

FRANK H. NETTER MD SCHOOL OF MEDICINE

The Frank H. Netter MD School of Medicine has been designed to be a model for educating diverse, patient-centered physicians who are partners and leaders in an interprofessional workforce responsive to health care needs in the communities they serve. Students from diverse backgrounds attain their highest personal and professional potential in a collaborative student-centered environment that fosters academic excellence, scholarship, lifelong learning, respect and inclusivity. The school embodies the university's commitment to the core values of academic excellence, a student-oriented environment and a strong sense of community. Accordingly, the school values:

- excellence in education that places the student at the center of the learning experience, and nurtures the student's independence as a lifelong learner
- diversity and inclusiveness in all students, faculty and staff
- a learning environment that promotes the provision of holistic, patient-centered care
- interprofessional education and service-learning experiences to promote teamwork in the care of patients
- clinical partners who support and promote the school's vision, mission and values
- social justice and the education of physicians to address health care inequalities
- partnerships within our community that provide students with learning and service opportunities to improve the health of the community
- advancement and support of primary care education and health services research through the school's Institute for Primary Care
- advancement of global health through the school's Institute for Global Public Health by promoting community medicine, public health and international partnerships
- advancement of rehabilitation medicine, through the school's Institute for Rehabilitation Medicine by promoting interprofessional care, services and research programs especially for wounded military personnel

The four-year curriculum leading to the MD degree is comprehensive and integrated. Core biomedical principles are correlated temporally and contextually with behavioral, clinical and allied health sciences. The curriculum emphasizes active student learning designed to equip graduates with the tools to be effective lifelong learners. Learning occurs in a variety of settings: small-group conferences, case-based learning seminars, lectures, with patients, standardized patients and independent study.

The curriculum is holistic in scope; content such as prevention and wellness promotion, population health, complementary and alternative medicine, and the study of contemporary health care systems are incorporated into discussions of the traditional diagnosis and treatment of medical diseases.

Each course has longitudinal themes that anchor the content in a pedagogically relevant and cohesive manner. These significant learning experiences shift the focus from "what is taught" to "what and how

students learn." The longitudinal themes include medical informatics, biostatistics, epidemiology, ethics, nutrition and sociobehavioral science.

Students begin clinical experiences in their first year and assume increased clinical responsibility in their second through fourth years. They have opportunities to formally learn and hone clinical skills during the clinical arts and sciences course, which uses standardized patients and state-of-the-art simulation labs. Students also meet weekly with a primary care physician, seeing patients, practicing clinical skills, and learning how to work effectively with other health care team members. The first year follows an organ system approach to biomedical sciences, focusing primarily on normal human function. To increase the medical context of this approach, students learn the fundamentals of common diseases in each curricular area. Year 2 follows a pathophysiological approach to content, exploring topics in greater depth and with enhanced sophistication and understanding. Students are exposed to a broad array of human diseases and best practices for diagnosis and management.

Students are allowed to individualize their medical education by selecting a field of concentration for elective course work. The elective course work provides the foundation for a student's capstone project, an independent research project. Elective concentration areas may include health management, policy, economics, law, education (including interprofessional education), global health, communications, ethics, humanities, or the student may design a novel concentration area with the support of a faculty adviser.

The School of Medicine also offers an anesthesiologist assistant program. For details, visit the Quinnipiac Anesthesiologist Assistant Program (<http://catalog.qu.edu/school-of-medicine/anesthesiologist-assistant/>) page.

Right to Modify

This Catalog is intended to serve as a convenient reference source for students. It is not guaranteed to be free from errors. Moreover, the programs, policies and courses described here are subject to continual review and reevaluation and may be changed at any time without prior notice. The School of Medicine reserves the right to modify the academic requirements, admission requirements and program of study; to change the arrangement and content of courses, the instructional material and the tuition and fees; to alter any regulation affecting students; to refuse readmission at any time; or to dismiss any student at any time, should it appear to be in the best interest of the school or student to do so. The School of Medicine also reserves the right to change the semester schedule and examination times and locations. Nothing in this Catalog should be regarded as setting terms of a contract between a student or prospective student and Quinnipiac University or its School of Medicine.

Student Learning Outcomes

Quinnipiac University Frank H. Netter MD School of Medicine MD Degree Educational Program Objectives

Upon completion of the MD degree, students will demonstrate competencies in the following 10 categories:

1. Care of Individual Patients

1.1 Demonstrate respect and compassion for all patients.

1.2 Practice sensitive and culturally effective patient-centered care, by identifying patient-specific context and preferences.

- 1.3 Gather accurate, organized and efficient medical histories from patients and families, attending to patient symptoms, beliefs, concerns, expectations and illness experience.
- 1.4 Perform accurate and relevant, focused and comprehensive physical examinations, distinguishing normal from abnormal findings.
- 1.5 Access and interpret written and electronic medical records to obtain a thorough patient data set.
- 1.6 Use decision analysis and evidence-based reasoning to interpret clinical data.
- 1.7 Identify individualized risk factors operative in any patient.
- 1.8 Assess patient information accurately in formulating a prioritized differential diagnosis.
- 1.9 Apply best practice, ethical and cost-effective principles in ordering tests and procedures.
- 1.10 Compose comprehensive and focused medical chart notes (written and electronic); accurately documenting medical history, physical exam and diagnostic test data.
- 1.11 Draft prioritized, comprehensive and focused problem lists, assessing each problem in cogent, organized and comprehensive prose.
- 1.12 Understand therapeutic interventions for common medical conditions; applying evidence-based reasoning for ordering medications and other therapies.
- 1.13 Develop accurate verbal and written medical orders, incorporating patient input and respecting patient autonomy.
- 1.14 Demonstrate proficiency with common medical procedures (listed in clinical arts and sciences course description).
- 1.15 Identify when additional input is needed and effectively communicate with consultants.

2. Professionalism

- 2.1 Demonstrate honesty, integrity and respect in all interactions with patients, colleagues and faculty
- 2.2 Display empathy, altruism and compassion toward patients and colleagues alike.
- 2.3 Apply the highest ethical standards of the profession, as set forth in the AMA Code of Ethics.
- 2.4 Recognize ethical dilemmas encountered in educational and clinical settings, and take appropriate steps (by reporting to authorities, or seeking counsel).
- 2.5 Maintain confidentiality, respect individual autonomy, and treat all persons with dignity.
- 2.6 Demonstrate equal and just treatment of all patients and colleagues. This includes but is not limited to diversity in gender, race, culture, language, age, sexual orientation, religious beliefs or disability.
- 2.7 Maintain professional deportment and demeanor.
- 2.8 Dress and maintain personal hygiene in a professional manner appropriate to the educational or patient care setting.

- 2.9 Prepare for educational experiences in a thorough, intellectually engaged, and timely fashion as mature graduate students of medicine.
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- 2.10 Display sophisticated self-awareness skills and willingly engage in self-improvement.
- 2.11 Maintain appropriate professional boundaries with patients, peers and faculty.
- 2.12 Recognize personal limitations of knowledge, skills and behaviors; and seek appropriate educational support to address the self-identified deficiencies.
- 2.13 Accept responsibility for mistakes or omissions, and disclose errors to appropriate supervisors.
- 2.14 Maintain and monitor physical, psychological and emotional health; seek appropriate health and counseling services when ill or impaired; and not engage in patient care if personal health might endanger another individual.
- 2.15 Recognize and refrain from conduct where patients are exploited (e.g., sexually, financially or for other personal gain).
- 2.16 Represent the ideals of altruism, justice and patient advocacy.
- 2.17 Understand the legal and ethical principles inherent to informed consent, end-of life decisions, and HIPAA, applying them to the care of patients.
- 2.18 Identify and avoid when possible, and manage potential conflicts of interest with industry and other organizations, as these may compromise ethical behavior and patient care.
- 2.19 Strive to place patient interests before self-interest at all times.
- 2.20 Engage in peer education, accepting and delivering constructive feedback.
- 2.21 Recognize breach of professional standards in others and respond appropriately, following School of Medicine Code of Conduct policies and procedures.

3. Knowledge and Scholarship

- 3.1 Describe the essential concepts within the foundations of human biology—molecular, biochemical, genetic, immunologic and cellular mechanisms.
- 3.2 Explain the comprehensive physiology underlying normal human function.
- 3.3 Identify the normal histology and anatomy of the human body.
- 3.4 Discuss the fundamentals of human behavior and development, from fertilization and embryology through aging.
- 3.5 Explain the homeostatic mechanisms of multi-organ systems.
- 3.6 Recognize the biological and cultural aspects of human nutrition in health and disease.

3.7 Recognize the critical contributions of the biopsychosocial determinants of “health”—global, national, community, family and lifestyle choices.

3.8 Explain the essential principles of clinical epidemiology, population and public health.

3.9 Apply the biostatistical and critical analytical skills needed to interpret basic science and clinical literature.

3.10 Discuss the health law and medical ethical principles inherent to the practice of medicine.

3.11 Recognize the influences of health care systems—political, economic and future perspectives—on health and disease management.

3.12 Recognize the nonmedical components of medical practice—financial, personnel management and team leadership, regulatory systems and insurance models.

3.13 Describe the components of a focused and comprehensive medical history and physical examination.

3.14 Utilize best-practice models of care—grounded in evidence-based medicine, cost/benefit analysis and diagnostic reasoning.

3.15 Describe the core principles of gross and microscopic, analytical/diagnostic and forensic pathology.

3.16 Explain the etiological mechanisms of human diseases—microbial, environmental, inherited, acquired/lifestyle and idiopathic.

3.17 Discuss the pathophysiology, clinical manifestations and prognosis of medical illnesses.

3.18 Discuss fundamental principles of diagnostic imaging and laboratory testing.

3.19 Explain principles of therapeutics—molecular, pharmacological, surgical, radiological and behavioral.

3.20 List the most commonly used types of complementary and alternative therapeutic approaches and explain the rationale for their use.

3.21 Identify and appreciate the roles, responsibilities, training and skills of other health professionals.

3.22 Effectively and efficiently gather and interpret medical evidence, to apply new knowledge at the point of care.

3.23 Develop a clinical question and effectively search medical literature utilizing electronic databases.

3.24 Recognize the principles of information technology, to prepare for future innovations in data management.

3.25 Develop in-depth scientific knowledge in a selected concentration area.

4. Interpersonal and Communication Skills

4.1 Exhibit “relational” empathy in clinical settings, conveying an understanding of a patient’s physical, emotional, and psychological state through verbal and nonverbal behaviors.

4.2 Demonstrate cultural sensitivity by engaging in respectful and positive interactions with all patients.

4.3 Actively listen and observe during patient encounters, attending to verbal and nonverbal cues.

4.4 Apply comprehensive interviewing skills with patients and families, including effective use of interpreters.

4.5 Provide effective anticipatory guidance during physical examinations, giving appropriate verbal prompts.

4.6 Accurately communicate patient data to other health professionals through oral presentations and written and electronic medical records.

4.7 Deliver medical information to patients, including but not limited to diagnosis, prognosis, diagnostic and therapeutic plans, delivering unwelcome news, and communicating ambiguity and uncertainty. Information will be adapted to individual patient needs, at a level appropriate to health literacy, language, hearing and cultural expectations.

4.8 Effectively use lifestyle counseling, respecting patient autonomy and lifestyle choices.

4.9 Engage in shared decision-making with patients and health care colleagues, as evidenced by listening, understanding and negotiating with flexibility and empathy.

4.10 Effectively teach colleagues in clinical and educational settings.

4.11 Respectfully function as a partner and consultant to other health professionals.

5. Practice-Based Learning and Improvement

5.1 Assess the care of patients, identify areas for improvement of expertise, and implement plans to address self-perceived deficits.

5.2 Appraise and assimilate best-evidence scientific information into patient care.

5.3 Set and meet personal learning goals.

5.4 Contribute to enhancing quality care and patient safety, using best evidence.

5.5 Use information technology effectively to maximize education, by acquiring, storing, retrieving and analyzing new medical data.

5.6 Practice population-based care, by learning and employing practice guidelines, best-practice and clinical pathways in the care of individual patients.

6. Systems-Based Practice

6.1 Identify the key principles of health care financing and delivery.

6.2 Explain existent and planned organizational models for health care.

6.3 Identify factors that contribute to health care disparities.

6.4 Work collaboratively to coordinate patient care within the health care system.

6.5 Recognize the impact of time management, case management, referral management and patient satisfaction surveys on health care delivery.

- 6.6 Work effectively in a variety of health care delivery settings and systems (including outpatient, inpatient, nursing home and free clinic).
- 6.7 Incorporate cost awareness and risk-benefit analysis in patient care.
- 6.8 Advocate for quality, equal access, and optimal patient care systems.
- 6.9 Help to identify system errors and implement potential systems solutions.

7. Interprofessional Collaboration

- 7.1 Identify the fundamentals of other health science educational programs—training, capabilities, and the unique contributions each profession brings to patient care.
- 7.2 Recognize national and international models of team care, such as Accountable Care Organizations (ACOs) and the Patient-Centered Medical Home.
- 7.3 Work respectfully and positively with health professionals from all disciplines in learning teams and patient-care teams.
- 7.4 List the principles of effective medical consultation and supervision.
- 7.5 Represent the physician's role in health care teams, reflecting on personal strengths and shortcomings and how these influence team function.
- 7.6 Add to their knowledge of basic medical science topics by engaging in interprofessional seminar groups. Examples include medical ethics (in a mock ethics committee) and fundamentals of radiology (with radiology imaging students).
- 7.7 Effectively engage in real and simulated patient experiences with health professionals from other disciplines. Examples include home visits, comprehensive evaluation for patients with disabilities, physical examination, mock cardiac arrests with high-fidelity mannequins.
- 7.8 Apply principles of team dynamics and strategies to prevent and resolve conflict.
- 7.9 Teach and learn from health professional student colleagues.
- 7.10 Accept evaluation from other health professional student colleagues.
- 7.11 Work collaboratively in interprofessional teams to enhance patient safety and quality of care.

8. Citizenship and Service

- 8.1 Prepare and deliver educational sessions for peers to enhance the academic culture for all.
- 8.2 Actively participate in the school of medicine and university community.
- 8.3 Identify the resources and barriers to health of the local and regional practice community, identifying vulnerable and marginalized populations within those communities served.
- 8.4 Become functional members of our practice community by meeting (and ideally exceeding) the formal graduation requirement of 40 hours of community service.

9. Medical Practice Management

- 9.1 List the business principles underlying successful health care delivery models.
- 9.2 Practice team building, personnel management and motivational strategies to promote a functional and successful office practice.
- 9.3 Advocate for other members of the health care team.
- 9.4 Discuss reform efforts impacting health care delivery.

10. Concentrated and Independent Learning

- 10.1 Demonstrate commitment to their education by actively engaging in the Concentration/Capstone project.
- 10.2 Produce a self-directed capstone project in a selected concentration area.
- 10.3 Effectively present their completed capstone project within the university, and ideally, to the national or international scientific community.

Vision

The Frank H. Netter MD School of Medicine will be a vibrant healthcare community that educates and nurtures diverse, compassionate physicians who promote wellness and patient-centered care for all members of society.

Mission

The Frank H. Netter MD School of Medicine is dedicated to educating current and future physicians to serve our community, as well as our profession. We accomplish this goal in a student-centered, collaborative environment that values compassionate care, integrity and inclusivity, academic excellence and scholarship, adaptability and social responsibility.

Values

1. **Primary care education:** providing education focused on partnering with patients to promote health as well as first-line care and chronic disease management.
2. **Personal and professional integrity:** achieving our highest potential as humans and healers by consistently acting with honesty and in accordance with strong moral values.
3. **Academic excellence:** creating a stimulating, student-centered environment that supports both learners and faculty to excel in their scholastic activities.
4. **Inclusiveness and diversity:** reflected in our students, faculty and staff and their respect of all people.
5. **Compassion and patient-centeredness:** putting the patient at the center of the health care experience.
6. **Social justice:** seeking to address healthcare inequalities both locally and globally and provide all patients with equal access to care.
7. **Scholarship:** advancing the field of medicine by promoting discovery, application, integration and dissemination of knowledge throughout one's career.
8. **Interprofessional collaboration:** promoting teamwork between disciplines and across institutions to deliver high quality care.
9. **Community partnership:** developing learning and service opportunities that improve the health of our community.

10. **Social responsibility:** advocating to improve the broader determinants of health in the setting of finite resources.

4. Increasing the involvement of women faculty in leadership positions and in the higher academic ranks will improve representation and mentorship opportunities.

Commitment to Diversity

The Frank H. Netter MD School of Medicine at Quinnipiac University is committed to providing an academic and work environment that respects the contributions, talent, and diverse experiences of all of our students, faculty, and staff. Our mission and core values include a commitment to diversity, collaboration, inclusivity, and mutual respect. We understand that excellence in medical education, scholarship, and the provision of clinical care is best achieved through promoting diversity in its broadest definition and maintaining an academic and work environment free of discrimination. We pledge to build and sustain a learning community where diversity is celebrated, and to foster access to medical education to learners from all segments of society. We consider inclusivity to be a responsibility of everyone in our learning environment.

To address the health care needs of medically underserved populations, reduce health disparities, achieve the school's mission, vision and core values to educate knowledgeable, culturally-aware, primary care physicians, and optimize our learning environment, the Frank H. Netter MD School of Medicine charges the Inclusion and Diversity Council to identify "value added" groups. While the School of Medicine values diversity and inclusivity of all groups, the school will place emphasis on the recruitment and retention of these specific groups.

Students

- Socioeconomically disadvantaged
- African-American and Hispanic/Latino
- Spanish language proficient
- Armed service veterans

Faculty and Staff (Deans, Directors, Coordinators, Administrative Assistants)

- African-American and Hispanic/Latino
- Spanish language proficient
- Women faculty and administrative leaders
- Armed service veterans

Rationale

1. Evidence from the academic medicine literature, demonstrates that students from socioeconomically disadvantaged backgrounds and students who are African-American and Hispanic/Latino have a higher than average likelihood of pursuing a career in primary care and working with underserved populations.
2. Many of our clinical affiliates serve Spanish-speaking communities. To provide quality, safe, and efficient healthcare to the Spanish-speaking community, students with Spanish language proficiency are considered value added.
3. Armed service veterans experience considerable health disparities. Increasing the presence of armed service veterans among our students, faculty, and staff will likely heighten campus awareness and sensitivity to the needs of veterans.

Placing emphasis on these value-added groups ensures that our students and faculty represent the patient populations we serve, provides racial/ethnic and gender diversity among peers, faculty mentors and role models, and assists us in achieving excellence in education and the clinical care of our community.