Appendix 1. Core and Specialized Teaching Competencies for Medical Educators from Srinivasan et. al.

Six Core Teaching Competencies for Medical Educators		
Content Area	Area description: Competent medical educators …	Core teaching competencies*: Competent medical educators…

Medical (or content) knowledge	Teach content and assess each learner's abilities within their field of expertise	1. Challenge and facilitate learners in practicing high quality, compassionate patient care within their field of expertise.
		   a. Teach learners to apply the established and evolving knowledge needed for the effective care of patients.
		   b. Teach learners to prioritize and multi-task patient care issues, including recognition of critical patient care issues.
		   c. Provide resources for additional skills development for learners.
		2. Assess learner progress in acquiring knowledge, skills, and attitudes.
		3. Provide learners with graduated responsibility based on their abilities.

Learner Centeredness	Demonstrate a commitment both to learners' success and well-being and to helping learners grow into their professional roles	1. Demonstrate respect for each learner.
		   a. Explicitly value each learner's contributions to the teaching/learning environment.
		   b. Demonstrate sensitivity and responsiveness to each learner as an individual, including respecting privacy, autonomy, and professional boundaries.
		   c. Demonstrate sensitivity and responsiveness to learner diversity, including ability, disability, gender, age, culture, ethnicity, and sexual orientation.
		2. Invest in each learner's growth and skill development.
		   a. Aware of competing demands on learners and learners' personal/professional issues, which might affect their growth.
		   b. Elicit each learner's barriers to learning and work to overcome them.
		   c. Recognize learners in distress and provide appropriate resources within the educational structure to assist.
		3. Create a learning climate in which learning is facilitated.
		   a. Stimulate the best in each learner, while minimizing unwanted behaviors.
		   b. Create open atmosphere that facilitates dialogue about different approaches to clinical issues and about personal/professional issues that affect professional development.

Interpersonal & Communication Skills	Flexibly tailor teaching and communication styles to facilitate learning.	1. Communicate expectations, goals, and information in ways that stimulate and engage learners. 2. Tailor communication and educational strategies to optimize learning, based on the learning context and learners' needs. 3. Determine each learner's prior knowledge and skills through direct observation or questions. 4. Provide specific feedback to each learner to help the learner improve. 5. Are open to alternative approaches to problems and issues. 6. Problem-solve in a social context. 7. Facilitate dialogue and understanding during times of professional conflict.
Professionalism and Role Modeling	Demonstrate best educational and content-related practices, and role model those behaviors for learners.	1. Inspire learners to excellence in their field of expertise through modeling professional behaviors. 2. Adhere to ethical principles in teaching, demonstrating compassion and integrity. 3. Model professional practice standards in their field of expertise. 4. Keep up-to-date on educational practices and resources within their field of expertise. 5. Remain accountable for their actions and follow-through on agreed upon activities in a timely fashion

Practice-based reflection and improvement	Demonstrate continuous self-assessment and lifelong learning to improve their effectiveness and capacity as educators.	1. Reflect upon education practices routinely.
		   a. Are mindful during and after educational interactions.
		   b. Actively seek input and feedback about the quality/effectiveness of their teaching from multiple sources, including learners.
		   c. Utilize feedback and self-assessment to identify teaching strengths and weaknesses.
		   d. Modify teaching techniques and approaches to improve current educational practice.
		2. Develop personal educational goals based on self-assessment and implement a plan to achieve those goals.
		3. Seek faculty development opportunities to improve educational practice.

Systems-based learning	Utilize resources within the larger system of medical education to advocate for learners and to provide optimal teaching and learning.	1. Utilize medical education resources to advocate for learners, to coordinate teaching endeavors, and to optimize learning environments
		   a. Seek and utilize resources within institution to improve medical education and the teaching environment.
		   b. Seek and work with others to utilize resources outside of the institution.
		   c. Utilize broader medical education resources, including shared curricula and national organizational resources.
		2. Negotiate resources to succeed in teaching within their area of expertise.
		3. Anticipate how trends within their field of expertise will affect clinical practice & plan for curricular changes to meet those needs.

Four Specialized Teaching Competencies for Medical Educators		
Content Area	Area description: Competent medical educators …	Advanced teaching competencies: Competent medical educators…

Program design & implementation	Design and implement sound, sustainable educational programs.	*Development*
		1A. Understand and apply major theories of medical education in program design and implementation.
		  − Seek additional training in conceptual models and best practices in education.
		  − Seek collaborators to round out their approach to content or methods outside of their field of expertise.
		  − Understand the current learning environment's strengths and weaknesses.
		1B. Use a deliberate, thoughtful approach to curricular development.
		  − Conduct needs analyses to ensure that program goals and content are appropriate and relevant.
		  − Craft prioritized learning goals and educational objectives, tailored to the needs of learners, patients, and the local health system.
		  − Involve key development personnel (technology, content, delivery) and stakeholders early in the process.
		  − Are aware of advances in instructional modalities, including simulation and emerging technologies.
		1C. Negotiate for resources appropriate to the scope of development.
		
		Implementation
		2A. Understand resource availability and constraints for program implementation.
		  − Anticipate implementation barriers, including lack of institutional and faculty support, lack of funding and staff/technological support, inertia, and learner constraints.
		  − Gather resources to overcome critical implementation barriers.
		  − Nurture staff and key personnel development to facilitate specific program implementation.
		2B. Involve key stakeholders, including learners and administration, in implementation.
		2C. Develop stepwise process for program implementation.

		Program Sustainability 3A. Begin succession planning during implementation to ensure continuity if a key educator becomes unavailable. 3B. Create robust program infrastructure, including recognizing, training, and involving other interested educators and staff. 3C. Ensure relevancy by changing a program based on feedback (learners/educators), self-reflection, & external practice/environment needs. 3D. Provide timely feedback to key stakeholders to improve accountability.

Evaluation and scholarship	Utilize scholarly and practical approaches to prioritize program evaluation in a way that creates new knowledge about the program, the process, and the field being studied.	*Evaluation*
		1A. Plan for learner and program evaluation during content development.
		1B. Identify measurable learning outcomes, either alone or with evaluation experts with additional skills
		  − Choose a scope of evaluation, appropriate to goals and resources.
		  − Consider evaluation of multiple outcomes: learners, patients, communities, self, staff, faculty, programs, and institutions
		  − Identify evaluation modalities most likely to capture key learning outcomes
		1C. Understand strengths and weaknesses of different types of evaluation modalities, including test/survey and non-test/survey modalities.
		  − Are able to access or develop (alone or with experts) appropriate evaluation techniques.
		  − Consider multiple evaluation techniques of individuals or groups, including simulators, standardized patients, direct observation, learning portfolios, clinical performance reviews (video review, charts, and portfolios), validated written instruments, and surveys
		  − Consider multiple evaluation techniques of program success, including patient outcomes, national benchmarks/exams, comparisons with other institutions, and participant evaluation.
		  − Consider appropriateness and limitations of existing evaluation tools
		  − Plan for utilization of new/emerging evaluation technologies
		1D. Utilize qualitative and quantitative analytic techniques to study outcomes of interest.
		  − Conduct appropriate rater training.
		  − Recruit appropriate statistical support and resources.
		
		Scholarship and dissemination
		2A. Share results of evaluation with others at institution, nationally and internationally through publication, conferences, and workshops.
		2B. Plan for disseminating the program in appropriate venues.
		2C. Identify questions unanswered by program implementation and evaluation, and plan for next steps.
		2D. Generate and share new ideas for improving or creating programs

Leadership	Create a shared vision for medical education, while anticipating future needs. Create systems in which team members can grow and succeed.	*Vision*
		1A. Plan for change.
		  − Anticipate future changes in medicine and society that will affect physician training.
		  − Proactively (not reactively) change institutions and programs to meet anticipated future changes.
		  − Manage the overall development process of planned changes and sustainable growth.
		1B. Build consensus around major educational goals.
		  − Prioritize competing needs of groups and new projects for appropriate resource allocation.
		  − Listen and change
		1C. Implement vision in a sustainable fashion

		Leadership Development 2A. Develop the next generation of educational leaders. − Recruit, nurture, and retain talented individuals (learners, faculty, staff). − Delegate both responsibility and authority for tasks in a logical fashion. − Progressively increase goals, responsibilities, and authority of capable individuals. − Begin succession planning at the point of assuming their leadership role. 2B. Promote faculty and staff achievement. − Create opportunities for leadership and skills development. − Create systems to recognize and reward those who meet/exceed goals. − Create systems to recognize and remediate those who do not meet appropriate benchmarks. *Organizational Culture* 3A. Create organizational systems that are resilient, flexible, capable of change, accountable, and balanced between stability and growth 3B. Monitor and respond to program and institutional performance outcomes 3C. Appropriately resource projects to ensure success and promote accountability − Manage budgets and resources to achieve programmatic goals. − Raise funds and resources from internal and external sources, concordant with values 3D. Create a culture of safety and trust in which critical feedback is encouraged and used to evolve programs.
Mentorship	Sustain a positive focus on the career growth of individuals (learners, faculty, staff)	*One-on-one mentorship* 1A. Articulate expectations of the mentor-mentee relationship, including deliverables by both mentor & mentee. 1B. Provide support, encouragement, inspiration and nurturing of mentees. 1C. Help develop needed skills through collaboration, feedback, apprenticeship and/or introduction to others. 1D. Advocate for mentees, including by providing key networking opportunities. 1E. Understand how to transition from a mentor-mentee role to a peer role as the mentee's skills develop. *Programmatic mentorship (including learner or faculty development)* 2A. Create an environment in which prepared individuals can personally and professionally succeed. 2B. Provide development opportunities to enhance individual/group goals. 2C. Create or identify development opportunities, tailored to individual career goals. 2D. Broaden the perspectives of individuals or groups. 2E. Create advising and feedback programs. 2F. Identify or develop programmatic resources for individuals to achieve their goals.

Competency & Subgroup		LOS	L&I	Design	Inq	Cap	Phil Ed	Epist	FMK	FCC	IMM	FHD	LC	SaT1	SaT2	STC	MS101	SCC	CELA
Curriculum Components		Peabody Required					Peabody Elective		MD Required					MD Optional				MD Extra Curr	
Medical Knowledge	1																		
	2																		
	3																		
Learner Centeredness	1																		
	2																		
	3																		
Interpersonal & Communication Skills	1																		
	2																		
	3																		
	4																		
	5																		
	6																		
	7																		
Professionalism and Role Modeling	1																		
	2																		
	3																		
	4																		
	5																		
Practice-Based Reflection and Improvement	1																		
	2																		
	3																		
Systems-Based Learning	1																		
	2																		
	3																		
Program design And Implementation	1A																		
	1B																		
	1C																		
	2A																		
	2B																		
	2C																		
	3A																		
	3B																		
	3C																		
	3D																		
Evaluation And Scholarship	1A																		
	1B																		
	1C																		
	1D																		
	2A																		
	2B																		
	2C																		
	2D																		
Leadership	1A																		
	1B																		
	1C																		
	2A																		
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	3A																		
	3B																		
	3C																		
	3D																		
Mentorship	1A																		
	1B																		
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	2D																		
	2E																		

	Competency Modeled
	Competency Modeled + foundational knowledge/theory of competency cultivated
	Foundational knowledge/theory of competency cultivated
	Foundational knowledge/theory of competency cultivated + Opportunity for authentic enactment of competency
	Opportunity for authentic enactment of competency
	Competency Modeled + foundational knowledge/theory of competency cultivated + Opportunity for authentic enactment of competency

Course Abbreviations and Descriptions:

Peabody:

Course Name	Description
Learning Out of School (LOS)	Introduces theories of learning and explores their utility for the design of learning environments. Contrasts socio-cultural and cognitive approaches toward concepts and categories, problem solving, and model-based reasoning. Focuses on learning out of school
Learning and Instruction (L&I)	Introduces theories of learning and explores their utility for the design of learning environments. Contrasts socio-cultural and cognitive approaches toward concepts and categories, problem solving, and model-based reasoning. Focuses on learning in school
Designing for Context (Design)	Examines how contextually responsive curricula shape learning in schools and other learning environments. Participants explore research, practices and models of responsive curricula design that include design of authentic tasks and assessments.
Inquiry Into Context (Inq)	Explores the design of contextually responsive inquiry. Methods of inquiry and views of research and knowledge in professional practice contexts are the course focus. This includes examining the traditions of practitioner inquiry; the practice of action research, self-study and other methodologies; and the relationship of inquiry and method to the contexts of learning.
Capstone (Cap)	Students who are enrolled in the non-licensure master's program are required to enroll in this course designed to assist students in preparation for the Capstone Experience. The master's Capstone experience enables students to synthesize and demonstrate their knowledge in core areas of the graduate program. Core areas are (1) the learner and learning principles, (2) learning environments, (3) curriculum and instructional strategies, and (4) assessment. Students will be guided on the requirements of the capstone, and supported through the proposal writing stage and submission. Students will identify a problem statement, research/resources for conceptual development, and engage in critical review of proposals.
Philosophy of Education (Phil)	This course explores the classic roots of modern educational ideas and in deconstructing the hidden assumptions in, narratives underlying, and discourse shaping contemporary educational research, policy and practice.
Epistemological Foundations of Math and Science (Epist)	Examines the social, cognitive, and material arrangements and mechanisms that contribute to how we know what we know in mathematics and in sciences. Knowing how we know is the domain of epistemology, and assembling the means to create disciplinary-distinct ways of knowing creates what Knorr Cetina (1999) calls an epistemic culture. It is this culture that sustains and regulates core assumptions about disciplinary knowledge.

Medical School:

Course Name	Description
Foundations of Medical Knowledge (FMK)	The first phase of the curriculum, Foundations of Medical Knowledge, will provide a solid, broad foundation of knowledge and skills. Multiple learning methodologies, including teamwork around structured cases, will be utilized to promote integration and application of new information. Subsequent years of training will deliberately build upon this foundation, with escalating level of detail as the learner advances. The intent is to focus on conceptual understanding, promoting better retention of information.
Foundations of Clinical Care (FCC)	Progressing through the curriculum, the student will have graduated responsibilities within the clinical setting. The Foundations of Clinical Care provides education in multiple medical disciplines via clerkships in medicine, surgery, pediatrics, obstetrics and gynecology, psychiatry, and neurology. There are elective opportunities as well.
Immersion Phase (IMM)	The Immersion Phase is a highly individualized period that builds upon the foundational knowledge acquired earlier, in a context that is most relevant to each student's individual interests. Immersion courses will solidify clinical skills; deepen foundational science knowledge through meaningful clinical engagement; allow students to dive into areas of personal learning needs and/or interest; expand knowledge and skills in leadership and scholarship; ensure readiness for residency; and enhance workplace learning skills. Students will select from a broad menu of courses including Integrated Science Courses, Advanced Clinical Experiences, Acting Internships and Advanced Electives.
Foundations of Healthcare Delivery (FHD)	Foundations of Health Care Delivery (FHD) is a key component of Curriculum 2.0. The goals of FHD are to integrate the patient care experience with health professions knowledge, integrate systems knowledge with patient care, nurture self-directed workplace learners, cultivate respectful professionals and prepare leaders who contribute to a collaborative practice-ready workforce.
Learning Communities (LC)	The Learning Communities are intentionally developed longitudinal groups of faculty and students that aim to enhance students' medical school experience and maximize learning. The Learning Communities' academic component seeks to maximize learning, specifically learning related to student development as professionals. Helping students build an appropriate image of the medical profession and skill set related to functioning within the healthcare environment are the essential foundations for future success. Development as professionals involves knowledge, skills and attitudes related to students' practice, as well as the environment within which the practice will occur. Topics include ethics, reasoning and metacognition, leadership, policy, mentoring, and service learning.
Students as Teachers – Course Participant (SaT 1)	The goal of this course is to prepare immersion phase medical students to become effective teachers as residents. The course offers a longitudinal didactic program, bringing the cohort together throughout the year to discuss general teaching strategies, educational theory and to review educational literature. This is combined with an opportunity to enhance proficiency in one specific teaching environment by participating in the delivery of a particular course or program in the general curriculum. Students will practice teaching skills, gain an appreciation for evidence-based teaching techniques, and receive mentoring and feedback from established educators.
Students as Teachers – Course Leader (SaT 2)	The Longitudinal Students-as-Teachers (SaT) Immersion Course also provides a select group of students an opportunity to lead the course, imparting their own vision to the program, designing curriculum, and facilitating the course, and developing leadership skills.
Shade Tree Clinic (STC)	The Shade Tree Clinic Community Health Experience offers a profound and rich exposure to primary and specialty care medicine in a resource-limited setting at a sub-internship level of responsibility. This course is a longitudinal ACE during the Immersion Phase for senior medical students. The Shade Tree Clinic Community Health Experience is an opportunity to develop clinical case management skills in the context of complex social determinants of health. Students are exposed to community resources needed to provide holistic care to vulnerable patients. They also gain creative, critical thinking skills necessary to confront challenges faced in a resource-limited context. Participating students have the opportunity to (1) enhance clinical patient care skills, (2) mentor and teach junior students, and (3) participate in didactic/skill sessions for advancement of clinical, advocacy, and leadership skills.
Med School 101 (MS 101)	Med School 101 is a 3 week course offered in July for gifted high school students, as part of VU's Program for Talented Youth. Generally 3-5 students are involved in the course each year. Prior to the course, the involved students create a curricular plan, develop their own teaching sessions and materials and arrange for other teaching sessions and clinical experiences. The university provides advice for engaging this cohort of learners. These students then execute the three week curriculum, reflect on curricular experiences, and serve as mentors for the subsequent group of students taking the course.

Medical School Extra Curricular Opportunities:

Extra Curricular Activity	Description
Student Curriculum Committee (SCC)	The Vanderbilt University School of Medicine faculty values students' perspectives on their education, and its members invite students to take an active role in shaping the VUSM curriculum. The Student Curriculum Committee (SCC) is the official body through which medical students can provide feedback to course instructors, voice opinions about their medical education, and effect changes to the VUSM curriculum. The Student Curriculum Committee reports to the Undergraduate Medical Education Executive Committee (UMEC), the VUSM committee that has primary responsibility for planning and maintaining the medical school curriculum. The Undergraduate Medical Education Executive Committee takes students' opinions very seriously and values their input. Vanderbilt SOM strives for innovative education that is responsive to changes in medical knowledge and practice and follows best available evidence for curricular design and implementation. To these ends, many faculty teams have formed to guide the development and refinement of curricular elements. SCC members are an integral part of these teams, providing a student perspective to ensure students' needs and interests are accurately considered.
Center for Experiential Learning and Assessment (CELA)	During the immersion phase, students can elect to participate in simulated encounters in CELA as upper class mentors for younger students. These opportunities range form observing patient interactions and providing feedback, coaching younger medical students, and teaching skills related to patient care. These opportunities are offered to all immersion phase students at various times throughout the year.