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# Introduction

“Botany – the science of the vegetable kingdom, is one of the most attractive, most useful, and extensive departments of human knowledge. It is, above every other, the science of beauty”.

**Botanist Joseph Paxton**



# BOTANY

Is a branch of biology which deals with the study of plants





# What is Botany?

Discipline of biology----- the science of plants

Greek word '**botane**', which means grass or fodder

A person specializes in the field of botany-----Plant scientist or botanist

Palaeobotany----- palaeobotanists study ancient plants in fossil



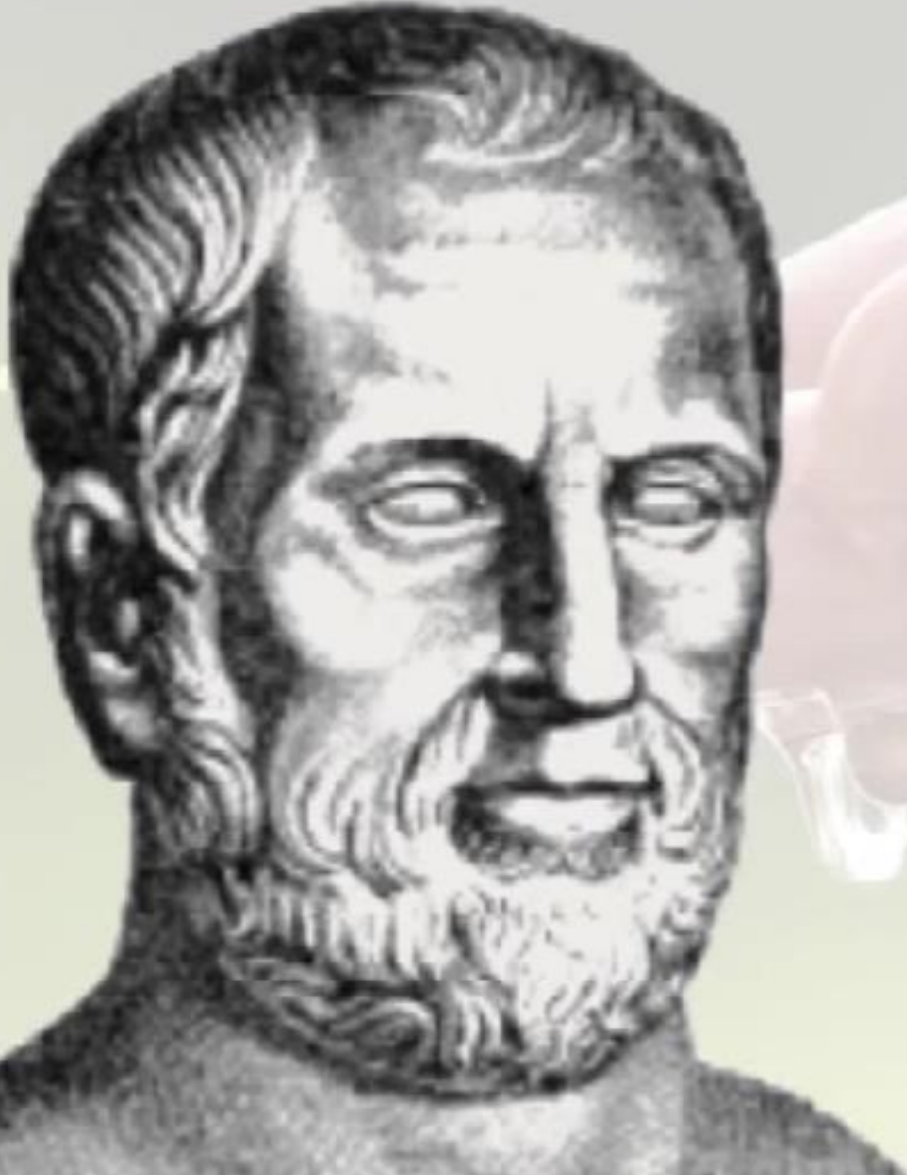


# HISTORY OF BOTANY



# HISTORY OF BOTANY





# ***Theophrastus***

***Greek philosopher***

***lived roughly 2,300 years ago***

***father of botanical science***

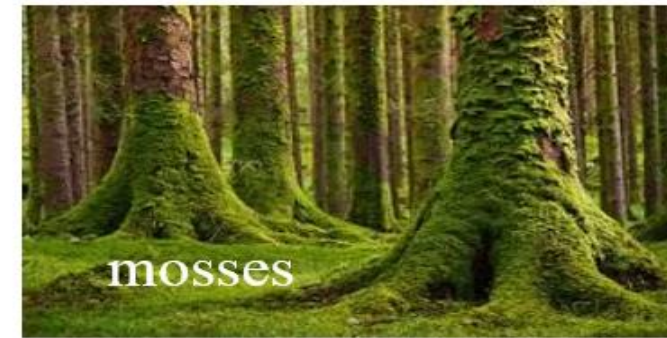


# BOTANY



- Botany is one of the oldest science began with early human efforts to identify edible, medicinal and poisonous plants.
- Botanists examine both the internal functions and processes within plant organelles, cells, tissues, whole plants, plant populations and plant communities.

- The plant world is extremely diverse, ranging from one celled algae to huge oaks.
- It contains plants like mushrooms which have no green color.
- In our gardens we find lichens and mosses, which are green plants, but have no true roots, no leaves and no flowers.
- Many of us grow ferns in our gardens. They are green plants with true leaves and roots, but no flowers.
- Finally there are the flowering or seed-bearing plants, which make up the vast majority of plants on earth.

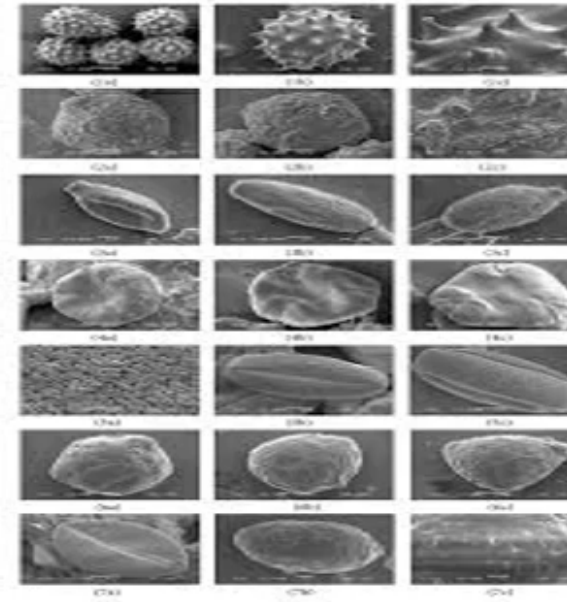


## **Study of Botany includes:**

- **Morphology:** study exterior of plants like form, shape of leaves, stem.
- **Taxonomy:** Identification & naming of plants.
- **Cytology:** Study of cell their structure, function and life history.
- **Anatomy:** Study of interior structure of living plants.
- **Physiology:** study of the function of plant cells, tissues etc.



- **Paleo botany:** Study of plant fossil
- **Palynology:** study of pollen grains
- **Ethno botany:** study of plants & human relationship.



Pollen





© Science Photo Library/EAST NEWS

The *Euphorbia obesa* is just a ball of uniqueness.

A 2,000-year-old giant sequoia called the **Wawona Tree** in Mariposa Grove, Yosemite National Park





# Comparison

No comparison to botany.

No other subject gives such a large area for freedom to select a career

Botany includes most life forms

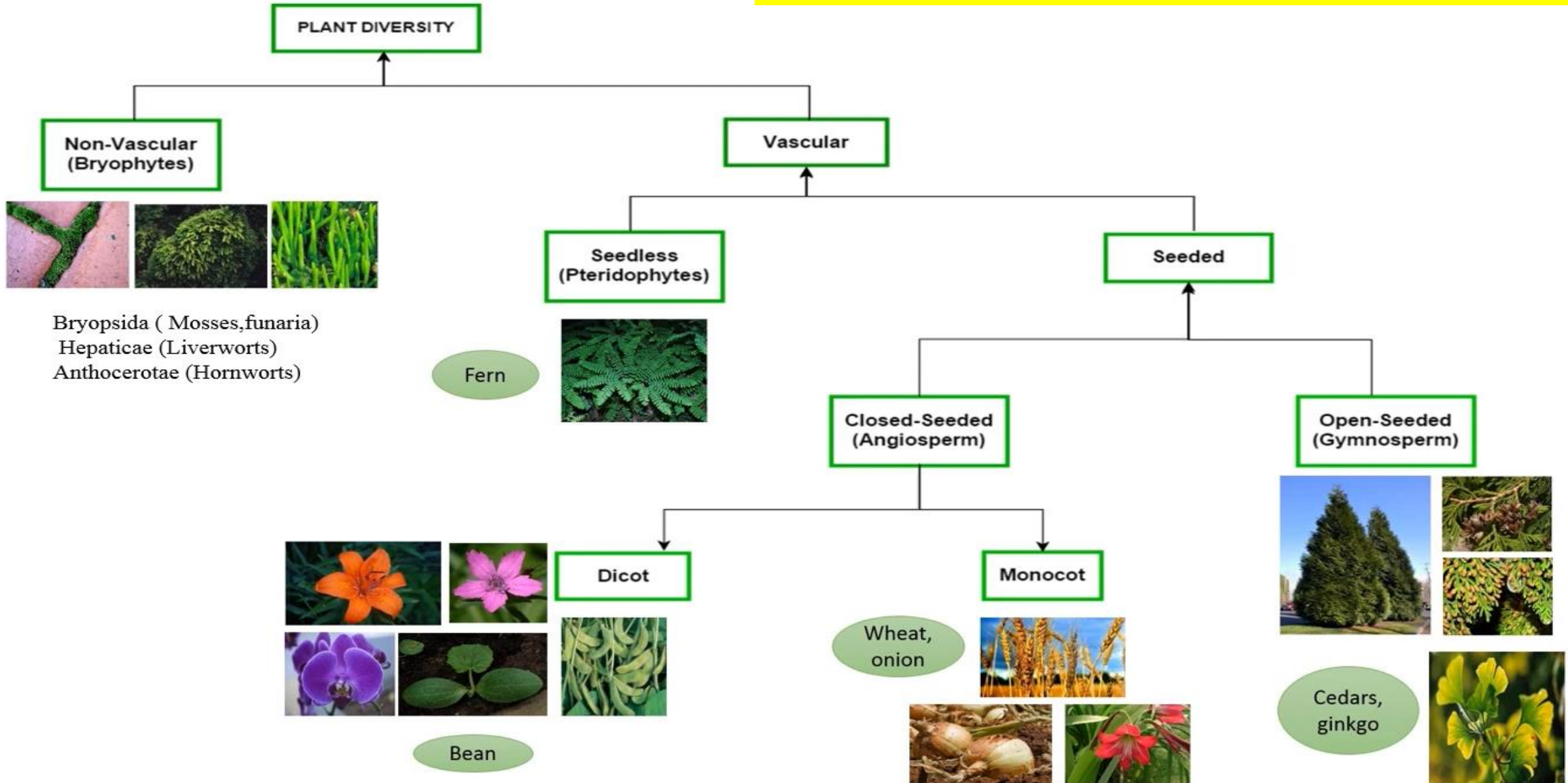
Microscopic- Viruses, Bacteria, Fungi, Algae etc.

Macroscopic- Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperm, angiosperm etc

Fossil- Paleobotany

# Based on natural system of classification

<iframe width="1536" height="864" src="https://www.youtube.com/embed/AWantNa9Pqo" title="Lecture: Disciplines of Botany and different forms of plants" frameborder="0" allow="accelerometer; autoplay; clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-share" allowfullscreen></iframe>



# Potential career paths



## Industry

- Crop improvement
- Science writing
- Environmental monitoring

## Non profit

- Botanical gardens
  - Museums
- International service

## Academia

- Technician
- Professor
- Instructor

## Education/outreach

- Nature centers
- Secondary schools

## Government

- Departments of conservation, land management, etc
  - Policy, law





# Scope

A B.Sc. degree in Botany = many opportunities for further studies, research and lucrative job in India and abroad.

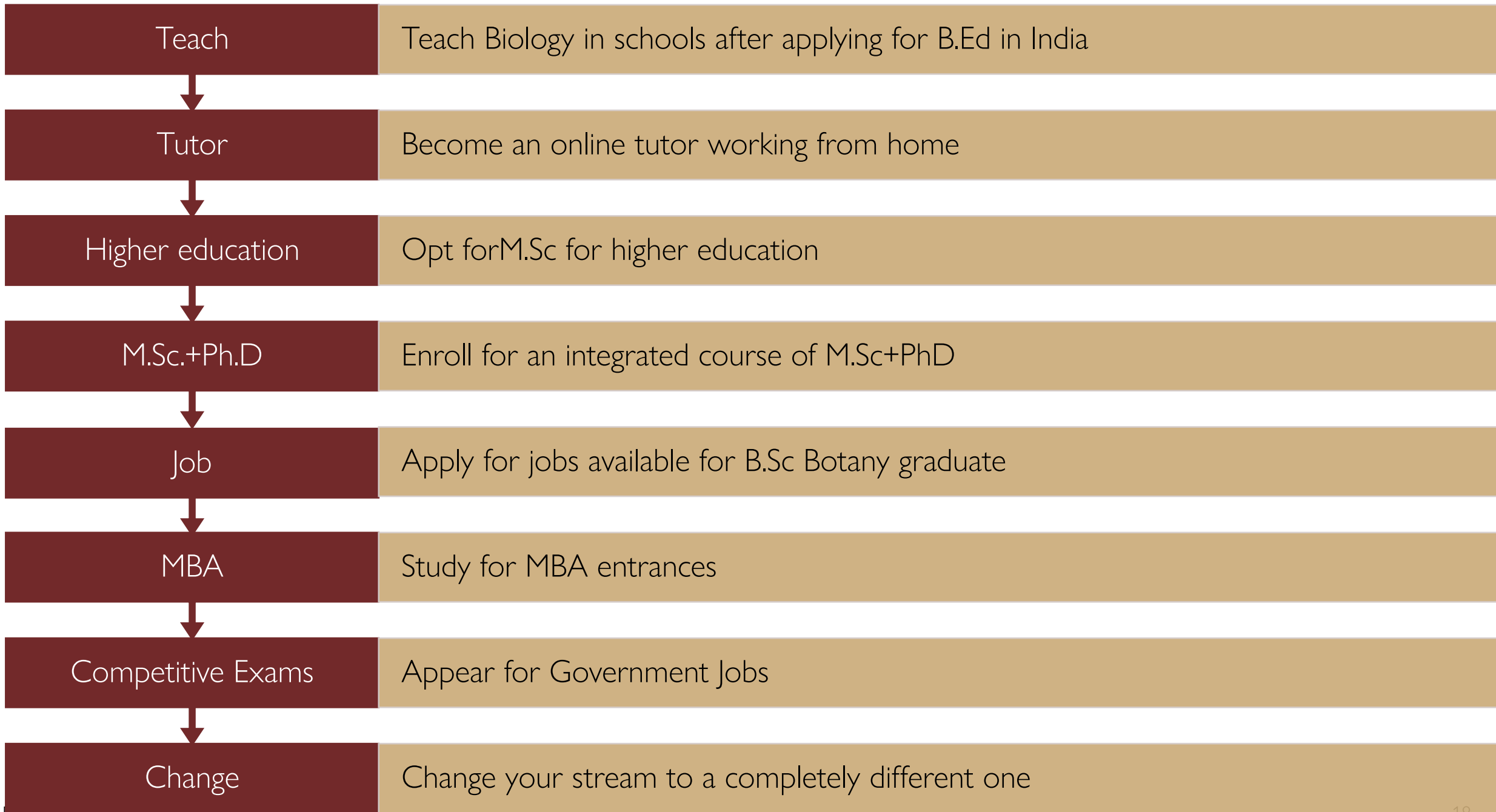
Myth only further study option for botany graduates is to opt for M.Sc. in the respective subject.

You have a wide range of options in subjects, subjects, and areas to pursue after graduation.

you can join post-graduate level degree programs or diploma programs.

Some students also choose non-science master's degree programs such as

- Animation
- Computer technology,
- Journalism,
- Management,
- Hospitality sector, or
- MBA
- Short-term courses like graphic design, web design, programming languages, financial accounting, post-graduation diploma, foreign languages, SEO and PPC courses and much more



# BEd



## Bachelor of Education or B.Ed.

Bachelor of Education or B.Ed.

- For Students who have the potential to be expert teachers and professors, a B.Ed. degree is an excellent career choice for advancing studies.
- It coaches graduates in different and unique pedagogy techniques to further improve teaching prowess.
- B.Ed. courses help individuals to develop skills and widen their understanding to impart quality education to their students.
- Teaching offers job security, job satisfaction, earning high income and flexible schedule.

# Master



# ter

## Best Master Courses after B.Sc. Botany

### M.Sc.

- Botany
- Horticulture
- Biotechnology
- Life sciences

### MBA





# Integrated M.Sc. & PhD Courses after B.Sc. Botany

Institutions like **IISER, TIFR, and NCBS** will offer you MSc-integrated PhD courses for biological sciences ( life sciences, botany, molecular biology, genetics, and so on). Special MSc courses (related to Botany) from top universities like **JNU, HCU, BHU, PU (Pondicherry University), MSU-Baroda, Pune University** etc., entrance examinations.

This saves time and helps you get the desired post after your studies.

Course Duration	3-6 years
Eligibility Criteria	Bachelor's degree in Science
Admission Criteria	Entrance exam
Top Colleges	IIT Bombay Rajiv Gandhi University, Itanagar IISER-Bhopal National Institution of Science Education and Research, Bhubaneswar

# Best PG Diploma Courses after B.Sc. Botany

- **Biotechnology-----**
  - Amity Institute of Biotechnology, Noida
  - SIES College of Management-Studies, Mumbai
  - MITCON, Pune
- **Seed technology-----**
  - Amity university
  - BHU
- **Plant Conservation-----**
  - JNU
  - ITM University Raipur
- **Bioinformatics-----**
  - JNU
  - Amity
- **Clinical research-----**
  - MITCON, Pune
- **Diploma in Applied Botany**



# Top Universities for MSc/MS

The course you want to study is often unavailable in India. In that case, opting for study abroad comes to reuse. List of top universities abroad offering plentiful courses after BSc:

- ❖ Massachusetts Institute of Technology
- ❖ Stanford University
- ❖ University of Oxford
- ❖ The University of Melbourne
- ❖ University of Cambridge
- ❖ University of Toronto





# Government Exams after BSc

If you want to pursue a job in the government sector, here are the significant exams you can prepare for after BSc:

- Indian Forest Services Exam
- UPSC Exams
- Railway Exams
- Bank Exams
- LIC AAO Exam
- AFCAT Exam
- SSC CGL



# Jobs / Career



## Government

Via competitive exams like UPSC, MPSC, Forces, Bank IFS, IPS etc.

## Marketing

Business of interest

## Design

Like Butique, Web design, Interior etc

## Politics

Via election

## Social

Join your interest related NGO's

# Career Options after B.Sc Botany



Farming  
Consulting

Environmental  
Consultancies

Plant  
Pathologist

Molecular  
Biologist

Nursery  
Manager

Ecologist

Plant  
Explorer

# B.Sc Botany Jobs in India

After graduating, candidates should begin as "freshmen" with entry-level positions.

Internship by college



**Environmental Consultant**

Offer their clients specialized evaluation and advising services regarding concerns connected to the management of environmental issues.

**Botanist**

Researches the plant world and how different plant species affect the environment

**Farming consultant**

Specialists who advise farming, agricultural, and public sector workers on technical, commercial, and financial matters



# Jobs

## Cont...

There are several jobs after BSc that you can pursue in the private as well as government sectors. Let's take a look at the best jobs after BSc:

- Research Scientist
- Clinical Research Specialist
- Lab Technician
- Biochemist
- Assistant teacher/Lecturer
- Lab Assistant
- Assistant Nurse
- IT/Technical Jobs
- Medical Representative



# Best government jobs after B.Sc.



- Forest Department- IFS Officer
- Indian Air Force
- AIIMS- Nursing Officer
- IARI- Laboratory Assistant
- FCI- Trainee
- LIC- AAO
- RBI Grade B Officer
- Indian Railways – Assistant Officer/ JE
- SBI PO/ other bank PO
- Public Sector Bank- Probationary Officer

# Government Jobs for B.Sc Botany Aspirants



**Lab Assistant :-** responsible for assisting researchers and scientists during lab experiments

**Ecologist:-** investigates how living things interact with their environment.

**Geneticist:-** evaluate or treat patients with genetic problems by researching the inheritance of features at the molecular, biological, or population level.

**Biochemists :-** Plan and carry out challenging projects for both scientific and application research overseeing the performance of laboratory teams

## Private Jobs for B.Sc Botany Graduates

The private companies hire aspirants from various colleges and universities for B. Sc. Botany.



### Job Profiles

### Description

Taxonomist

Mapping a species' DNA, examining its structure, recording it in pictures or sketches, and gathering required specimens

Ecologist

Investigates how living things interact with their environment.

Cytologist

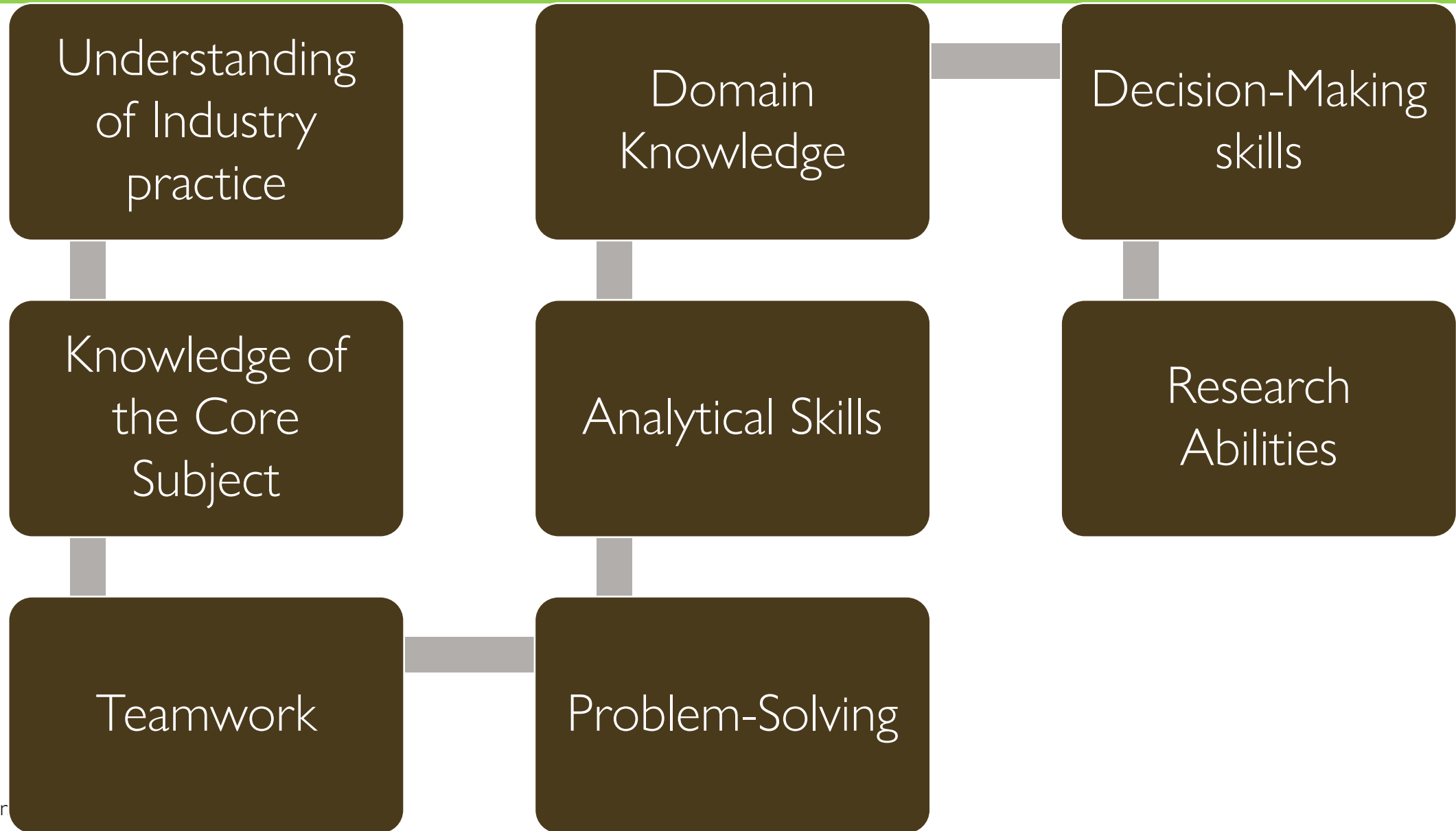
Utilize a microscope to examine specimens and assess specimen quality.

Biological Technician

Establishing, maintaining, and cleaning laboratory apparatus, including scales, pipets, and test tubes



# Skills Required for B. Sc. Botany Jobs



# B.Sc Botany Salary in India

The pay for a B.Sc Botany in India varies based on several factors, such as experience in terms of training, internship, projects, etc., and other factors. B.Sc Botany graduates often make between **INR 4 to 8 LPA**. **(Source: Payscale)**. Other factors that affect income include the job title, and the industry one chooses to work in.

The B.Sc Botany graduate salary in India is displayed in the table below:

B.Sc Botany Salary In India	Amount (INR)
Highest Salary	6.5 LPA
Lowest Salary	2 LPA
Average Salary	3.5 LPA

# Government Sector



Average  
Annual Salary  
(INR)

MOEF  
INR 3.5 LPA

TERI  
INR 3LPA

WPSI  
INR 4 LPA

MOEF-The Ministry of Environment, Forest and Climate Change  
TERI- Tata Energy Research Institute  
WPSI-Wildlife protection society of India

# Factors To Consider Before Choosing A Job

Salary, entitlements, and conditions

Company profile

Cultural fit

Career progression

Purpose, CSR, and volunteer days

Employee benefits



# Recruiters for B.Sc. Botany Graduates:

Top Recruiters	Average Annual Salary (INR)
Frutarom Industries	10 LPA
Indesso Aroma	9.5 LPA
Synergy Flavors	11 LPA
Senda Biosciences	8 LPA
Ajinomoto	6.75 LPA
Haldin Pacific Semesta	9.8 LPA
Helix Smith	7.65 LPA
Chromadex	8.65 LPA
Kalsec	6 LPA

# Scholarships

## • Indira Gandhi Scholarship for Single Girl Child

- Purpose: This scholarship is offered by UGC in order to help families to pay for post-graduation level education of girl child.
- Scholarship Amount: INR 36,200 per month for maximum two years
- Eligibility: Any girl who is the only girl/twin daughter/fraternal daughter of a family and has secured admission in a full-time (regular) master's degree programme from a recognised university/college is eligible to apply for this scholarship. The age limit for this scholarship is 30 years.
- Application Mode: Online on the official website of UGC's Post-Graduate Indira Gandhi Scholarship for Single Girl Child for PG Programmes.
- How to apply: Candidates applying for the scholarship can follow the below-mentioned steps on how to apply.
- Step 1: The student will have to visit the homepage of the National Scholarship Portal and click on 'New Registration'.
- Step 2: Read the guidelines carefully as mentioned on the page, select the undertaking below and click on the option - 'Continue'.
- Step 3: Select the state of domicile, scholarship category, scheme type, gender, write the applicant's name, date of birth, mobile number, email ID.
- Step 4: Provide the bank details (Bank name, IFSC Code, Account Number)
- Step 5: Select Aadhaar or Bank Account Number as identification detail and click on the 'Register' button.
- Step 6: The mobile number will be verified and an OTP will be generated.
- Step 7: Now, log in using OTP and fill the form.
- Step 8: An application ID and password will be generated. Use that for future references.
- When to Apply: Around August

## **Narotam Sekhsaria Scholarship Programme**

**Purpose:** Narotam Sekhsaria Foundation offers interest-free loan scholarships to students who want to pursue PG courses in fields like Applied Sciences, Pure Sciences, Social Sciences and Humanities, Architecture Law, and Management at good Indian as well as international universities.

**Scholarship Amount:** Maximum INR 20 lakhs

**Eligibility:** Aspirants meet eligibility criteria for this scholarship if they are-

- Indian nationals residing in the country
- Below 30 years of age
- Final year graduation student or have completed graduation from a recognised university

**When to Apply:** Between January to March

**Application Mode:** Online on the [official website of Narotam Sekhsaria Scholarship Programme](#).

**Process:** The candidates are required to meet the eligibility criteria before applying for the scholarship. Students are also given an option where they can find out if they are eligible for the scholarship or not. Students will have to follow the below-mentioned steps:

- Register by paying a fee of INR 500.
- Once registered, login by using the ID and password.
- Applicants will be shortlisted for the next phase which will be to upload their respective documents.
- Shortlisted applicants will be called for a personal interview in the month of May/June 2020.
- Students who clear the interview will be notified regarding the scholarship at the end of June 2020.

# Scholarship to study at abroad

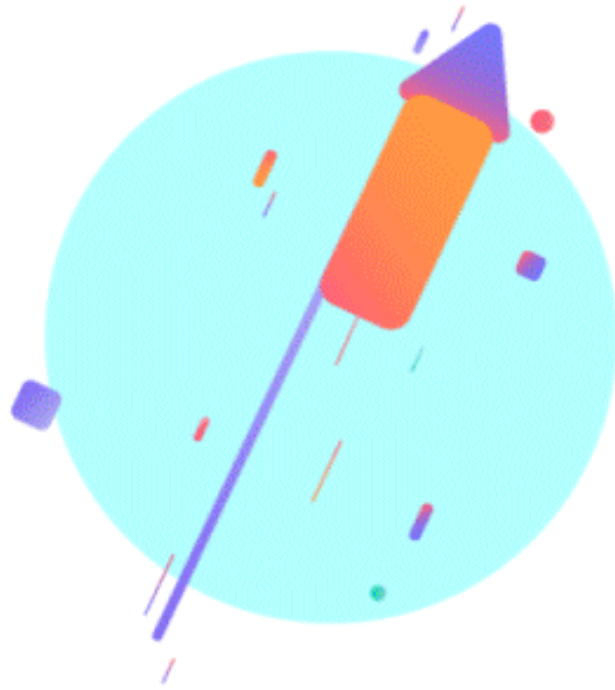
Search internet with keywords like-----  
scholarship for ms in uk for indian students  
after b. sc botany

The screenshot shows a web browser window displaying the IDP International Education Specialists website. The URL is [idp.com/india/scholarship/148958/alberta-mycological-society-award/](https://idp.com/india/scholarship/148958/alberta-mycological-society-award/). The page features the IDP logo and a search bar. A navigation menu includes 'Study abroad', 'What we do?', 'Destinations', 'Find a course', 'Student Essential Services', 'IELTS', and 'IDP FastLane'. The main content area is titled 'Alberta Mycological Society Award At University of Alberta' and includes a 'Share' button and a 'Speak to our counsellors' button. Below this, a table provides key details about the award:

Location	Qualification	Funding type	Deadline	Value of award:
Canada	Postgraduate	Fee waiver/discount	Contact the university	2000 CAD

At the bottom of the page, there is a 'Call' button and a 'Courses for you' button. The Windows taskbar is visible at the bottom of the screenshot, showing the search bar and various application icons.





**Congratulations!**

Great job, your work here is done

# How to achieve success



- \* **Every thing is possible**
- \* **Believe in yourself and work hard**
- \* **Find inspiration and take actions**
- \* **Don't take "no" as an answer**
- \* **Don't ever let others bring you down**

# fun

[www.facebook.com/UZAIR](http://www.facebook.com/UZAIR)





“ Business opportunities are like buses.  
There's always another one coming. ”

Richard Branson





# Thank You

Annual revenue growth







Thank you

Dr. Mayur A. Dongre

[mayurdon82@gmail.com](mailto:mayurdon82@gmail.com)