM-T has a long-standing and productive relationship with a university-based teaching hospital system, community hospitals, community and rural clinics, the Southern Arizona Veteran’s Affairs Health Care System (SAVAHCS), and multiple Indian Health Services sites. All are components of the medical students’ required and elective clinical experiences, and align with the college’s mission and vision goals of exposure to broad diversity of patient care and engagement. Medical students have their first clinical encounter on the first day of medical school. They meet their Societies mentor and interview a patient selected through the program. This first encounter is designed for students to understand their patient’s experience. Subsequently, students have clinical experiences weekly in the curriculum, as well as in the student-run CUP clinics.

Required and elective community-based rotations
As noted, a significant component of medical students’ clinical experiences occurs with community partners in both urban and rural settings. Clerkships maintain an active roster of participating sites and preceptors and evaluate them annually for comparability in student experiences, patient exposure, education, and assessment. Instructional development is offered to sites that have either new teaching faculty or opportunities...
Figure 2 Medical education leadership.
for improvement in the current staff. To align with the mission of training and retaining students interested in providing community-based health care, all clerkships provide community-based experiences as part of their rotations. Similarly, the SAVAHCs is a vital component of clerkship training in veterans’ health care for the medicine, psychiatry, neurology, and surgery clerkships. Through their active engagement with veterans in these rotations, students are able to build on the instruction in veterans’ health care they received as part of the PHM curriculum.

Challenges in designing and implementing clinical experiences for medical students

An ongoing challenge is monitoring clinical experiences for their impact, benefit, and safety for students’ experiences; however, the curriculum committee’s monitoring system using annual site reviews has been successful in this regard. Another emerging challenge is competing with 2 osteopathic schools of medicine in Arizona that are able to offer financial support to clinical sites. Not unique to the COM-T, there is also the pressure for teaching faculty to generate significant clinical income to retain their practice and/or position.

Curricular Governance

The curriculum management and governance structure is designed to oversee the medical education program. The Tucson Educational Policy Committee (TEPC) provides program-wide oversight and is made up of faculty elected by the general faculty and students elected by their peers. The TEPC has several subcommittees that oversee major curricular components, as shown in Figure 1.

See Figure 1—Curricular governance.

Education Staff

The Office of Curricular Affairs is made up of 26 full- and part-time educational faculty and professional staff who provide leadership, planning, evaluation, and support for the undergraduate medical education program and the TEPC and its subcommittees at COM-T. The office provides organizational responsibility for the CUP community outreach programs, the RHPP, the student development program, and the dual-degree programs. Central to the role of the Office of Curricular Affairs is providing administrative support for all 3 curricular phases. This role includes rigorous assessment and evaluation strategies and support, with cross-linking of educational design and feedback to grow the educational mission further.

See Figure 2—Medical education leadership.

Faculty Development and Support in Education

Through the Office of Curricular Affairs, COM-T provides professional development to faculty through the services of the director of faculty instructional development. In this role, the director supports faculty in improving their classroom-based and clinical teaching by offering both in-person and online modules. This support extends to all house staff, adjunct faculty, and affiliate clinical teaching faculty at clinical teaching sites through online training. Such development is provided routinely and codified in TEPC policy. Additionally, the Academy of Medical Educators and Scholars (AMES) provides peer-based instructional assessment and instruction.

The role of educational scholarship has grown rapidly in COM-T’s promotion and tenure process over the last 10 years. Today, all new faculty candidates and faculty candidates for promotion must demonstrate effective teaching in their respective departments and provide peer assessment as demonstration of that educational contribution. Further, the college has created faculty promotion tracks, for example, an educator Scholar track, that require evidence of increasing impact and recognition of the candidate’s educational efforts, which are documented in an educational portfolio.

Academy for educators and scholars

The mission for AMES is to develop and retain outstanding educators and promote excellence in teaching and educational scholarship. AMES recruits its membership from COM-T faculty in all departments, including senior, highly experienced faculty and junior or midlevel faculty who show great promise in education and educational scholarship. AMES offers robust faculty development and mentorship and supports COM-T’s success in maintaining a pool of strong educators to support its mission and vision goals. AMES has an annual budget to fund education-based research, educational scholarship travel grants, and outreach efforts (education-based journal club, speakers, research forums).

Initiatives in Progress

The COM-T has launched an early acceptance program in partnership with the University of Arizona Honors College. Approximately 10 students enrolled in the Honors College will be accepted during their junior year. Students will experience an individualized curriculum as well as participate in an immersive summer research experience at the COM-T between their junior and senior years before starting medical school. The COM-T is currently also exploring a 7-year combined University of Arizona undergraduate and medical school program, in conjunction with the recently approved Bachelor of Medicine degree that the college plans to offer. Finally, the COM-T is launching an MD–MEd dual-degree program in collaboration with the University of Arizona College of Education.