CAREERS360

QUICK GUIDE TO COURSES IN

VETERINARY SCIENCES AND ANIMAL HUSBANDRY

IF YOU LOVE ALL CREATURES GREAT AND SMALL
INTRODUCTION

Imagined your love for animals taking you to space. Unbelievable? You might just be familiar with a veterinarian who looks after your pet dog when he is sick or one who attends to your cows. But the fact is vets, as they are commonly known, even work in aerospace. They work as scientific advisers on animal use in space programmes. Remember Laika, the Soviet space dog who was the first animal to orbit the earth?

In common parlance a veterinarian is a person who has been trained in the science of animal medicine, whose job is to treat animals who are sick or injured. We tend to forget that our morning kick-starts with foods obtained from animals like cows and chickens, be it milk, butter or eggs. Besides milk, major poultry products are sourced direct from farms to our breakfast table for our nourishment. By monitoring and maintaining the health of animals that provide food for us the veterinarians also ensure a safe food supply for human beings.
In an agro-based economy like India, where animals are worshipped, the study of veterinary science and animal husbandry is in demand like never before across various development sectors.

The 5-year BSc in Veterinary Sciences and Animal Husbandry course trains you to become clinicians and researchers for prevention and treatment of animal diseases. The course and internship period focuses on practices needed to embark on a career in veterinary science. In some institutions the course is known as Bachelor of Veterinary Science (BVSc).

Students who have passed 10+2 with Physics, Chemistry and Biology are eligible to apply for an undergraduate course in Veterinary Sciences and Animal Husbandry. Certain colleges/entrance exams have a cut-off of 50% marks in Physics, Chemistry and Biology in 10+2.

Eligible candidates should qualify entrance examinations held at state and national level (See Page 19: Entrance Examinations) for admission. In some states like Kerala you will have to apply for a common Engineering Agricultural and Medical Entrance Test to gain admission. At national level, Veterinary Council of India (http://www.vci.nic.in) conducts an All India Pre-Veterinary Test in May for aspiring undergraduates.

Institutes for Master’s: Tamil Nadu Veterinary and Animal Sciences University, Chennai; Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana; Indian Veterinary Research Institute, New Delhi.; Professional areas: Government, private, non-governmental organizations, Banks and Insurance, Pharmaceutical companies. Salary expectation: Veterinary Surgeon, Rs.40,000 per month with government.
IN THIS 5-YEAR COURSE, THE LAST SIX MONTHS ARE DEVOTED TO HANDS-ON TRAINING IN DISEASE MANAGEMENT.

The course can be broadly divided into basic sciences and clinical sciences. During the course spanning nine semesters you get exposed to disciplines like anatomy, physiology, biochemistry, nutrition, livestock management and production. Production technology, pathology, microbiology, pharmacology, genetics and breeding also form part of the course. Gynaecology, surgery, medicine and animal husbandry extension are the other important components of the course. Learning process is through theory and laboratory sessions.

The last six months of the final year are devoted to hands-on training on animal and poultry disease and management. This six-month intensive internship programme is offered in clinics and hospitals where you are exposed to fieldwork that help you learn leadership and managerial skills. “Attendance is most compulsory. You study theory and gain practical learning. The field entails study of Veterinary Science and management, which is the Animal Husbandry component,” shares Dr. Shinde, a former PhD student of Rajasthan University of Veterinary and Animal Sciences (RAJUVAS), Bikaner.
SELECTING AN INSTITUTE

THERE ARE AT LEAST 34 INSTITUTIONS THAT OFFER THIS COURSE AND ALMOST ALL OF THEM ARE PUBLIC-FUNDED.

Some 34 institutes across 22 states including CCS Haryana Agricultural University, Hisar; Bombay Veterinary Science College, Mumbai; and College of Veterinary Science & Animal Husbandry (Anand Agricultural University), Anand offer BSc in Veterinary Sciences (See page 17: Recognized Veterinary Colleges in India).

Bachelor of Veterinary Science (BVSc) degree course at TANUVAS, Chennai was started in the year 1936. The then Madras Veterinary College (University of Madras) was the first veterinary college to be affiliated with University in the country. Rajiv Gandhi College of Veterinary and Animal Sciences, Puducherry admits 60 students each year for their undergraduate 5-year degree course. Then entrance is gained by qualifying Central Admission Committee (CENTAC), Puducherry.

WHAT AFTER GRADUATION?

EMPLOYMENT OPPORTUNITIES ABOUND IN ACADEMIC AS WELL AS GOVERNMENT SET-UPS, ALONG WITH PHARMACEUTICALS.

"It’s an allied medical science. Second best to medicine is Veterinary Science and Dentistry followed by Pharmacy and Biotechnology. The profession is growing, there are lots of opportunities and it’s a nice respectable profession,” shares Dr. Anil Kumar Pruthi, Dean, College of Veterinary Sciences, Lala Lajpat Rai University, Hisar. Employment opportunities abound in academic as well as government setups. “Job creation depends on candidates. Government provides subsidised rates to vets for setting up dairy farms etc. Just create your own avenues and don’t give up! Private companies and farms are always there,” opines Dr. Shinde.

There are many areas that fresh graduates may pursue for career prospects (See Box: Where you can work). “The field is diversifying and growing, especially livestock and poultry. Banks and insurance require vets for passing of loans for
livestock. Entrepreneurs in poultry are growing in India. Farming of livestock, Kennel Management, Agri Business Management, Pathologist, you just name it,” emphasises Dr. Pruthi.

For admission to Master’s programmes, the Indian Council for Agricultural Research (ICAR) conducts an All India Entrance Examination. “Trend now is to pursue Master’s and PhD. Private poultry, research, teaching, you name it. Graduates of Meat technology can expect Rs. 40,45000. ICAR scientist starts with Rs. 50,000. Academic and research can get Rs. 50,000 with good promotion prospects. In a Vet college, apart from salary you get a non-practising allowance and other benefits,” shares Dr. Nitin Patil, Director of National Research Centre in Camel (NRCC), Bikaner. PG course in Veterinary Science (MVSc) is for two years. Students can specialise in areas like medicine, surgery, anatomy, bacteriology, biochemistry, cardiology and dermatology. Other areas are: microbiology, molecular biology, anaesthesia, gynaecology, pathology, toxicology and virology pharmacology.

In accordance with Indian Veterinary Council Act, 1984, the registered veterinary degree holders are eligible to practice in the country. The degree-holder must have acquired the required qualification from a recognized institution of academic excellence.

Opportunities are aplenty in rural as well as urban areas. In cities, keeping pets is a fad, thus increasing the demand for private veterinary clinics and kennels. Growth in the poultry sector and animal products sector has also resulted in increased demand for veterinarians in different sectors of livestock and poultry. Veterinary science students can work with medical institutions of both the private and public sectors. Aviaries, wild life sanctuaries and zoological parks also need veterinary specialists.

The demand of specialists is high amongst all areas of agriculture sectors, government animal husbandry departments, poultry farms, veterinary hospitals and clinics. Veterinary specialists may be required in a range of career roles from vaccination of animals, to information on nutrition and health, to scientific breeding using methods like in-vitro fertilisation and artificial insemination.

Besides professional practice, research and development in this domain is also looked up as a viable career option. Defence services and police departments keep dogs and horses that need a specialized vet.. In addition to research role, Army also recruits veterinary specialists for treatment and care of their mounted regiments. Army Short Service Commission selects BVSc degree holders for positions in Remount Veterinary Corps of Indian Army. Private practice earnings are unlimited. “Earnings for a fresh graduate range between Rs. 20,000 to 4 lakhs depending on where you work. Graduates can apply for a gazetted Class I vacancy for Veterinary Surgeon and earn Rs. 45,000 as salary,” added Dr. Pruthi (See Box: Government sector jobs).

Teaching is another good option. Typically, a teaching role in a reputed university requires a postgraduate degree and higher qualifications. Vets can also take up research work, on their own or in association with government agencies such as ICAR.

Some of the prominent private sector recruiters of veterinary doctors are pharmaceutical industries. Roles include working as scientists in research and development divisions for drugs, chemicals and bio-products, particularly antibiotics and vaccines for human and animal use. They are also engaged in technical sales, agri-business, marketing and pet food manufacturing industries. They also find employment in management of industries dealing with animal feed, animal products, milk and meat products processing industries etc.
Veterinary Sciences  Course Review

Besides profit sharing organisations, there are numerous job opportunities available with Non-government Organisations and societies working for the welfare of the animals and livestock owners like BAIF (Bharti Agro Industrial Federation), Help-in-Suffering, LPP (League of Pastoral People) and PETA (People for Ethical Treatment of Animal).

To put it in a nutshell, nowadays veterinarians work in private, government and corporate clinical (See Page 19-21).

INTERNATIONAL APPEAL

There are about 450 veterinary programmes worldwide. Favourite destinations are the US and the UK.

Students in India, compared to other developed countries, get exposure to all kinds of knowledge. In Denmark, focus is on production. In Canada, it is Clinical. In India, you get a complete picture of every aspect of the field,” adds Dr. Patil of NRCC.

There are about 450 veterinary programmes worldwide. A number of universities in the United States offer Bachelor’s and Master’s in veterinary science. Association of American Veterinary Medical Colleges (www.aavmc.org) provides a list of pre-requisites for securing admission. Two top veterinary science schools in the United States are: Cornell University College of Veterinary Medicine, and Michigan State University College of Veterinary Medicine.

Admission to Bachelor’s degree course in veterinary sciences from UK-based universities
Veterinary Sciences

requires students to qualify Bio-Medical Admissions Test (BMAT). The institutes accredited by Royal College of Veterinary Surgeons (RCVS) allow undergraduates to practice professionally on completion of the course. Some of the prominent institutes in UK include University of London and University of Cambridge.

PROFESSIONAL TALK:

Dr. Justine Walker,
GP, Assistant Veterinarian, Los Angeles, California

Q. What made you choose veterinary field?
A. I was bored with what I was doing. I felt that a higher being was telling me that I need to make a move. I was thinking of becoming a veterinary technician (similar to nurse in the human world) at first. Friends encouraged me to see if I can get into a vet school.

Q. How did it feel going back to school?
A. My first and toughest issue was money. It is difficult to get loans when you go to community college. Decision to quit work and do this was such a big life changing decision. It was a gamble – had no idea I’ll get in.

Q. Focus on a specific school?
A. I applied to 10 and got into 7. If I got into only one, I would’ve gone. It’s not where you get your degree. It’s really about what you do with it and how you apply it to your work and experiences.

Q. What is the process to apply?
A. Applications are mainly done online. There’s one main website for most schools, click on schools to apply. Prerequisites differ by schools. All require basic sciences (biology, organic chemistry, biochemistry), some maths, physics, and general education classes.

Q. What are the traits required to make it as a Vet?
A. Mmmm – love animals? No seriously, you have to be good with people. It is customer service, educator, doctor all in one. You have to make the client
understand, satisfy them and help the animal. Animals don’t talk, so you have to be able to pick up cues and signs that they show us.

Q. What was the most difficult challenge you faced in the Vet school?
A. Sheer amount of material to be learned was quite a challenge. It is definitely not for the ill prepared, not something you can get through on a whim. It really helped that I was older and more focused than I was at 22.

Q. And, in the profession?
A. ‘Please doc, help me, don’t you love animals?’ It’s amazing what people demand or expect from a Vet. Medicine always throws anomalies at you. Experience really takes you a long way. Euthanasia is always difficult. I take it very seriously and with great care. MDs cannot let people go even when nothing can be done. I can as a veterinarian. It still doesn’t make it easy and I often ask myself, “Who am I to be the one to take a life?” I have told myself that when it stops being difficult, I quit being a vet.

### Recognized Veterinary Colleges in India

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<tr>
<th>S. No</th>
<th>States</th>
<th>University</th>
<th>Institution</th>
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<tbody>
<tr>
<td>1-3.</td>
<td>Andhra Pradesh</td>
<td>Sri Venkateswara Veterinary University, Tirupati, Andhra Pradesh</td>
<td>College of Veterinary Science, Hyderabad</td>
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<td>College of Veterinary Science, Tirupati</td>
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<td>College of Veterinary Science, Gannavaram</td>
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<td>4.</td>
<td>Assam</td>
<td>Assam Agricultural University, Jorhat</td>
<td>Faculty of Veterinary Science, Guwahati</td>
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<td>7.</td>
<td>Haryana</td>
<td>Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar</td>
<td>College of Veterinary Sciences, Hisar</td>
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<td>8.</td>
<td>Himachal Pradesh</td>
<td>CSK Himachal Pradesh Krishi Vishwa Vidyalaya, Palampur.</td>
<td>Dr. G.C. Negi College of Veterinary and Animal Sciences, Palampur</td>
</tr>
<tr>
<td>9.</td>
<td>Jharkhand</td>
<td>Birsaa Agricultural University, Ranchi</td>
<td>Ranchi College of Veterinary Science and Animal Husbandry, Ranchi</td>
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<tr>
<td>10-11</td>
<td>Karnataka</td>
<td>Karnataka Veterinary, Animal &amp; Fisheries Sciences University, Bidar.</td>
<td>Veterinary College Hebbal, Bangalore</td>
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<td>Veterinary College Nandinagar, Bidar</td>
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<td>12-13</td>
<td>Kerala</td>
<td>Kerala Veterinary and Animal Science University, Poockot.</td>
<td>College of Veterinary &amp; Animal Sciences, Thrissur</td>
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<td>College of Veterinary and Animal Sciences, Poockote</td>
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<td>14-15</td>
<td>Madhya Pradesh</td>
<td>Madhya Pradesh Pashu Chikitsa Vigna Vishva Vidyalaya, Jabalpur</td>
<td>College of Veterinary Science &amp; Animal Husbandry, Jabalpur</td>
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<td>College of Veterinary Science &amp; Animal Husbandry, Mhow</td>
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<td>16-19</td>
<td>Maharashtra</td>
<td>Maharashtra Animal &amp; Fishery Sciences University, Nagpur</td>
<td>College of Veterinary &amp; Animal Science, Parbhani</td>
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<td>Nagpur Veterinary College, Nagpur</td>
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<td>Bombay Veterinary College, Mumbai</td>
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<td>KNP College of Veterinary Animal Science, Satara</td>
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<th>Institution</th>
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<tr>
<td>20.</td>
<td>Mizoram</td>
<td>Central Agricultural University, Imphal, Manipur</td>
<td>College of Veterinary Science &amp; Animal Husbandry, Aizawl, Mizoram</td>
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<tr>
<td>21.</td>
<td>Odisha</td>
<td>Orissa University of Agriculture &amp; Technology, Bhubaneswar</td>
<td>College of Veterinary Science &amp; Animal Husbandry, Bhubaneswar</td>
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<tr>
<td>22.</td>
<td>Puducherry</td>
<td>Pondicherry University, Puducherry</td>
<td>Rajiv Gandhi College of Veterinary &amp; Animal Sciences, Puducherry</td>
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<td>23.</td>
<td>Punjab</td>
<td>Guru Angad Dev Veterinary &amp; Animal Sciences University, Ludhiana.</td>
<td>College of Veterinary Science, Ludhiana</td>
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<td>24.</td>
<td>Rajasthan</td>
<td>Rajasthan University of Veterinary and Animal Sciences, Bikaner.</td>
<td>College of Veterinary Science &amp; Animal Husbandry, Bikaner</td>
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<tr>
<td>25-26</td>
<td>Tamil Nadu</td>
<td>Tamil Nadu Veterinary &amp; Animal Science University, Chennai.</td>
<td>Madras Veterinary College, Chennai</td>
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<td>Veterinary College &amp; Research Institute, Namakkal</td>
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<td>27.</td>
<td>Uttarakhand</td>
<td>Govind Ballabh Pant University of Agriculture &amp; Technology, Pantnagar</td>
<td>College of Veterinary Science, Pantnagar</td>
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<td>28-29</td>
<td>Uttar Pradesh</td>
<td>Uttar Pradesh Pandit Deen Dayal Upadhyay Pashu Chikitsa Vikyan Vishwavidyalay Evam Go Anusandhan, Mathura</td>
<td>College of Veterinary Science &amp; Animal Husbandry, Mathura</td>
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<td></td>
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<td></td>
<td>Narender Deva University of Agriculture &amp; Technology, Faizabad, Uttar Pradesh</td>
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<td>30.</td>
<td>West Bengal</td>
<td>West Bengal University of Animal &amp; Fishery Sciences, Kolkata</td>
<td>Faculty of Veterinary Science, Kolkata</td>
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<td>31.</td>
<td>Chhattisgarh</td>
<td>Indira Gandhi Krishi Vishvavidyalaya, Raipur, Chhattisgarh</td>
<td>College of Veterinary Science &amp; Animal Husbandry, Durg</td>
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<td>Recently changed as Chhattisgarh Kamdhenu Vishwavidyalaya, Anjora, Durg</td>
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<td>32.</td>
<td>Bihar</td>
<td>Rajendra Agricultural University Pusa, Samastipur, Bihar</td>
<td>Bihar Veterinary College, Patna</td>
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<tr>
<td>33-34</td>
<td>Jammu &amp; Kashmir</td>
<td>Sher-E-Kashmir University of Agricultural Sciences, Jammu</td>
<td>College of Veterinary Sciences, Jammu</td>
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<tr>
<td></td>
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<td>College of Veterinary Sciences, Kashmir</td>
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### Entrance Examinations

1. JNU Combined Biotechnology Entrance Exam (for MVSc)
2. Tamil Nadu Veterinary and Animal Science University Entrance Exam
3. Indian Council of Agricultural Research Entrance Examination
4. Kerala Engineering Agricultural and Medical Entrance Test
5. All India Pre Veterinary Test
6. Engineering, Agriculture & Medical Common Entrance Test (Andhra Pradesh)
7. West Bengal Joint Entrance Examination Board, EVETS

### Where you can work

1. State/Central Government
2. Veterinary Hospitals/Primary Veterinary Centres
3. State Livestock Farms
4. Semen Banks/Sperm Stations
5. Poultry Farms
6. Meat/Milk Processing Plants
7. Polyclinics
8. Disease Investigation Centres
9. Biological Products or Vaccine Institutions
10. Disease Eradication Schemes/Vaccination Camps
11. Public Health Labs
### Government sector jobs

1. Army (Remount Veterinary Corps)
2. BSF/Police
3. ICAR – Co-ordination and funding of animal-based research.
4. Department of Animal Husbandry & Dairying, Ministry of Agriculture
5. Quarantine Units
6. Central Farms

### Academic and research opportunities

1. Faculty in State Agricultural Universities, State Veterinary Universities, or Universities having courses in Veterinary Science
2. Teaching/Research/Extension in Veterinary College/Institutes/Universities
3. Para Veterinary Staff Training Schools
4. Experimental & germ-free animal facilities attached to Veterinary & Medical Institutions, Drug research institutions
5. Experimental Animal Units
6. Clinical, diagnostic & investigation centres attached to veterinary colleges and research institutes
7. Local Bodies/Municipalities/Panchayats
8. Slaughter houses/Cattle Pounds/Public health Laboratories
9. Zoos & Wildlife centres
10. Animal resource development under Panchayati Raj

### Private sector jobs

1. Pharmaceuticals
2. Commercial dairy farms
3. Commercial poultry farms
4. Commercial breeding farms/hatchery
5. Race club, stud farms
6. Veterinary instruments/equipment industry
7. Biological products and vaccine product plants
8. Insurance companies, banks
9. Corporate bodies like National Dairy Development Board, Milk Board and Milk Unions
10. Feed processing industry

### Self-employment opportunities

1. Private Practice/Consultancy
2. Partner/Assistant to a Practitioner
3. Entrepreneur in L.S. or Poultry Farm
4. Diagnostic labs - X-ray, Ultra-sound facilities
B. PHYSICAL EDUCATION
BUILD A CAREER AROUND SPORTS

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