Emergency medicine, also known as accident and emergency medicine, is the medical specialty concerned with the care of illnesses or injuries requiring immediate medical attention. Emergency physicians care for unscheduled and undifferentiated patients of all ages. As first-line providers, their primary responsibility is to initiate resuscitation and stabilization and to start investigations and interventions to diagnose and treat illnesses in the acute phase. Emergency physicians generally practise in hospital emergency departments, pre-hospital settings via emergency medical services, and intensive care units, but may also work in primary care settings such as urgent care clinics. Sub-specializations of emergency medicine include disaster medicine, medical toxicology, ultrasonography, critical care medicine, hyperbaric medicine, sports medicine, palliative care, or aerospace medicine.

Different models for emergency medicine exist internationally. In countries following the Anglo-American model, emergency medicine was originally the domain of surgeons, general practitioners, and other generalist physicians, but in recent decades it has become recognised as a specialty in its own right with its own training programmes and academic posts, and the specialty is now a popular choice among medical students and newly qualified medical practitioners. By contrast, in countries following the Franco-German model, the specialty does not exist and emergency medical care is instead provided directly by anesthesiologists (for critical resuscitation), surgeons, specialists in internal medicine, pediatricians, cardiologists or neurologists as appropriate. In developing countries, emergency medicine is still evolving and international emergency medicine programs offer hope of improving basic emergency care where resources are limited.

The field of emergency medicine encompasses care involving the acute care of internal medical and surgical conditions. In many modern emergency departments, emergency physicians are tasked with seeing a large number of patients, treating their illnesses and arranging for disposition—either admitting them to the hospital or releasing them after treatment as necessary. They also provide episodic primary care to patients during off hours and for those who do not have primary care providers. Most patients present to emergency departments with low-acuity conditions (such as minor injuries or exacerbations of chronic disease), but a small proportion will be critically ill or injured. Therefore, the emergency physician requires a broad field of knowledge and procedural skills often including surgical procedures, trauma resuscitation, advanced cardiac life support and advanced airway management. They must have some of the core skills from many medical specialties—the ability to resuscitate a patient (intensive care medicine), manage a difficult airway (anesthesiology), suture a complex laceration (plastic surgery), set a fractured bone or dislocated joint (orthopedic surgery), treat a heart attack (cardiology), manage strokes (neurology), work-up a pregnant patient with vaginal bleeding (obstetrics and gynecology), control a patient with mania (psychiatry), stop a severe nosebleed (otolaryngology), place a chest tube (cardiothoracic surgery), and conduct and interpret x-rays and ultrasounds (radiology).