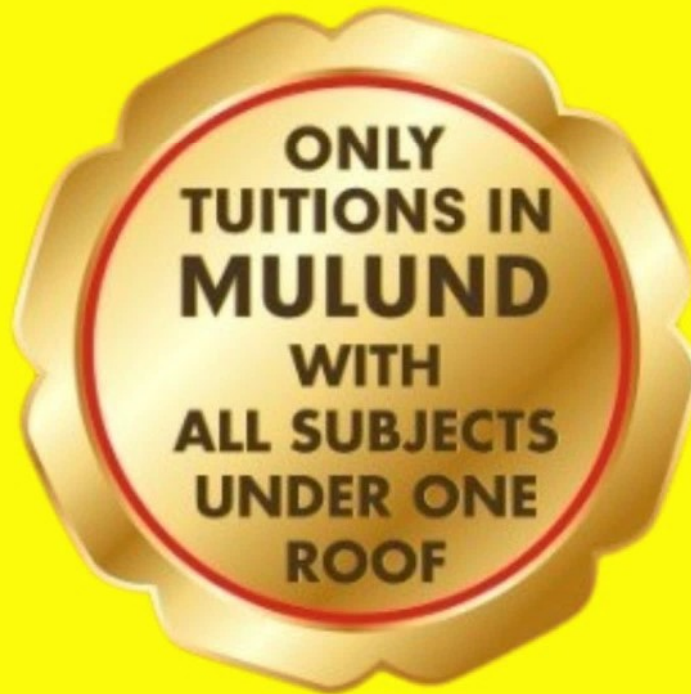




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XI, XII (Sci), NEET, JEE Mains, MHT-CET



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Session 2025-27

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AEROSPACE ENGINEERS

Aerospace engineers design all kinds of manned and unmanned aircraft and spacecraft, from small airplanes to satellites. They test and build new designs and work to improve existing machines.

In 1903, the Wright brothers' first plane flew for twelve seconds and went only 120 feet. Today, aerospace engineers are working on supersonic ramjets. These scramjets, as they're called, will take you from New York to Tokyo in only two hours. That's a lot of progress for one century. As an aerospace engineer, you could build satellites or defence systems. You could make airplanes faster and safer. You could design a spacecraft, a space station, or an explorer robot like the Mars-roving Spirit. If looking up at the sky starts you thinking about how to get there, you could be one of tomorrow's aerospace engineers.

What is expected from you...?

- A math and science fan who can think ahead and solve problems creatively.
- You'll need to be able to explain your ideas to others, so start building good writing and speaking skills now.
- Write and speak about your work to supervisors and co-workers
- Make sure your work is always precise and accurate
- Keep learning about new technologies and equipment
- Work as part of a team

What you need to study in XI and XII...?

Take science in XI and XII, including maths, chemistry, and physics.

- Prepare for the competitive engineering entrance.
- Consider taking computer science and computer-aided design (CAD) classes to get jump start on skills you'll use in college and on the job.

Did You Know?

Aerospace engineers who work on spacecraft are known as Astronautical engineers.

AGRICULTURAL ENGINEERS

Agricultural engineers use science and math to meet agricultural challenges. They help farms grow better and more food, look for ways to conserve soil and water and design tools and equipment.

At the beginning of the twentieth century, it took four farmers to grow enough food for ten people. By the end of the century, one farmer could feed one hundred.

Agricultural engineers have contributed to this dramatic improvement. They've invented machinery, improved production systems, and found ways to grow healthier and stronger plants.

What is expected from you...?

- A math and science fan who enjoys solving problems and working with machines. If you love plants, animals, and the satisfaction of seeing your ideas bear fruit, this could be a great career for you.
- Solve complex problems
- Work outdoors and indoors
- Travel to different job sites
- Use tools and large machines
- Be careful and accurate
- Work as part of a team

What you need to study in XI and XII...?

- Take science in XI and XII, including Physics, Chemistry and Maths.
- Prepare for the competitive engineering entrance.
- Build computer skills. Take computer science and computer-assisted drafting.
- Sign up for shop class and get hands-on experience with tools and machines.

Did You Know?

Agricultural engineers are using enzymes to convert fats in foods to healthier substances.

ARCHITECTS

Architects design buildings and oversee their construction.

Before any building is constructed, it exists in the mind's eye of an architect. Architects design buildings in which we work, worship, play and conduct the countless other activities of our lives. Consider the building you're in right now. Where are the windows placed ? What materials were used to construct the building? How does the structure sit on the site it occupies? What style of architecture is used? And how do people use the building? The building's architect once considered all these same questions.

What is expected from you...?

- Creative and artistic but also very attentive to detail and able to communicate well.
- Produce designs based on client needs
- Create detailed blueprints and models
- Choose building materials
- Know about building codes and zoning restrictions
- Supervise construction at noisy and busy sites
- Hold many meetings with clients, engineers, and others

What you need to study in XI and XII...?

- Take science in XI and XII, including Physics, Chemistry, and Maths.
- Prepare for the competitive engineering entrance.
- Get a good foundation in drawing and design. Do your best in math and physics.
- Read architectural magazines to build your knowledge of architectural styles, building types, materials, and trends in the industry.

Did You Know?

An architect or an architectural firm often specializes in particular types of buildings, such as homes, schools, or airports.

BIOMEDICAL ENGINEERS

Biomedical engineers design and develop devices and systems - from artificial organs to medical equipment - that solve health problems.

In 2001, a doctor in the U.S. performed gall bladder surgery on a woman who was in France hospital. The surgeon used a remote to control a robotic arm that performed the actual work on the patient.

The surgical robotic arm is an exciting biomedical engineering achievement. But it's far from the only one. Biomedical engineers work to make prostheses {artificial body parts} better, diagnostic procedures more accurate, and drugs easier to take. Thanks to biomedical engineers, becoming healthy and staying that way is getting easier every day.

What is expected from you...?

- A creative, curious problem solver who wants to help others. If you like machines, but think the human body is the most interesting machine out there, then this could be a great career for you
- Spend your days in the lab
- Work as part of a team
- Write reports.
- Use computers.
- Test and repair equipment.
- Research and learn about new materials

What you need to study in XI & XII...?

- Take science in XI and XII including Biology, Physics, Chemistry, and Maths.
- Build up-to-date computer skills.
- Check out engineering competitions.

Did You Know?

Researchers are testing iPill a pill with a computer chip that will check the body for information before releasing its drug. Biomaterials specialists are also working on ways to grow organs in a lab so people who need transplants won't have to wait for healthy organs to become available.

CHEMICAL ENGINEERS

invention and manufactured goods.

Chemical engineers know that there's more to creating a great product than coming up with a new idea. They figure out how to turn new ideas into products that can be mass-produced. Whether they're making perfume with a fragrance that lasts or cookies that taste homemade or tape that sticks in the rain, chemical engineers are using their understanding of chemicals and chemical reactions.

What is expected from you...?

- A fan of math and chemistry who likes to figure out the best way to get things done. If you look at things and wonder how to improve them, chemical engineering could be the field.
- Design manufacturing processes
- Dream up new uses for chemicals
- Work with various chemicals or equipment
- Troubleshoot problems in plants or factories
- Keep up with new technology
- Do lab research

What you need to study in XI & XII...?

- Take science in XI and XII, including Physics, Chemistry, and Maths..
- Prepare for the competitive engineering entrance.

Did You Know?

Chemical engineers are working on hydrogen-based fuel cells that could someday replace gasoline (petrol & diesel) engines.

CIVIL ENGINEERS

Civil engineers design, plan, and run large building projects, such as bridges, buildings, roads, dams, and water-supply systems.

The Great Pyramid of Giza is the only one of the seven wonders of the ancient world still standing. And it does make people wonder: How did the Egyptians, working over forty-five hundred years ago, ever manage to build it? With a base that spreads over 13.1 acres and a height of 481 feet, it would be quite a project even today. Yet the Egyptians engineered ways to meet the huge challenges they faced. And they did it all without power tools, computers, trucks, or even pulleys.

Today's civil engineers have it a lot easier, but their projects are no less fascinating. They help construct the wonders of the modern world.

What is expected from you...?

- Someone who loves taking things apart and putting them back together. If you couldn't get enough Lego time when you were young, this could be the career for you.
- Solve complex problems
- Read blueprints
- Understand and meet building codes
- Work outside and inside
- Travel to different job sites
- Work as part of a team

What you need to study in XI & XII...?

- Take science in XI and XII, including Physics, Chemistry, and Maths.
- Prepare for the competitive engineering entrance.
- Learn computer-aided drafting.
- Work for or Intern with a construction company to get a feel for the building process.

Did You Know?

Civil engineers design roller coasters.

COMPUTER

Computer hardware engineers design and develop computer hardware, such as computer chips, circuit boards, modems, and printers. They also test hardware and supervise its installation.

In the 1940s, high tech meant the ENIAC computer. What did the room-sized machine do? It could do five thousand additions and subtractions per second.

It solved equations. And that's all it did. In other words, ENIAC was a gigantic calculator.

If you're using a typical computer today, you could be doing research, writing a report, instant-messaging a friend, and listening to music -- all at the same time. Thanks to computer hardware engineers, computers can do a lot more than they used to. And they've gotten smaller, and faster, too.

What is expected from you...?

- Interest in math, science, computer and curiosity to solve problems. If you
- love using computers, but like taking them apart and rebuilding them even
- more, this could be the career for you.
- Respond to the needs and concerns of clients
- Make decisions based on data
- Read blueprints
- Keep up with new technology

What you need to study in XI & XII...?

- Take science in XI and XII, including Physics, Chemistry, and Maths.
- During school days learn as many computer courses as you can.
- Prepare for the competitive engineering entrance.

Did You Know?

In 1973, Bob Metcalfe built the first Ethernet network, the most common system that allows computers, printers, and other devices to share information.

Intel is working on computer chips that will hold one billion transistors. Compare that to the Pentium 4 chip, which holds a mere 55 million.

ELECTRICAL ENGINEERS

Electrical engineers develop and oversee electrical systems and equipment. They work with everything from power grids to computers and telephones to cars.

Turn on a light. Turn on a computer. Turn on a TV. Rev your engine, if you have one. Do you wonder why it works? Do you ever take apart a new gadget when you get it? Or look at something and think,

"Hey, | can make that do more"?

If you're intrigued by the machines around you and the power that makes them run, you have a lot in common with electrical engineers.

What is expected from you

- A creative, logical, practical, and flexible team player
- See your ideas become reality
- Present and defend your ideas to others
- Keep learning new skills and technology

What you need to study in XI & XII...?

- Take science in XI and XII, including Physics, Chemistry and Maths.
- Prepare for the competitive engineering entrance.
- Study computer science, a field with very close ties to electrical engineering.
- Learn computer-aided drafting and design.

Did You Know?

Nikola Tesla, inventor of AC power, launched the age of robotics when he sailed a remote-controlled boat in 1898. The boat amazed and frightened the audience when it answered questions by flashing its lights.

To get robots to move in unique ways, engineers have sometimes turned to nature, modelling them on cockroaches, crickets, and other critters.

ENVIRONMENTAL ENGINEERS

Environmental engineers use math and science to address environmental challenges such as hazardous waste and pollution. They also study the impact on the environment of proposed construction projects.

Environmental engineers work toward that goal. They help cities and construction companies find ways to build that don't damage the environment. They help to clean up environmental problems from the past.

They work with factories so they pollute less. Environmental engineers do their part to make sure that the earth will be in good condition for those who live here tomorrow.

What is expected from you...?

- A nature lover who's a fan of math and science and can solve problems in a creative way. You may need to work with others who don't always agree with you, so it helps to be calm but persuasive Work outdoors and indoors.
- Travel to job sites
- Write reports
- Keep up with new regulations and technology
- Research solutions to problems like acid rain or global warming
- Possibly decide the degree of danger of certain hazardous waste
- Perhaps design ways to treat waste water

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry, maths and physics
- Prepare for the competitive engineering entrance
- Pay attention in English. As an engineer, you'll need to be able to read complex materials and write reports.

Did You Know?

- Polluted areas can sometimes be cleaned up by tiny, naturally occurring organisms that eat the contaminants.
- Environmentally minded builders are using straw-filled plaster walls to provide insulation and save trees.

MECHANICAL ENGINEERS

Mechanical engineers develop, build, care for, and improve tools, machines, and systems.

Every day you come in contact with many machines. There's the clock radio that wakes you up, and the car, bus, or bike you take to school. You use calculators, computers, stereos, and phones throughout the day. Finally, you come home and use the microwave, stove, refrigerator and electric can opener as you help with dinner. Our lives are a lot easier today, thanks to the mechanical engineers who imagined and built these tools. In a world where we depend on machines more than ever before, mechanical engineers keep things running.

What is expected from you...?

- A creative, curious, and logical problem solver. Mechanical engineers need
- to be visual thinkers who can turn data and theories into useful devices
- Design new gadgets and improve old ones.
- Be part of a team
- Read reports and interpret data
- Present your ideas to others
- Focus on details while checking for problems and safety issues
- Keep learning new skills and technologies

What you need to study in XI & XII...?

- Take science in XI and XII, including maths, chemistry, and physics.
- Prepare for the competitive engineering entrance.
- Learn computer-aided drafting and design.
- You'll need to know how machines and tools work.

Did You Know?

Robots may soon be doing everything from preparing meals to mowing lawns. Mechanical engineers are working in the cutting-edge field of nanotechnology, developing high-performance materials and devices the size of molecules.

MINING AND GEOLOGICAL ENGINEERS

Mining and geological engineers help find deposits of coal, metals, and minerals. They also design mines and mining equipment for bringing these materials to the earth. And they solve safety and environmental problems related to mining.

A lot has changed since the nineteenth century when the forty-niners panned for gold in California. Mining and geological engineers now use satellite photography and variations in the earth's magnetic field to find new deposits of minerals. They use machines that can remove 10.8 metric tons of coal per minute. But it's not just about the tools. Today's mining pros are also finding ways to mine that are safer for both mine workers and the environment.

What is expected from you...?

- A student learning math and science who's curious about the world below
- the earth's surface and who cares about the condition of the earth.
- Specialize in coal, gold, or another mineral or metal
- Supervise mine construction
- Inspect mines for safety
- Keep up with new technology and laws
- Travel to job sites

What you need to study in XI & XII...?

- Take science in XI and XII, including Physics, Chemistry, and Maths.
- Prepare for the competitive engineering entrance.
- Find out if a nearby natural history museum offers geology classes or field trips.

Did You Know?

Swaziland, in Africa, is home to the world's oldest known mine -- its an iron mine about 45,000 years old.

PETROLEUM ENGINEERS

Petroleum engineers search for oil and gas. They design ways to remove as much as possible from the earth and to turn it into fuel we can use.

The United States gets about 63 percent of its energy from oil and natural gas. That means that there's a constant race to find new sources of petroleum and natural gas, get them out of the earth, and process them.

Today's petroleum engineers are using the latest high-tech equipment to do just that. They keep homes heated, cars running, and stoves burning.

What is expected from you...?

- A fan of math and science who's fascinated by the world below the earth's surface.
- Design new equipment for oil and gas recovery
- Decide on the best way to recover oil from a reservoir
- Search for new sources of oil and gas
- Conduct research into new ways of recovering oil or gas
- Troubleshoot problems
- Keep up with new technology
- Work both outdoors and indoors

What you need to study in XI & XII...?

- Take science in XI and XII, including maths, chemistry, and physics.
- Prepare for the competitive engineering entrance.
- Sign up for computer science.

Did You Know?

Petroleum engineers now use computer models to figure out the best way to drill into a reservoir.

It takes hundreds of millions of years for the earth to turn plants and animals into petroleum.

ACTUARIES

Actuaries decide how likely it is that various events will happen. Using their knowledge of statistics, finance, and business, they help create insurance policies, pension plans, and other financial plans.

To be alive is to face risks. Some are avoidable. For example, if you want to avoid earthquakes, don't move to California. But some risks are harder to control. People can get sick without warning or wind up in an auto accident. And some hardships are inevitable. Much as we hate to think about it, we all die.

Do you find these facts fascinating, if gruesome? If so, consider a career as an actuary. Actuaries make a profession of studying risk.

What is expected from you...?

- Someone who loves crunching numbers and enjoys using computers.
- Finally, be ready to keep up with changes in areas such as health and business.
- Take tough exams to break into the field and to advance in your career
- Make calculations and use statistics
- Make predictions
- Explain technical matters to others
- Help create new financial products

What you need to study in XI & XII...?

Take the most challenging math classes.

Join economics, business, and accounting undergraduate course.

Read the news to keep up with changes in society that affects the insurance industry.

Did You Know?

In 2010, 66 percent of all actuaries worked in insurance. Another 13 percent worked for consulting companies.

Actuaries are often called "number crunchers," because they spend so much time making calculations and interpreting statistics.

SURGEONS

Surgeons are doctors who treat and correct injuries, diseases, and deformities by operating on patients

When our brain works properly, when our heart pumps normally, and when our bones and muscles move with ease, we are barely aware of just how remarkable a machine the body is. But when something goes wrong and that machine breaks down, the mechanic you need is often a surgeon. Surgeons mend bone and tissue and repair major organs damaged by disease and injury.

What is expected from you...?

- A highly self-motivated, compassionate, and decisive leader. Patients will depend upon you to enhance and save their lives by making critical decisions -- quickly and under pressure. And nurses, surgical technicians, and others in the operating room will look to you for leadership
- Improve and save lives
- Examine patients before and after surgery
- Explain surgical procedures
- Spend years studying and training
- Keep up with advances in surgery
- Balance heavy workloads with your personal life
- Work closely with other doctors and health care professionals

What you need to study in XI & XII...?

- Take plenty of challenging science courses all through high school, including biology, chemistry and physics.
- Prepare for the most competitive entrance exam from XI onwards.

Did You Know?

transplant of a kidney from mother to son.

RADIOLOGISTS

Radiologists are doctors trained to use their knowledge of medicine and technology to diagnose and treat disease and injury with the use of internal imaging methods.

Since the invention of the x-ray more than one hundred years ago, the ability to see inside the human body has enabled doctors to understand how our bodies work -- and how they don't.

But we've come a long way in the last century. Health professionals now use a combination of techniques involving computers, sound waves, magnetism, and more. They can scan our bones, muscles, and organs with remarkable accuracy and diagnose and treat diseases and injuries as never before.

What is expected from you...?

- A curious, focused communicator who is interested in technology. You must
- be eager to learn about the machines that will be a part of your everyday environment, but you'll also need excellent people skills.
- Improve and save lives
- Use x-rays, ultrasound, MRIs, CAT scans, and other imaging technology
- Work closely with technicians, other doctors, and specialists
- Spend years studying and training
- Keep up with advances in medicine and technology

What you need to study in XI & XII...?

- Prepare for the most competitive entrance exam from XI science onwards.

Did You Know?

paediatric radiology.

PSYCHIATRISTS

Psychiatrists are doctors who specialize in the physical causes and effects of mental illness. Some focus on talk therapy, helping patients heal through talking about their problems, and others focus on treating illness with medication. Many combine these approaches.

The grand-daddy of psychiatry is Sigmund Freud, born in 1856. Freud came up with many concepts that are now a part of psychiatry -and of popular culture. These include the ego, the unconscious, the slip of the tongue, and depression. Freud invented psychoanalysis ("the talking cure"). And he didn't just talk the talk; he walked the walk, doing self-analysis to test out his ideas.

Although many of his controversial ideas have been rejected by today's psychiatrists, Freud left behind a body of work that still grips our cultural imagination.

What is expected from you...?

- Highly motivated -- both the training and the work are very demanding.
- You'll need to be a good communicator who's emotionally stable and able to make sound, well-informed decisions.
- Evaluate medical histories
- Diagnose patients (decide which illness they have)
- Give medical tests
- Prescribe medication
- Talk with patients one-on-one and in groups
- Keep up with advances in medicine and therapy

What you need to study in XI & XII...?

- Take as many advanced science classes as you can.
- Sign up for psychology to learn about human thought, emotions, and behavior.
- Read biographies of famous psychiatrists such as Sigmund Freud and Melanie Klein.
- Volunteer at a hospital.

Did You Know?

The field of psychiatry has changed radically with the introduction of drugs such as Xanax (for anxiety) and Prozac (for depression).

PAEDIATRICIANS

Paediatricians are doctors who care for children from birth to early adulthood. They specialize in diseases and ailments specific to young and growing bodies.

Supervising the health of children requires specific medical training. They're at risk for a variety of diseases, from chicken pox to rubella. And no matter what ails children, they need to be treated in a way that is appropriate to their age and weight. Even the nutritional needs of children are different from those of adults.

As a paediatrician, you may advise parents on taking care of their first baby, diagnose childhood cancer and recognize the symptoms of an eating disorder. If you become a paediatrician, your impact on the health of children will stretch all the way into their adult lives.

What is expected from you...?

- Diplomatic, sensitive, and an excellent communicator. You'll need to listen carefully as your patients or their parents describe their symptoms.
Recognizing the common threads among childhood diseases and encouraging parents to promote healthy lifestyles is an important part of the job.
- Talk to teens about birth control
- Help overweight children, start diets to prevent future health problems
- Order tests to confirm your diagnoses
- Give babies their immunization shots
- Treat children for sore throat and other common ailments
- Advise parents on surgical options and refer them to a surgeon
- Work closely with other doctors

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry, and physics.
- Prepare for the competitive medical entrance.
- Volunteer at a health clinic, hospital, women's clinic, or elder care facility.

Did You Know?

Some paediatricians specialize in areas such as the heart problems of children

OPTOMETRISTS

Optometrists examine eyes to diagnose vision problems and eye diseases. They determine a course of treatment or refer patients to ophthalmologists and other specialists.

If you're like most sighted people, you take your vision for granted. But optometrists don't. They're fascinated by the eyes -- both how they work and how they fail.

Prescribing eyeglasses, diagnosing eye conditions and their causes, referring patients to specialists for eye surgery -- it's all in a day's work for optometrists.

Though their activities vary, their mission is always to help people see as well as possible.

What is expected from you...?

- A tactful communicator who is able to work precisely with your hands. In addition to being able to relate to patients, you will need good business sense -- especially if, like many optometrists, you run your own practice.
- Test depth and color perception
- Test for near- and far sightedness
- Keep up with advances in your field
- Work in private practice, research, or industry (developing eye-related products)
- Work in night and weekend hours to suit patient schedules and to build a successful practice.

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry. and physics. Prepare for the competitive entrance.
- Good Knowledge of computer is essential
- Volunteer to work at an optometrist's office and try to learn some business skills as well as optometry.

Did You Know?

Some optometrists specialize in the vision problems of the elderly, children, or partially sighted persons. Others may specialize in problems related to working conditions.

PATHOLOGISTS

Pathologists are doctors who study the cause and development of disease. Most choose a specialty such as genetics or forensic pathology. Forensic pathology is the pathology used, for legal purposes, one of which is deciding cause of death.

The pathologist will analyze the patient's blood and look for abnormalities. If surgery is necessary, he or she will also examine tissue samples. The pathologist's tests and conclusions will help the medical team identify the cause of the patient's pain. Once they've found the cause, they can begin treatment.

What is expected from you...?

- A crack investigator and a good communicator. You'll need to listen carefully as doctors and patients describe symptoms. Each patient presents a new set of variables. The ability to recognize the common threads among diseases makes a pathologist's advice and expertise particularly valuable
- Spend years studying and training, and a lifetime keeping up with advances in medicine
- Work closely with other doctors
- Improve and save lives, or serve justice and solve the mysteries behind Deaths

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry, and physics. Prepare for the competitive entrance.
- Volunteer at a health clinic, hospital, women's clinic, or eldercare facility.

Did You Know?

Forensic pathology is only one of many specialties in this field. Others include paediatric pathology, chemical pathology, and molecular genetic pathology.

GYNECOLOGISTS AND OBSTETRICIANS

Gynecologists and obstetricians are doctors who specialize in women's health and reproduction.

Human anatomy is complex and fragile, and each one of us is unique. While we can't expect physicians to specialize in our own distinct makeup, they do specialize in health issues exclusive to women and men.

Gynecology and obstetrics -- usually combined into one specialty (ob-gyn) -- is the care and treatment of women's organs throughout their lives. Ob-gyns, as doctors in this specialty are called, look after women's reproductive health, dealing with birth control, pregnancy, and fertility. They also treat breast and cervical cancer and sexually transmitted diseases.

What is expected from you...?

- Compassionate as well as a strong decision maker and a good listener. You'll need to listen carefully as your patients describe their symptoms. You'll also need to be particularly sensitive when asking and answering difficult questions about women's health, sexuality, and reproduction.
- Improve and save lives-- and help to nurture new ones
- Give some patients bad news
- Deliver babies
- Discuss birth control options
- Spend years studying and training and a lifetime keeping up with advances in medicine

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry, and physics. Prepare for the competitive medical entrance.
- Volunteer at a health clinic, hospital, women's clinic, or an eldercare facility.

Did You Know?

To prevent birth defects, a women can take certain steps, such as making sure has enough folic acid in her diet, before her child is even conceived.

ANAESTHEISTS

Anaesthesiologists work with other doctors to give patients medication that relieves pain during surgery. They also monitor patients' vital functions throughout an operation.

Even the most routine surgeries can be risky when a patient undergoes anaesthesia. In some cases, irregularities in blood pressure or heart rate during surgery can lead to grave consequences. Imagine how important it is to administer just the right dose of medication to an infant whose organs are still underdeveloped and who cannot speak to tell you that he's in pain.

It's the job of the anaesthesiologist to take these factors into consideration and to monitor a patient's pulse, temperature, and other vital signs throughout surgery.

What is expected from you...?

- Self-motivated and able to work long hours under pressure. It also helps to be a strong decision maker and a good communicator. Anaesthesiologists must be especially calm and cooperative since they work so closely with a team during surgery -- always a potentially tense situation.
- Spend years studying and training, and a lifetime keeping up with advances in your field
- Concentrate intently for long periods
- Make sure patients are safe and pain-free
- Work for long hours in an operating room
- Balance heavy workloads with your personal life

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry, and physics. Prepare for the competitive entrance.
- Volunteer at a health clinic, hospital, women's clinic, or an eldercare facility.

Did You Know?

After completion of your undergraduate medicine course (MBBS) you need to study for 3 years to become an Anaesthesiologists.

DENTISTS

Dentists prevent, diagnose, and treat health problems of the mouth. Most dentists are general practitioners, but some specialize in areas such as orthodontics (straightening teeth with braces) and endodontics (providing root canal treatment).

Dentists search for the culprits behind pain and disease. They delve into countless mouths to remove tooth decay, fill cavities, and repair fractured teeth. They also perform corrective surgery on gums and supporting bones. And among their less serious but more popular tasks is the whitening and reshaping of teeth to enhance their patients' smiles.

Like other health care professionals, dentists also work to prevent disease. They inspire their patients to do so as well, encouraging healthy diets and good oral hygiene.

What is expected from you...?

- Confident, quick, and steady with your hands. You should also be people oriented -- you'll need to communicate your skills and trustworthiness to patients, who will keep your practice going by returning and referring others. Good business skills are also important, especially in private practice.
- Operate equipment including x-ray machines, drills, and scalpels
- Find and fill cavities
- Educate patients on dental care
- Oversee business and office tasks
- Supervise a staff of technicians and assistants
- 'Continue your education to take on specialties, such as periodontics (the dentistry of gums and bones)

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry, and physics. Prepare for the competitive entrance.
- Volunteer at a dental clinic.

Did You Know?

Most dentists run their own practices.

DIETITIANS AND NUTRITIONISTS

Dietitians and nutritionists provide medical nutrition therapy, plan food and nutrition program, and oversee food preparation.

Eating right is one of the best preventive medicines there is. But people don't always know what's good for them. That's where Dietitians and nutritionists come in.

These pros work closely with a wide variety of people, spreading the good word about proper nutrition. Their duties vary, depending on their job. For example, they might develop nutrition programs for hospital patients, advise clients on losing weight, or prepare reports on the benefits of dietary fibre.

What is expected from you...?

- Good at science as well as outgoing and articulate. Your work may involve public speaking as well as one-on-one counseling.
- Give a presentation on nutrition to a class of fourth graders
- Develop a low-salt diet for a client with high blood pressure
- Advise an overweight client on reducing fat and sugar in his diet
- Teach an elderly person how to shop for food

What you need to study in XI & XII...?

- Do your best in biology and chemistry to prepare for college science courses
- Take science in XI and XII, including biology, chemistry, and physics. Prepare for the competitive entrance.
- Volunteer or intern at a nonprofit organization, such as Meals on Wheels.

Did You Know?

A recent university study found that iron may help make bones strong. Beef, poultry, fish, and beans are all good sources of iron.

OCCUPATIONAL THERAPISTS

Occupational therapists help people who have learning disabilities, physical handicaps, illnesses, and other conditions master everyday tasks, from shopping for groceries to walking with crutches.

It takes enormous patience to work with the physically handicapped, the mentally ill, or anyone struggling with the tasks of daily life. But as an occupational therapist (OT), you can find great satisfaction in helping them live more independently.

Whether you're teaching a stroke survivor to use a walker, modifying school equipment for a disabled child, or helping the victim of a car accident to get behind the wheel again, one thing is certain: you'll make a difference.

What is expected from you...?

- A creative, patient problem solver: progress can be painfully slow
- Work with a wide range of people
- Discover each person's special needs
- Tailor an individualized plan for each patient
- Be patient, even when progress is slow
- Keep records of each client's activities and progress
- Come up with creative solutions to problems
-

What you need to study in XI & XII...?

- Take science in XI and XII, including biology, chemistry, and physics. Prepare for the competitive entrance.
- Sign up for psychology to learn about motivation, therapeutic techniques, and mental illnesses.
- Volunteer at a hospital or another health care facility: it may even help you to get into the college of your choice.

Did You Know?

You can specialize and work only with children, substance abusers, older adults, or another group.

More and more OTs work in nontraditional settings outside the hospital. These include community health centers, schools, and rehabilitation workshops.

PHARMACISTS

Pharmacists prepare and distribute medications prescribed by doctors and other health practitioners. They advise patients on the drugs they take and make sure that they avoid dangerous drug interactions.

When you imagine pharmacists at work, do you see them counting out pills and filling bottles? That's actually only a small part of a pharmacist's job.

These professionals play a key role in the treatment of disease. They advise both doctors and patients about the dosages, interactions, and side effects of medications. In fact, pharmacists don't only work at the corner drugstore. You'll also find them researching new medications for drug companies or monitoring drug therapy at hospitals, nursing homes, and mental health institutions.

What is expected from you...?

- A careful communicator who is interested in helping people and pays close attention to detail. You must be certain that clients understand drug instructions and pay careful attention to the dangers of drug interactions and side effects
- Respect and protect patient privacy
- Conduct experiments if you go into research and development
- Keep up with the latest advances
- Work some nights and weekends

What you need to study in XI & XII...?

- Take science in XI and XII, including chemistry, and physics.
- Prepare for the competitive entrance exam from XI science onwards.
- Build communication skills in English, drama, and speech classes.
- Learn a foreign language so you can communicate with patients in diverse communities.
- Volunteer or work at a health clinic, hospital, or community pharmacy.

Did You Know?

Some pharmacists specialize in specific drug therapies such as cancer or mental health treatments.

VETERINARIANS

Veterinarians prevent, diagnose and treat illness in small animals (such as cats and dogs), large animals (such as horses and cows), or both. They may also research diseases and their cures.

If you've ever pulled a thorn from a dog's paw, you know the satisfaction that comes from making an animal feel better. But if you've ever given a cat a pill, you also know that it's not easy to tell an animal what's best for it.

AS a veterinary student, you'll learn about more than the health problems of animals. You'll also learn how to diagnose patients who can't explain their own symptoms.

You may be surprised to learn that people skills are a must for veterinarians. That's because for every animal a vet treats, there's a human standing by. In fact, one of the hardest things vets have to do is tell someone it's time to let go of a sick pet.

What is expected from you...?

- Patient, compassionate, perceptive and able to communicate with a wide variety of people
- Advise an owner on how to help his overweight dog slim down
- Risk getting bitten, scratched or kicked by an upset animal

What you need to study in XI & XII...?

- Take as many science and biology courses as you can
- Volunteer or intern at a local animal shelter, vet's office, clinic, zoo, stable, farm, or research lab. Get as much hands-on experience with animals as possible.
- Get to know few pet's veterinarian and ask them questions about the job.

FORENSIC SCIENTISTS

Forensic scientists, sometimes called crime laboratory analysts, provide scientific information and expert opinions to judges, juries and lawyers.

Forensic science is more complex than TV might lead you to believe. In 1991, a postal worker was accused of murdering a waitress. At the trial, a forensic scientist testified that a bite mark on the victim matched the suspect's teeth. The postal worker was convicted and sentenced to death.

Years later, other forensic scientists conducted DNA testing of saliva found on the victim's clothing. The testing revealed that the postal worker was innocent and identified that true murderer. Forensic science helped condemn an innocent man - - and then he redeemed him. It is a field constantly growing and changing

What is expected from you...?

- Someone who loves science and wants to fight for justice. You'll need determination to discover the truth - - no matter whom it hurts or helps. You'll be happiest in this career if you're good with details and like projects
- requiring a care ful, step-by-step approach.
- Keep precise records
- Serve as an expert witness in court.
- Keep up with the latest advances in your area.

What you need to study in XI & XII...?

- Make the most of your maths and science courses.
- Develop your public speaking skills by joining the debate team or the drama club. You'll need them in the courtroom.
- Practice taking organized notes during class lectures.
- Scan newspapers to learn about legal cases requiring input from forensic scientists.
- Do your best on English papers and lab reports in science. You'll need strong writing skills to draft reports throughout your career.
- Read science magazines to stay on top of new discoveries.

Did You Know?

Most forensic scientists work in laboratories. Some visit crime scenes. Others work in morgues, hospitals, police departments, or universities.

HOTEL MANAGEMENT

Students in this, major learn how to manage hotels, motels, and other lodging business such as resorts. Course work covers hospitality law, employee management, financial management and more.

With the right management, hotels can be a lot more than just a place to sleep. In fact, some become a part of history. The Algonquin in New York City is one such hotel. The great singer Marion Anderson slept there. So did authors Gertrude Stein, Simone de Beauvoir and William Faulkner.

But the Algonquin is most famous for the group of writers who lunched there daily for a decade beginning in 1919, dishing out sharp-tongued opinions about the world around them. While others called them the Algonquin Round Table, they called themselves the Vicious Circle.

What is expected from you...?

- An outgoing person who enjoys interacting with people from various backgrounds. You'll need to be comfortable with computers and have good organizational and problem solving skills. Be prepared to present yourself professionally at school and during visits to hotels and motels.
- Learn computer software programs
- Do a lot of hands-on learning
- Study various subjects from law to marketing to communication

Checklist before joining the course:

- Do the professors have experience and contacts in the hotel and motel industry?
- Does the course operate students-run hotels?
- What other hands-on learning opportunities does the course offer?
- Will the course help you find work after graduation?
- What are recent grads doing now?