

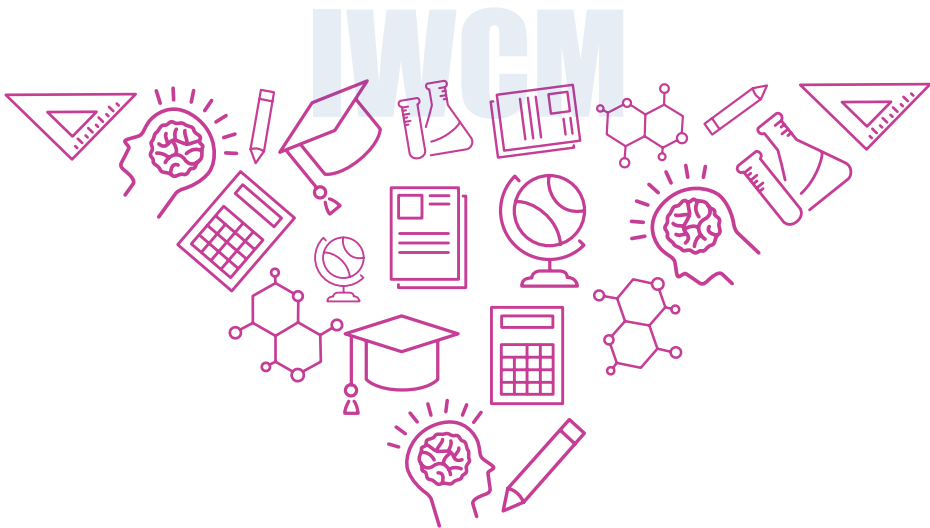
A Guide for Higher Education



District 323



**What shall I Study
after +2 ?
How can I excel?**



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Published in India

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IWCM



Career Counselling for 12th Standard Students

An initiative of
Inner Wheel Club of Madras
District 323

2021-22



INNER WHEEL CLUB OF MADRAS

DISTRICT 323

FOREWORD

This eBook is meant to be a guide and resource to the thousands of students who complete their 12th standard and are on the threshold of pursuing higher education. As more and more young people are seeking jobs, it is important to choose a course of study that provides job opportunities.

The Greater Chennai Corporation has approved the book and both the eBook and printed copies have been given by the Inner Wheel Club of Madras to their 22 Higher Secondary Schools.

The book covers a diverse range of subjects, who can opt for them, where to study, fee structure and job opportunities for each course. Not many are aware of courses that can be studied without fees or reduced fee structure. Information on such courses has been provided. Vocational courses, industrial training and even options to start working after completing 10th or 12th standard are also included.

The eBook has been designed with a desire to reach out to the thousands of students who require guidance on what to study for gainful occupation. It has been structured to make navigation and search easy with quick links to courses. A flowchart has been added as a quick reference to what courses a student is eligible to study, based on the subjects studied in the 12th standard.

The eBook was first brought out in Tamil in September 2021, authored by Mr N Sakthivel Murugan and compiled, formatted and designed by Mr 'Chutti' Ganesan. As there was a great demand for the English version of the eBook, we had it translated. We thank Mrs Vijayalaxmi Sundararajan for her painstaking and sincere efforts to give us the English version in record time remaining true to the content and spirit of the original.

We hope that students using this eBook will find it helpful and look forward to receiving their feedback.

President

Javanthi Singaram

Secretary

Sandhya Jaichandren

June 2022

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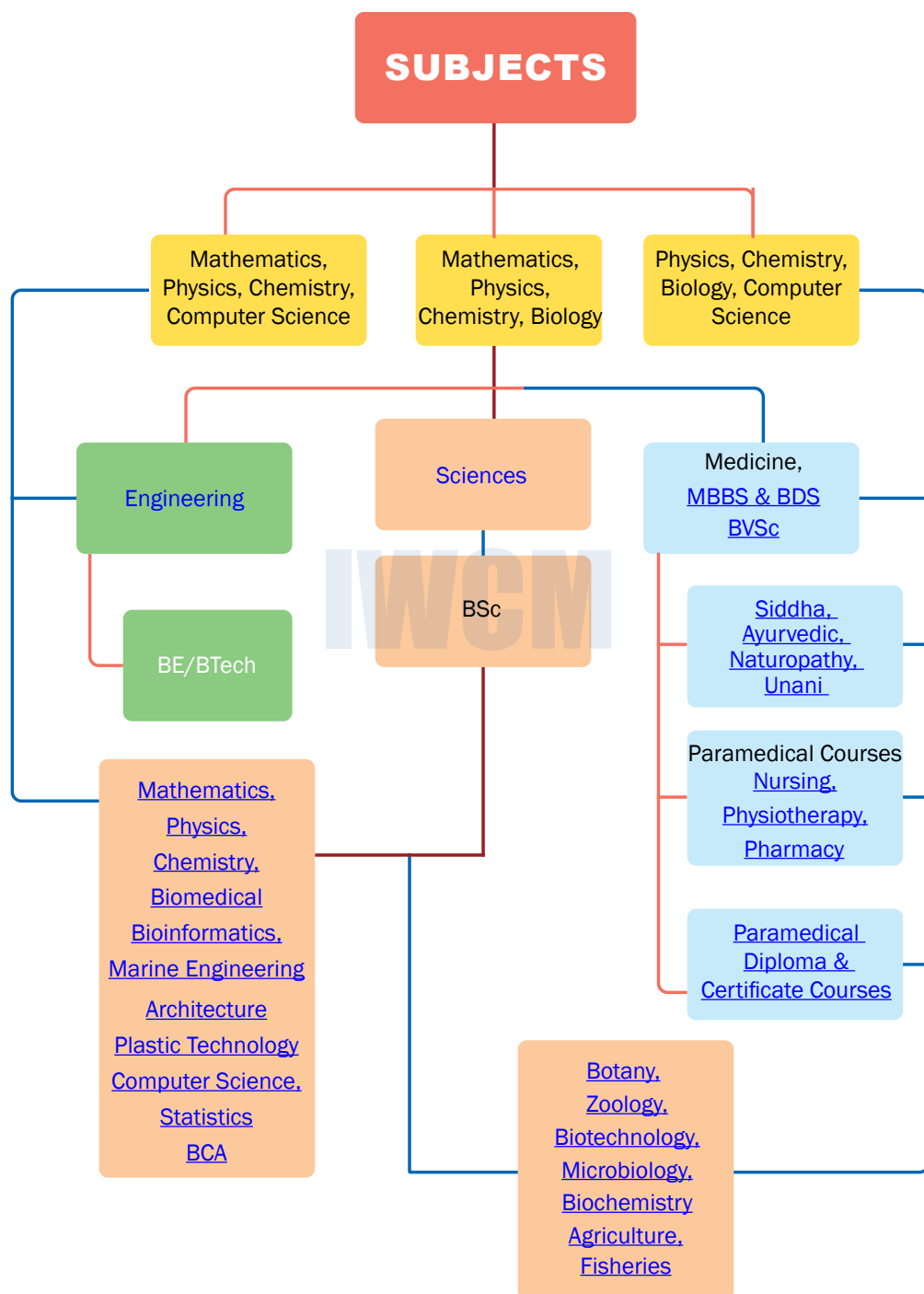
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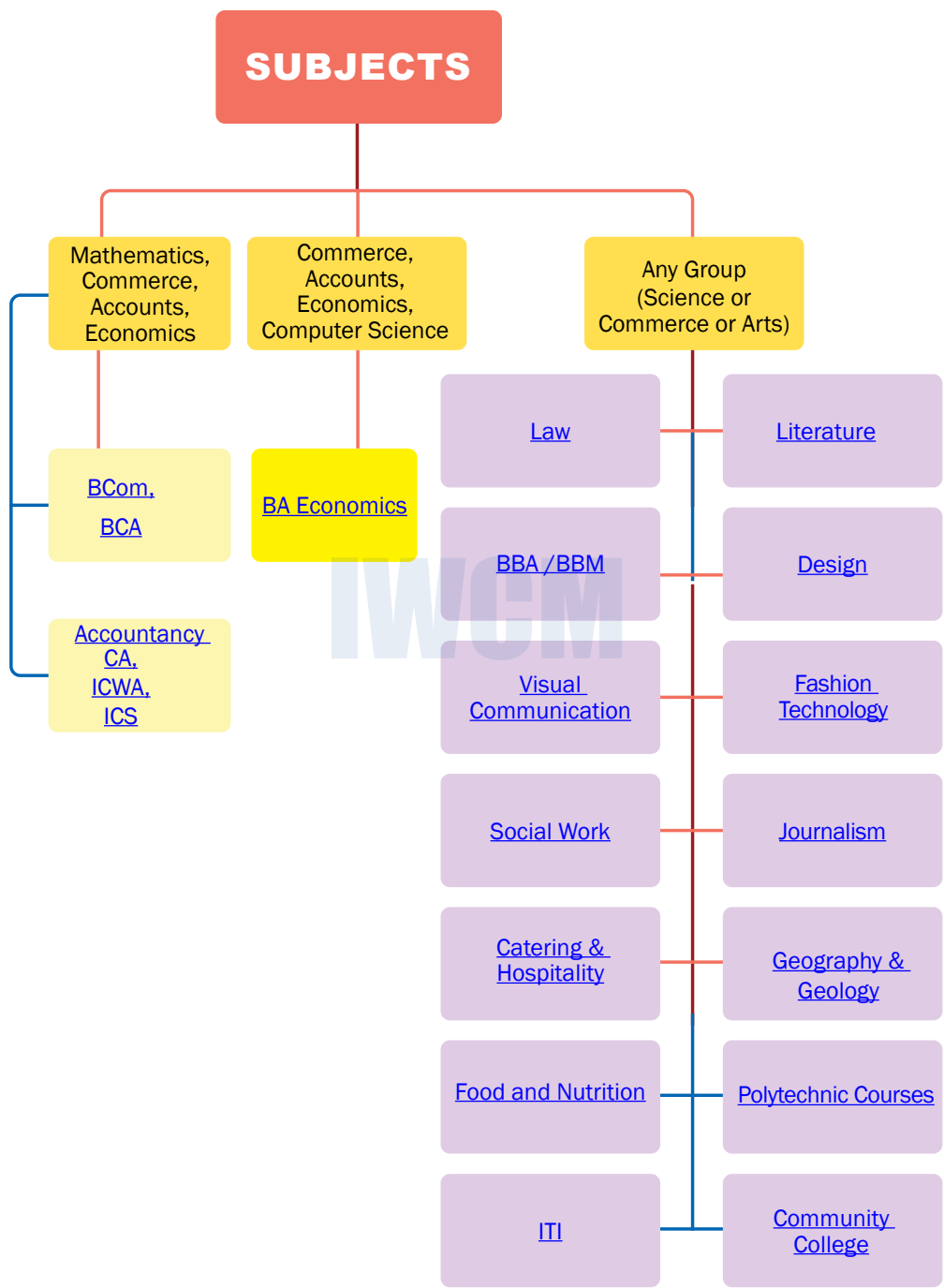
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Courses on the Basis of Subject Group Studied in 12th Standard



Courses on the Basis of Subject Group Studied in 12th Standard



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1: HIGHER EDUCATION FOR THE FUTURE



The aim of education is not to force information into the brain. According to Swamy Vivekananda, the aim of education is to Improve one's quality of life, build character and teach proper application of the mind. Degrees and high scores may be your individual strength but your identity is defined by your employability and ability to earn a livelihood which leads you to be a responsible citizen in society.



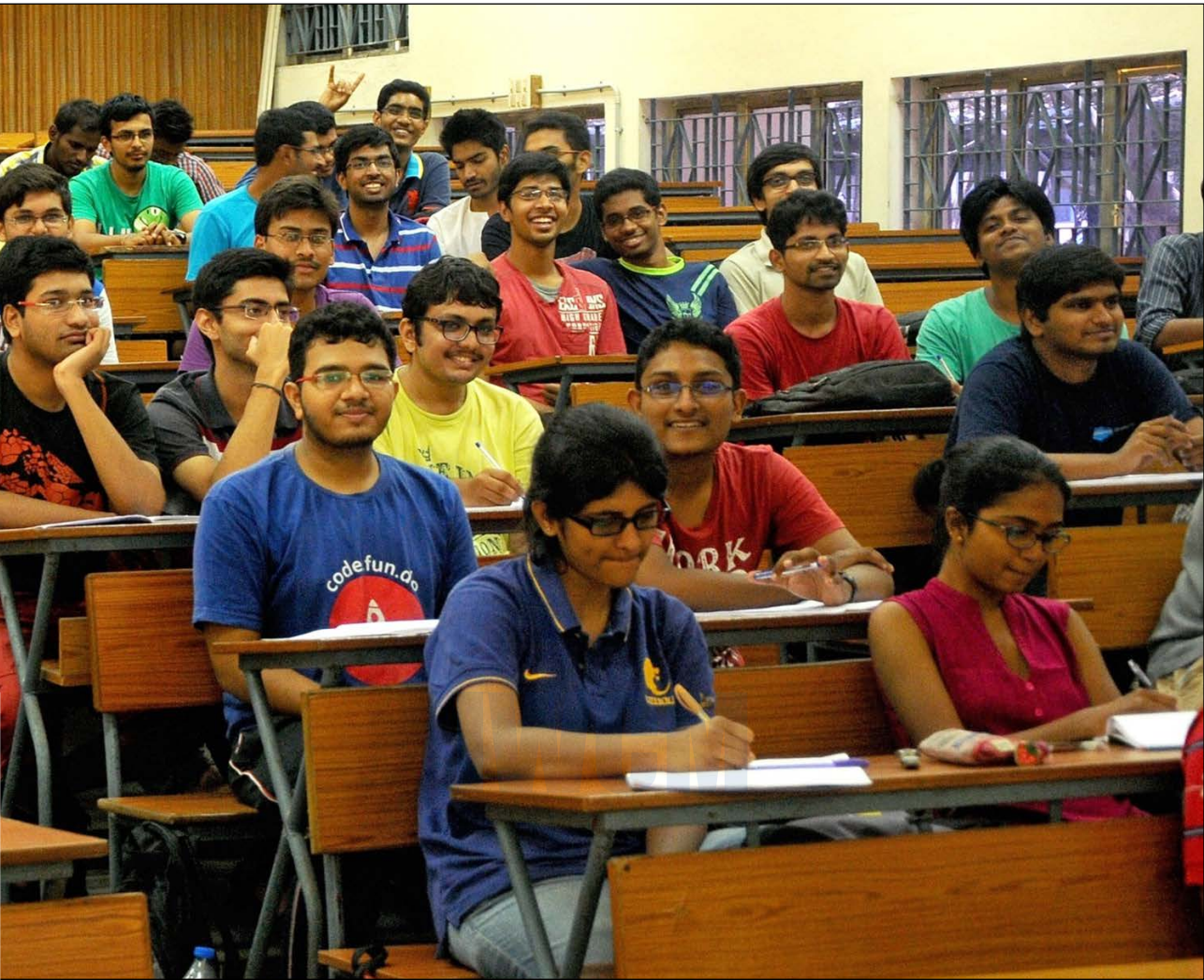
‘Once I finish 12th standar and join a college, I am assured of a job’ is the overall belief among college aspirants. However, they are assessed based on their ability to apply their knowledge and how education has refined their thoughts and behavior and prepared them for the next stage in life. It is most important that students complete their college education with equal attention to each semester and finish the course without any arrears.

Multinational corporations that come for campus interviews, look for students who have completed their course without arrears and also with consistent good marks/scores.

If you want to succeed in your career, you have to put in effort and focus on your studies. You have to start thinking and do research about

Metallurgy was the subject that Sundar Pichai, the CEO of Google, studied in his undergraduate degree. He did not do the course with the aim of joining Google; Google did not even exist when he did his course. He reached this high level of achievement owing to the quality of education he obtained in the institution and his perseverance.





- the sources of employment after graduation
- additional courses that offer various levels of certification
- qualify in above and thus add extra value to your undergraduate degree.

You are now living in the digital world, where knowledge and information are easily available. Read up to gain more information relevant to your subject so that your knowledge is wholesome.

Never forget the efforts of your parents in funding your education. While in school and college, do remember that the government also spends a huge amount of money in educating you. All this is for your progress and success in your career and contribution to society and country. Let us be responsible citizens and make our country great. ●

2: HOW TO SELECT THE BEST EDUCATIONAL INSTITUTE?

You will attend a college only once and therefore select the best:

1. Your success and opportunities are better when you select the best institution
2. A low standard of education will not fetch best employment opportunities, it will be a waste of money and time and may result in shattered dreams.

Therefore, pay attention to selecting a good college that offers the subjects of your choice.

The College studied in will play a big role in determining a student's future. Thus its selection is crucial for successful higher education. Highly successful people often attribute their success to the education they have received in college. College education is a significant contributor to a successful career.

Here are some important factors in selecting a good college.





2.1: Specialised colleges

Some colleges offer specialisation in the fields of Technology, Management and Economics, for example, Madras School of Economics at Chennai (Kotturpuram) offers specialisation in Economics. IIT Madras and Anna University are recognized as providers of high quality education in the field of Technology.

Medical colleges in Chennai are recognized as quality education providers in the field of Medicine. Therefore, it is wise to first decide on the field or area of specialisation and then identify a suitable college.

2.2: Popular colleges

Some colleges in your area may already be popular and also have a good name. The management may be excellent and teaching faculty would have many years of experience. The alumni of that college would be highly successful in their careers. Many may be employed in foreign countries also. The tuition fee may also be less in comparison.

In general, it is wise to choose a good college for a bright future.

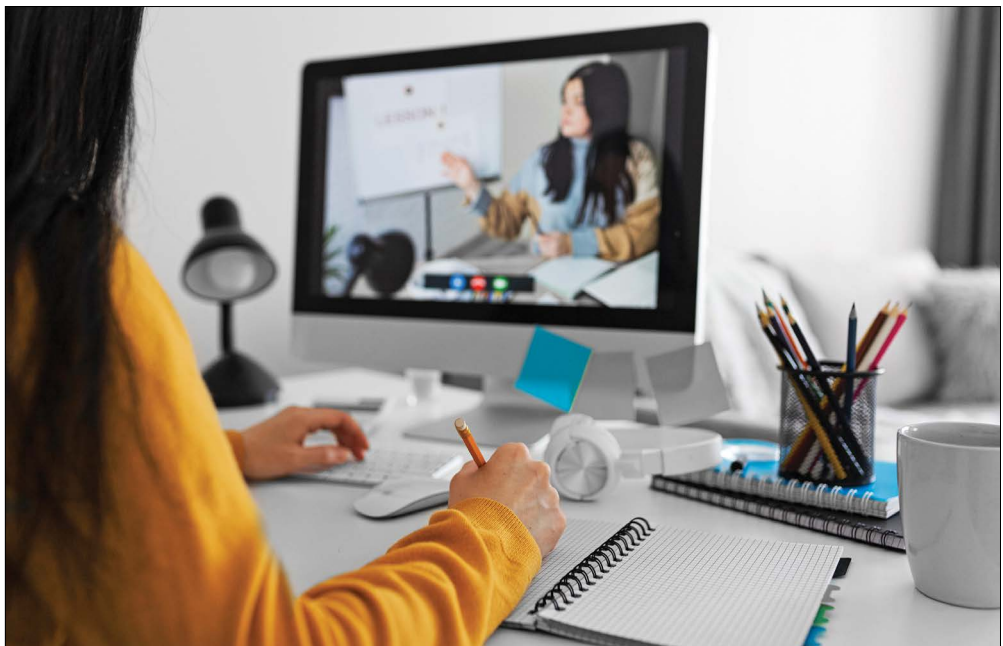
Some colleges may be run by prominent personalities. Check the pass percentage in the university exams before deciding to join that college.

If you select a good college, you will get suitable employment opportunities in whatever field you choose to pursue.

2.3: College environment and online classes

Due to the continuing Corona pandemic, online classes are unavoidable. Check the following:

- if the college has the infrastructure for online classes
- the college environment and facilities





- if facilities such as laboratories, library, toilets, water supply, etc. are all maintained properly

2.4: Discussion with past and present students

Contact the past and present students of the college and make a thorough enquiry about the functioning of the college.

The opinion of students who did not fare well in their studies might confuse you. So, identify students who were class toppers and ask for their opinion about the institution. This will help you select a good college for a better future.

2.5: Compare college prospectus

A prospectus or book with full information about the college will be given along with the application form. The book will contain the following information:

- When was the college established?
- When was the curriculum designed and duly approved for teaching?
- Details of the college administrators
- List of faculty and description of facilities

Compare the information given in the Prospectus of different colleges and then decide.

2.6: Advertisements and campus interview

In some colleges, staff currently working in the college may speak highly about the college in advertisements on television and FM Radio channels. They project their college as the BEST.

Some colleges boast that 1500-2000 students have got employment to advertise about their institution. They boast about campus interviews conducted 10 years ago. Do not get carried away by such advertisements, enquire thoroughly before joining.

2.7: Seek the help of the Internet

For all of your doubts about education, look for assistance on the Internet. There are different portals providing comparative information about colleges, courses and facilities. Check the authenticity of the information provided online.



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2.8: Colleges offering concessions

If a student scores 80% to 90% of marks in 12th standard, some colleges offer tuition fee waiver. Such students may also get free transportation to the college bus. Colleges that have low students' strength may advertise to increase enrollment. Find out to make sure that such fee concessions do not affect the quality of teaching.

2.9: Take the advice of experts

Nowadays many experts conduct seminars to provide guidance about colleges and courses to study. Such seminars are conducted online also. Participate in them to get advice about specific courses and colleges offering them.

2.10: Transparency in admission process

The Government of Tamilnadu conducts counselling sessions for admission to Engineering and Medical colleges. For admission in Science and Arts colleges, the Government has planned to introduce online counselling. Look out for online announcements about the admission process. It is better to join those colleges where the admission process is transparent.



3: CHOOSING A COLLEGE AND COURSE TO STUDY

You will succeed in your graduate study if you choose a course that you like.

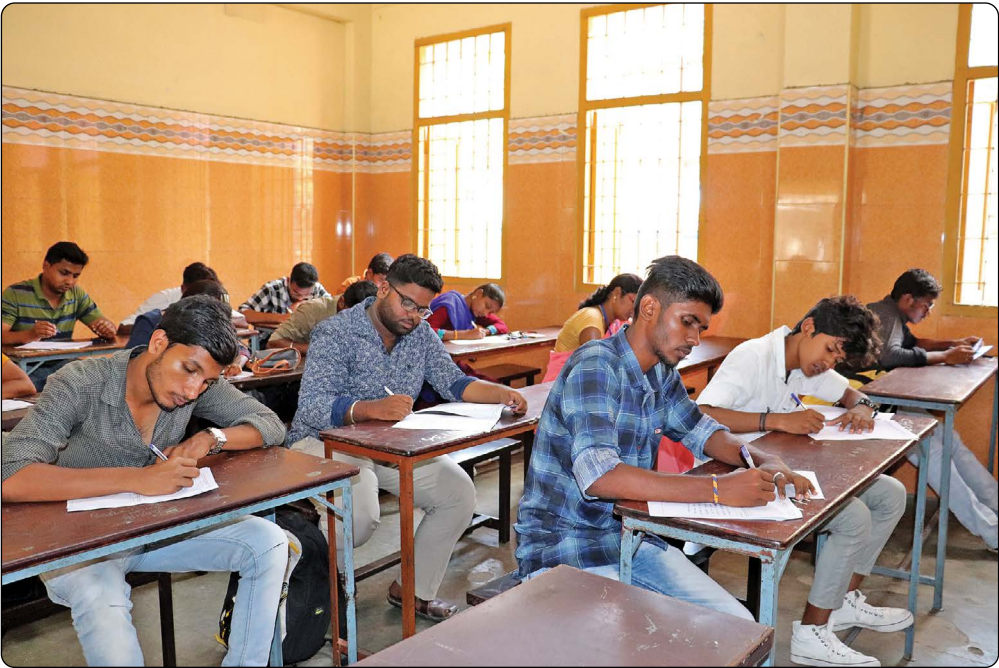
3.1: Consider the following before you choose:

1. What is your field of interest? What would you like to do?
2. Professional or non-professional course?
3. What are the future prospects for this course?
4. What are the opportunities available?
5. Is the selection through a group discussion or individual interview?
6. On completion, do you want employment or go for further studies?
7. What is the tuition fee?
8. What will be the total expenditure for completing the course?
9. Are there additional certificate courses that can help one get employment?
10. Is there competition in getting the seat or can one get a seat as soon as they apply?
11. Are there any scholarships available?
12. Are there fee concessions or any other financial help?

Arrive at clear answers to the above questions and then search for a suitable college.

There are multiple courses to pursue in the fields of Engineering, Medicine, Paramedical courses, Law, Management, Fashion, Architecture, Arts, Science, Design, Journalism and Creative studies such as Theatre and Film making.

Do not join a course because of suggestions by friends or compulsion by parents.





3.2: Opportunities for higher education

Broadly, there are 4 groups of study in higher secondary.

Group 1: Mathematics, Physics, Chemistry and Biology/
Computer Science.

Group 2: Botany or Zoology instead of Mathematics

Group 3: Accountancy, Economics, Commerce, History

Group 4: Vocational courses

Based on the above groups, one can choose the field of study. For example, if a person studies Biology in the first group, medicine or engineering can be pursued. Students who choose Group 3 can pursue courses in Commerce. Students who choose vocational courses can pursue higher education only in that specific field.

4



Medicine is a respectable and prestigious profession.

After the Corona wave, the medical field is now looked upon with enormous respect. In the past 10 years, there has been a vast increase in the number of engineering graduates but not as many in the field of medicine. Currently, there is an increased interest to pursue medical studies.

- In order to pursue MBBS, BDS or courses in nursing, one has to take the NEET entrance exam and get a qualifying score.
- Students who take the NEET exam will need to participate in two rounds of counselling before joining a Government Medical College.

Counselling by the Tamilnadu Medical Council

<https://tnhealth.tn.gov.in/>

Counselling by Indian Medical Council for All India quota

<https://mcc.nic.in>

The MBBS course comprises 5 ½ years of study. The BDS course has to be completed in 5 years. There are 36 Government medical colleges and 16 private medical colleges in Tamilnadu. There are 3150 seats available for the course. In India, Tamilnadu is considered to have the best facilities for the study of Medicine and continues to hold the first place in the ranking for medical education in India.



Employment opportunities

After completing MBBS, if internship is done in Government hospitals, there is a chance of being appointed as a Government doctor. At present, there are more private medical institutions with branches in second and third tier cities of Tamilnadu and therefore, there are plenty of employment opportunities for medical graduates.

4:1 Government Medical Colleges in Chennai

1	Chennai Medical College
2	Stanley Medical College, Royapuram, Chennai
3	Kilpauk Government Medical College, Chetpet, Chennai
4	Government Medical College, Omandurar Government Estate, Chennai
5	Tamilnadu Government Dental College, Chennai.

4.2: Fees

- The fees for studying MBBS or BDS in Government medical colleges:
- General category, backward category, most backward category Rs 13,600
- Dental college Rs 11,600
- Other category students admitted through quota in MBBS or Dental college, Rs 9600
- The fees for studying MBBS or BDS in Government allotted quota in self-financed colleges
- Rs 25,000 for Government allotted quota for students admitted under general, backward and most backward category
- Rs 25,000 exemption from paying tuition fee of is provided for students who come under the category of under privileged, Arundathiyars, tribals and those who have converted to Christian religion or if the annual income of their parents is less than Rs 2.5 lakhs
- Rs 3000 for Nursing, Physiotherapy, Pharmacy and such allied health courses,



4.3: Approach NEET with well-planned study

In India, to get admission in a medical college, it is compulsory to appear and qualify in the NEET exam. Due to increase in competition, it is essential to plan the study and preparation for the NEET exam.

The NEET test is conducted by the National Testing Agency (NTA). The NTA defines the syllabus and provides model question papers to guide the students. Students must take full advantage of this facility to appear in model tests available online for practice. This preparation helps the students when they give the main test.

4.4: Who can apply for the NEET test?

- General category: Students who have scored over 50% marks in Chemistry, Physics and Biology or Zoology or Botany.
- Other categories: Students must have scored 40% marks in Chemistry, Physics and Biology or Zoology or Botany.

To take the NEET exam, a candidate can choose language in which to answer; the questions are in English and Tamil.

The duration of the NEET exam is 3 hours. There will be 180 objective type questions from Physics, Chemistry, Zoology and Botany.

4.5: Scoring pattern

For a correct answer, 4 marks are awarded. For a wrong answer, one mark will be deducted. If no answer is given to a question, no marks will be awarded. The total marks are 720. Last year, there were students who scored 720 out of 720 and stood first in the test.

For further details regarding NEET test: <https://neet.nta.nic.in/>



4.6: NEET 2023 Exam Dates

NEET 2023 official notification is yet to be announced officially and tentative schedule is as follows:

Event	Date
Application form will be available from	1st week of December 2022
Deadline for application submission	Last week of December 2022
Corrections	3rd week to 4th week of January 2023
Availability of admit card	4th week of March 2023
Date of entrance exam	1st week of May 2023
Result will be announced on	1st week of June 2023
Counselling will commence from	2nd week of June 2023
https://www.neetnic.in/neet-2023/	

4.7: Important information regarding counselling for medical studies

The Tamilnadu Medical Council conducts medical counselling in the Omandurar Multi Super Specialty Hospital. The Directorate of Medical Education, Tamilnadu notifies the timing of the counselling and interview. The timetable for counselling is published online at: <https://tnmedicalselection.net>

4.8: What to bring for counselling session

1. Hall ticket of NEET test
2. Mark list certificate of NEET
3. Mark list of 10th and 12th standards
4. Transfer certificate
5. Authority letter of the Government school or Government-aided school showing that the student has studied from 6th to 12th standard in Tamilnadu
6. Bonafide certificate if already joined another college

7. Nativity/residence certificate if 6th-12th standard has been studied in another state
8. Aadhar card
9. Caste certificate
10. Certificate to show first-generation to become a graduate
11. Ration card

Certificate to be brought by the parents

1. Birth certificate
2. Certificate of studying 10th/12th standard and any other studies
3. Income certificate

More than 25,000 students apply for Government allotted seats. Students already admitted in the All India quota cannot participate in this counselling. Those who have joined Engineering or other fields of study must submit a Bonafide certificate of the college/institution. After the first counselling stage, even if there are vacant seats for medical admission, a student cannot join if he/she has not taken part in the first stage of counselling even though he/she is available for the second stage counselling.

To participate in counselling, a bank draft of Rs 500 is to be submitted. On selection and allocation of college, one has to pay the fee by demand draft.

Students who are admitted to self-financed colleges, or through Government reserved quota, cannot get a refund of fees once paid. Those who could not get a college of their choice in the first round of counselling may join some other college, and if they get a seat later in the second round of counselling, they are given an opportunity to change the college. Applicants who are physically disabled, or from families belonging to the armed forces, and or admitted under sports quota do not have the option to change the college.

Daily update on number of vacant seats in general medicine and dental medicine for admission through Government quota, and self- financed colleges are published in the following websites:

www.tnhealth.org
www.tnmedicalselection.net



5



Nursing offers employment opportunities in foreign countries.

Students who study Physics, Chemistry, Biology in their 12th standard can join nursing course. Admissions are based on qualifying in the NEET exam and subsequent counselling.

In a Government medical college, the annual fee is only Rs 3000. Also, there is not much competition for the nursing course. With the opening of many hospitals and nursing homes, qualified nurses are in demand. Specialised courses in Nursing are also available today.

5.1: Who can study Nursing?

In order to be a good Nurse, one has to be compassionate, dedicated and have the ability to communicate well with patients and doctors.

After completing 4 years of study in nursing, and 1 year training, one has to register with the Nursing Council. On completion of BSc Nursing, one can opt to pursue MSc in Nursing.

On completing BSc Nursing, one can further specialize in pediatric nursing, emergency nursing, cardio thoracic nursing, neuro science nursing, nephron – urology nursing, and gynaecological nursing.

5.2: Number of seats available

In Tamilnadu, 5 government medical colleges offer Nursing courses. There are 250 BSc Nursing seats available in these colleges and 2000 certificate courses for Nursing studies. In private institutions, there is a Government quota of 5134 seats in BSc Nursing.

“The annual fee for nursing studies in government medical colleges is only Rs 3000 whereas in private colleges, the fee is Rs 45,000 for the same course.”

5.3: Who can apply?

Though nursing is more popular among women, men can also apply for the BSc Nursing course. The age limit for this course is 17 to 30 years. For SC and ST candidates the limit is 35 years for.

Employment Opportunities

At present, there is a need for 6 lakhs nursing graduates all over India. The Department of Health, Central Government of India is paying more attention to health and welfare activities and hence this number may increase. There are more opportunities in the Government sector for nursing graduates.

There is an increase in employment opportunities in foreign countries for nurses.

The Overseas Manpower Corporation of Tamilnadu Government is undertaking the responsibility of identifying job opportunities in foreign countries for nursing graduates. They are also involved in selection of suitable candidates for the jobs. There is a great demand for nursing graduates, especially in England, America and the Gulf countries.

5.4: BSc Nursing course in Government medical colleges

1	Madras Medical College, Chennai
2	Madurai Medical College, Madurai
3	Chengalpattu Medical College, Chengalpattu
4	Government Mohan Kumaramangalam Medical College, Salem
5	Government Theni Medical College, Theni



6

**Physiotherapists are much in demand in India and abroad.**

Nowadays, if you visit a hospital for treatment of mobility issues, after consulting the doctor, you can consult with the physiotherapist in the next room. Along with the medicines prescribed by the doctor, physiotherapy helps in faster improvement. Large hospitals give a lot of importance to physiotherapists. Expert therapists are much in demand.

A physiotherapist needs to have complete knowledge of the nature of illness and the working of the parts in our body. Medical treatment, along with physical exercises are necessary for the damaged parts to be set right. The physiotherapist must be an expert in giving appropriate exercises to bring the body to normalcy.

Although physiotherapists attend to patients in a hospital, the practice of physiotherapists visiting patients in their homes and giving treatment has increased. Thus, the therapist's income also increases. The role of a physiotherapist in sports is significant and there is an increased demand for good physiotherapists in that area. Students interested in sports can study physiotherapy and find suitable employment.

Earlier, scoring high marks was sufficient to join this course. But now, one has to qualify through NEET exam to do this 4 ½ year course.



6.1 Government colleges offering physiotherapy course

- | | |
|---|--|
| 1 | Government Institute of Rehabilitation Medicine, Chennai |
| 2 | Government College of Physiotherapy, Trichy |
| 3 | Government Kilpauk Medical College, Chennai |

There are more than 20 self-funded colleges run by private institutions. In government colleges, the yearly study fee is Rs 3000 and in private institutions the fee is Rs 33,000.

Employment opportunities

A physiotherapist can get employment in hospitals as well as in medical treatment centres. Physiotherapists can also open their own therapy centres after gaining experience in the field. Gymnasiums, fitness centres and sporting facilities also have a need for good physiotherapists. Qualified physiotherapists are much in demand in foreign countries.



7



In the medical field, pharmacy courses are very important. Those who score 40% or more in 12th standard with Physics, Chemistry, Biology/ Botany/Zoology are eligible to apply for pharmacy courses.

The counselling conducted by Directorate of Medical Education is held at state level to admit students for this course. In Tamilnadu, Chennai and Madurai have Government pharmaceutical colleges. Apart from this, there are 37 self-financed colleges conducting pharmacy courses.

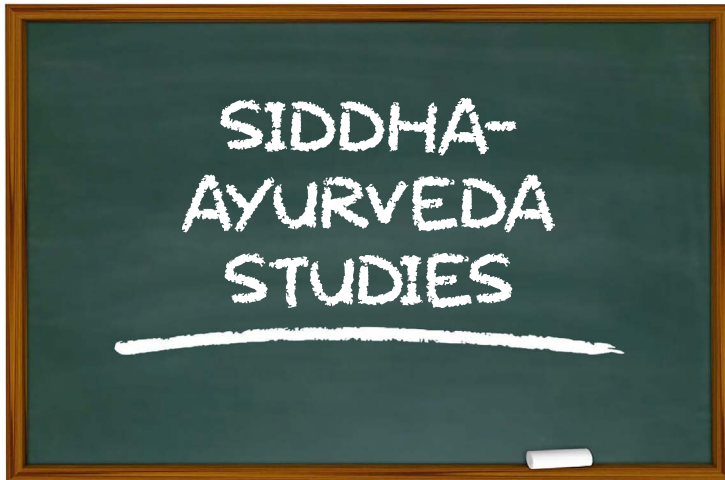
Employment opportunities

Job opportunities are available in Government and private hospitals. A graduate in pharmacy can become a salesperson or a pharmacist in private hospitals/ nursing homes. They can work in a medical shop. There is scope for studying higher courses like MPharm.

BPharm graduates can also open a medical shop. With DPharm (Diploma in Pharmacy) qualifications, one can advise patients about medicines. There are job opportunities abroad also.

BPharm (Bachelor of Pharmacy) – 4 years
DPharm (Diploma in Pharmacy) – 2 years
PharmD (Doctor in Pharmacy)- 6 years
Government medical colleges offering BPharm
1. Madras Medical College, Chennai
2. Madurai Medical College, Madurai

8



MBBS degree is based mainly on English medical science method. Siddha and Ayurveda are based on Indian system of medicine .

BSMS (Bachelor of Siddha Medicine and Surgery)

BA MS (Bachelor of Ayurvedic Medicine and Surgery)

BNYS (Bachelor of Naturopathy and Yogic Sciences)

BUMS (Bachelor of Unani Medicine and Surgery)

For the above courses, admission will be conducted only after the admission for MBBS course through counselling is completed. There will be a separate announcement by the medical council.

For further information and details: <https://tnhealth.tn.gov.in>
www.tnmedicalselection.org

To keep in mind: From last year, only students securing minimum marks in NEET test are eligible to apply for this course. General category students who secure 50% marks in Physics, Chemistry, Biology (or Botany or Zoology) are eligible to apply for Siddha and Ayurveda studies. For other categories, students must secure 40% marks in the above subjects.



8.1: How many seats are available?

- | |
|--|
| 1. Government Siddha Medical College, Palayamkottai (BSMS) - 100 seats |
| 2. Government Siddha medical college, Chennai (BSMS) - 60 seats |
| 3. Government Ayurveda Medical College, Kottaru,
Nagarkoil (BA MS) - 60 seats |
| 4. Government Unani Medical College, Chennai - BUMS - 60 seats |
| 5. Government Homeopathy College, Thirumangalam, Madurai - 50 seats |

The total number of seats in the above 5 colleges is 330. Out of this, 50 seats are reserved for All India quota. In Tamilnadu, there are 25 seats available in private Siddha medical college.

Employment opportunities

Government hospitals now have Siddha department of medicine. After completing the course in Siddha medicine, if an internship in Government hospitals for a fixed period is completed, they will be appointed as Government medical practitioners. There is scope for employment even in private hospitals. One can also set up a private practice.

8.2: Fees for Siddha-Ayurveda studies

- In Government colleges, the fee is Rs 5000
- With Government quota, in self- financed college, the fee is Rs 10,000
- In self-financed colleges with Government approved fee structure, the fee is Rs 1,25, 000

9



In the medical field, many para-medical courses are available. In hospitals, doctors cannot treat a patient properly without the assistance of para-medics,. They are essential employees. Therefore, there is a great demand for such workers. To become a para-med, one needs to do an appropriate para-medical course.

Para-medical courses are available as graduate, diploma and certificate courses.

Counselling for para-medical study is done after the counselling for MBBS. Student must check the newspaper daily or check on the website of Directorate of Medical Education, Government of Tamilnadu.

Para-medical courses like BPharm, BSc Nursing and Physiotherapy are all considered as vocational courses. The duration of such courses is 4 years. After completing this course, there will be a one-year training/internship. For this course, the fee in Government colleges is only Rs. 3000.

9.1: Employment (job) oriented para-medical courses

1. BSc Nursing
2. Bachelor of Physiotherapy
3. BPharm Bachelor of Pharmacy
4. BOT Bachelor of Occupational Therapy
5. BBMRSc Bachelor of Medical Records Science
6. Bachelor of Allied Health Science



9.2: Other para-medical courses

1. BSc Accident and Emergency Care Technology
2. BSc Audiology and Speech Language Pathology
3. BSc Cardiac Technology
4. BSc Cardio Pulmonary Perfusion Care Technology
5. BSc Critical Care Technology
6. BSc Dialysis Technology
7. BSc Electro Neurophysiology
8. BSc Medical Lab Technology
9. BSc Medical Sociology
10. BSc Nuclear Medicine Technology
11. BSc Operation Theatre and Anesthesia Technology
12. BSc Optometry Technology
13. BSc Physician Assistant
14. BSc Prosthetics and Orthotics
15. BSc Radiology Imaging Technology
16. BSc Radio therapy Technology
17. BSc Anesthesia Technology
18. BSc Cardiac Perfusion Technology (CPI)
19. BSc Cardio Vascular Technology (CVT)
20. BSc Diabetes Science
21. BSc Echo Cardiography Technology

Employment opportunity

Those who have completed para-medical studies with technical specialties have great opportunities in multi-specialty hospitals. Due to a lack in proper expertise, many hospitals are also establishing medical technical education training centres. A multi-specialty lab technician's salary starts from Rs 20,000 and can go up to Rs 1 lakh. Therefore, it is a field that offers excellent employment prospects.

9.3: Diploma in allied health sciences

A 2-year Diploma course is available in the following allied health sciences.

1. Accident and Emergency Care Technology
2. Critical Care Technology
3. Nursing Aide
4. Operation Theatre and Anesthesia Technology
5. Ophthalmic Nursing Assistant
6. Pediatric Technician
7. Scope Support Technology
8. Medical Record Science
9. Optometry Technology
10. Radiology and Imaging Technology
11. Medical Lab Technology
12. Cardiac Non- Invasive Technology
13. Dialysis Technology

9.4 Certificate courses

A 1-year Certificate course is available in the following allied health sciences.

1. Cardiac Sonography Technician
2. ECG Treadmill Technician
3. Pump Technician
4. Cardiac Catheterization Lab Technician
5. Emergency Care Technician
6. Respiratory Technician
7. Dialysis Technician
8. Anaesthesia Technician
9. Theatre Technician
10. Orthopaedic Technician



9.5: Institutions offering 3-year degree courses in allied health sciences

BSc (Radiography and Imaging Technology)

1. Madras Medical College, Chennai
2. Stanley Medical College, Chennai
3. Chengalpattu Medical College, Chengalpattu

BSc (Radio Therapy)

1. Madras Medical College, Chennai
2. Government Kilpauk Medical College, Chennai

BSc Cardio Pulmonary Perfusion Technology

1. Madras Medical College, Chennai
2. Government Tirunelveli Medical College, Tirunelveli.

BSc Optometry

1. Madras Medical College, Chennai
2. Government KAPV Medical College, Trichy
3. Government Villupuram Medical College, Villupuram

BSc Cardiac Technology Course

1. Government Tirunelveli Medical College, Tirunelveli
2. Government KAPV Medical College, Trichy
3. Government Villupuram Medical College, Villupuram
4. Government Mohan Kumaramangalam Medical College, Salem.

“

o be able to test vision, paramedical course BSc Optometry is offered in Chennai Government Eye Hospital, Egmore. This course is available only in AIIMS, New Delhi and in Tamilnadu. A two-year Diploma in Optometry is available in Government medical colleges. After completing this course, one can become an Optician.

In the dental field, to become a Dental assistant, diploma courses such as Dental Mechanic, Dental operating room Assistant are available. After 12th standard, if you study this diploma course, you can join as an assistant to a dentist/dental surgeon. Excellent employment opportunities are available in this field.

”

10



Veterinary science was not an attractive career option about ten to fifteen years ago. It is now a growing field with more veterinary doctors in a well-paid profession. Therefore, the number of students interested in this course has also gone up. Study of veterinary sciences is usually a 5 ½ year course.

Colleges affiliated to Tamilnadu Veterinary and Animal Sciences University (TANUVAS)

1. Veterinary Medical College, Chennai (120 seats)
2. Veterinary College and Research Institute, Nammakkal (80 seats)
3. Veterinary College and Research Institute, Tirunelveli (80 seats)
4. Veterinary College and Research Institute, Orathanadu, Thanjavur (80 seats)
5. Veterinary College and Research Institute, Talaivaasal, Salem (40 seats)
6. Veterinary Medical College and Research Institute, Veerapandi, Theni (40 seats)
7. Veterinary Medical College and Research Institute, Udumalaipettai, Thiruppur (40 seats)
8. College of Food and Dairy Technology, Koduvalli, Alamathi, Chennai – BTech Dairy or Food Technology (40 seats)
9. College of Poultry Production and Management, Hosur – BTech Poultry Farming (40 seats)

For further details, see <https://tanuvas.ac.in/>



Employment Opportunities

On completion of BVSC., students may write the Central Government staff selection commission exams and Tamilnadu government public service commission group 1 exams to get employment. Every year, the government of Tamilnadu selects 500-1000 veterinary doctors. There is an increasing need for veterinary doctors in Tamilnadu because poultry farms, dairy farms and cattle farms have increased in numbers. Cattle food farms, milk production and processing farms employ veterinary doctors. After post- graduation in this field, one can take up teaching assignments or continue in research studies. There are good employment opportunities in foreign countries also.

11



There are plenty of opportunities in the field of Agriculture. In the past 5 years, Engineering studies are losing their charm and the study of agricultural sciences is gathering attention. More so after the Corona pandemic.

To do a course in agriculture, students must have studied Biology /Botany/ Zoology as one of the subjects in 12th standard. However, to join agriculture or food technology, students who have studied Mathematics/Computer science, are also eligible.

11.1: Who can apply?

General category candidates must have 55% marks in Mathematics, Physics, Chemistry and Biology or Botany/Zoology. Applicants from backward class must have 50% marks and from most backward class must have 45% marks. Scheduled caste and Scheduled tribe candidates are eligible to apply if they have passed the 12th standard exams.

11.2: How to join a course in Agriculture?

You have to:

- take the admission test conducted by the Indian Agricultural Research Institute, New Delhi
- participate in the counselling conducted by the Tamilnadu Agriculture University

The 12th standard marks are not considered for the entrance test of the Indian Agricultural Research Institute. Only the scores in the entrance test are considered for admission in the best agricultural institutes in India. For more information about this entrance test, go to the website: <https://icar.nta.nic.in/WebInfo/Public/Home.aspx>

Apart from the counselling offered by Tamilnadu Agricultural University, one can directly apply to Annamalai University, Chidambaram and Gandhigram Deemed University to join agriculture-based courses offered by them.

In Government colleges, the course fee for Agricultural Sciences is less than Rs 30,000 per annum, whereas in a private college, the annual fee is Rs 70,000 or less. A first generation graduate, is exempted from paying fees.

11.3: Courses available at Agricultural University

1. BSc (Hon) Agriculture
2. BSc (Hon) Horticulture
3. BSc (Hon) Forestry
4. BSc (Hon) Food, Nutrition and Dietetics
5. BTech Agricultural Engineering
6. BSc (Hon) Silkworm breeding
7. BTech Food Technology
8. BTech Biotechnology



9. BTech Environmental and atmosphere engineering

10. Agri Business Management

There are 14 colleges affiliated to Coimbatore Agricultural University. These colleges are Government run institutions. Apart from these, there are 29 self-financed colleges. One can join these colleges also under the Government quota.

11.4: Colleges affiliated to Agricultural University

1.	Agricultural College and Research Institute, Coimbatore 641003
2.	Agricultural College and Research Institute, Madurai 625104
3.	Agricultural College and Research Institute, Killikulam, Thootukudi 628252
4.	Anbil Dharmalingam Agricultural College and Research Institute, Navalur Kuttapattu, Thiruchirapalli, 620027
5.	Agricultural College and Research Institute, Vaazavacchanur, Thiruvannamalai 606753
6.	Agricultural College and Research Institute, Kudumiyannmalai, Pudukottai 622104
7.	Agricultural College and Research Institute, Ecchankottai, Orathanaadu, Thanjavur 614902
8.	Horticulture College and Research Institute, Coimbatore 641003
9.	Horticulture College and Research Institute, Periyakulam, Theni 625604
10.	Horticulture College and Research Institute (for Women) Navaloor, Kuttapattu, Trichy 620027
11.	Agricultural Engineering College and Research Centre, Coimbatore 641003
12.	Agricultural College and Research Institute, Kumaloor, Pallapuram Thiruchirapalli 621712
13.	Forest College and Research Centre, Mettupalayam 641301
14.	Community Science College and Research Institute, Madurai 625104



Candidates who apply for counselling through the Agricultural University have the advantage of low fees if they get admission. There are 1600 seats in Government colleges and 3100 seats in self- financed colleges.

Those interested in agriculture can also apply for a two-year diploma course in three Government colleges and eight self-financed colleges.

Further information for the counselling conducted by the Tamilnadu Agriculture colleges can be obtained from: <https://tnau.ac.in/>

For Agriculture and Horticulture Courses offered by Annamalai university, please see the website: <https://annamalaiuniversity.ac.in/adm/index.php>

When applying for courses in Annamalai University, please remember that Government quota seats and self-financed seats are available. The fee under Government quota is below Rs 40,000. For seats under self-financed quota, an additional Rs 1,00,000 is charged.

Employment opportunities

Agricultural researcher/technician, Field analyst, Farm manager, Agricultural sales representative, Agricultural food and consumer products warehouse manager, Agricultural educator/ teacher, Project planner, Soil surveyor, Agronomist, Agriculture executive officer are a few positions that are available to those who complete courses in agricultural sciences. There are other job opportunities in Government and privately run agricultural companies, agricultural tools manufacturing factories, fertilizer companies and banks. A career in this field promises a bright future.



12



Students interested in fisheries can apply for counselling conducted by the Fisheries University in Nagapattinam and join courses in Fisheries sciences or Fisheries engineering.

The courses offered are:

1. BFSc Bachelor of Fisheries Science 4 years
2. BSc Aquaculture (Fisheries Microbiology) 3 years
3. BE Fisheries Engineering 4 years
4. BSc Nautical Science

Students who have studied Math, Physics, Chemistry, Biology/Zoology/ Botany in 12th standard can apply.

More information can be found at the website: <https://cifnet.gov.in/>

12.1: Courses in fisheries are available at the following colleges:

1. Dr MGR Fisheries College and Research Institute, Ponneri
2. College of Fisheries Engineering, Nagapattinam
3. Fisheries College and Research Institute, Thoothukudi
4. College of Fish Nutrition and Food Technology, Madhavaram, Chennai
5. Fisheries College and Research Institute (Thanjavur and Kanyakumari)



Students belonging to families engaged in fishing are eligible for 50% fee concession in the Central Maritime University.



The Central Institute of Fisheries Nautical and Engineering Training (CIFNET) headquartered in Kochi has a branch in Royapuram, Chennai. The institute offers courses in Nautical Engineering and Nautical Science with a reduced tuition fee. For further information see <https://cifnet.gov.in/>

Indian Maritime University is situated on the Chennai-Pondicherry East Coast Road at Uthandi. Here one can study courses in Nautical Science and Nautical Engineering, viz., BS Nautical Technology, BTech Marine Engineering, BTech Naval Architecture and Ocean Engineering, BSc Nautical Science, BSc Applied Nautical Science, BSc Maritime Science, BSc Ship Building and Repair.

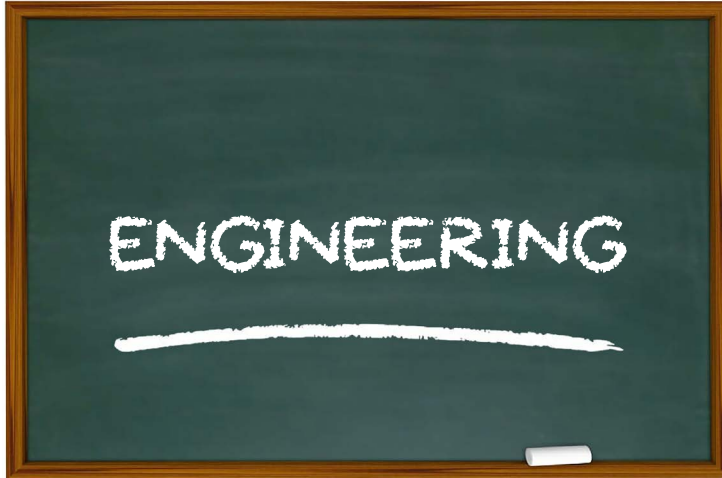
For further information, <https://www.imu.edu.in>

Employment opportunities

Jobs are available in Tamilnadu Fisheries Department. Seafood is popular these days and there are flourishing businesses in the field of seafood processing and export. Fish and prawn/lobster culture farms, processing centres and seafood manufacturing centres provide jobs. One can also apply for jobs in harbours and on ships.



13



Tamilnadu has seen a rapid growth in engineering studies in the past 20 years with infrastructure to match the demand for the course. There are more than 500 Engineering colleges in Tamilnadu, but the interest for engineering studies has come down because of a dull job market. There are more than 1 lakh seats in the Government colleges. However, the seats remain largely unfilled and only a few colleges are functioning with full strength.

In Tamilnadu, there are more than 20 Government engineering colleges. Let us look at the colleges and the courses available.

13.1: Anna University holds the top rank for engineering studies!

Anna University comes close to the IITs and RECs in terms of ranking. In Tamilnadu, after completing 12th standard, Anna University is more often the first choice.

The major institutions affiliated to Anna University are the College of Engineering, Guindy, MIT Chrompet, Alagappa College of Technology and School of Architecture and Planning.

College of Engineering, Guindy, Alagappa College of Technology and MIT, Chrompet offer the following courses:

Aeronautical, Automobile, Computer Science, Civil, Electrical and Electronics, Electronics and Communication, Electronics Instrumentation, Geo Informatics,

Industrial, Mechanical, Materials Science, Mining, Manufacturing, Printing, Production, Chemicals, Ceramics, Food Technology, Information Technology, Petrochemicals, Pharmaceutical, Rubber and Plastics, Textiles, Mechatronics, Biomedical, Electronics and Telecommunication, Instrumentation, Marine Engineering, Metallurgy, Petroleum, Robotics and Automation and Textile Technology and Industrial Biotechnology.

To learn more about the courses in Anna University, visit the website www.annauniv.edu

Anna University has a Centre for University-Industry collaboration and has signed memorandums of understanding (MOUs) with a focus on campus interviews and placements. Multinational companies also visit the campus to recruit students for employment with them.

Other colleges affiliated to Anna University are at Kanchipuram, Vizhipuram, Dindivanam, Panrutti, Aarani, Ariyalur, Pudukkottai, Thirukuvalai, Dindigul, Ramanathapuram and Nagarkoil.

Regional colleges: Anna University has regional centres in Coimbatore, Thiruchirapalli, Tirunelveli and Madurai.

13.2: Government engineering colleges

1. Kovai Government Engineering College, Coimbatore
2. Alagappa Chettiar College of Engineering and Technology, Karaikudi
3. Government Engineering College, Burgur, Krishnagiri
4. Government Engineering College, Karuppur, Salem
5. Government Engineering College, Tirunelveli
6. Thanthai Periyar Government Institute of Technology, Vellore
7. Government Engineering College, Tanjavur
8. Government Engineering College, Dharmapuri
9. Government Engineering College, Bodinayakanoor, Theni
10. Government Engineering College, Srirangam, Trichy
11. Institute of Road and Transport Technology, Erode



13.3: Government-aided colleges

1. PSG College of Technology, Coimbatore
2. Coimbatore Institute of Technology, Coimbatore
3. Thyagaraja Engineering College, Madurai

In order to join Anna University, Anna University-affiliated colleges, Government engineering colleges, or Government-aided colleges, one has to attend counselling conducted by Directorate of Technical Education, Tamilnadu. Candidates must apply online and indicate their choice of college and course.

13.4: Points to be considered before selecting an engineering course

- If the first choice for engineering studies is Computer Science, the second option is often Electronics and Communication. Before selecting the options for study, one must consider a few things
- Find out about the college of choice by looking at information from the previous year. Pay attention to the specific course of choice and find out the scores of the students who actually got admission in that college and for that course.
- Pay attention to the pass percentage in the previous few years for that specific college and course
- Are there campus interviews held every year for graduating students?
- Check the website of Anna University for information on the pass percentage for the previous five years
- Understand the fee structure for the specific course and also check if the course is recognized by AICTE (All India Council for Technical Education)
- Read through all the information in the Prospectus that is provided along with the application form

To join Engineering by participating in the counselling, please check the website: <https://www.tneaonline.org/>

13.5: Courses in engineering

There are two kinds of engineering courses.

1. Core engineering group
2. Applied engineering group

Core engineering groups

1. Computer science engineering
2. Electronics communication engineering
3. Electrical and electronics engineering
4. Mechanical engineering
5. Civil engineering

Applied engineering groups

1. Biomedical
2. Industrial biotechnology
3. Food processing
4. Ceramics technology
5. Textiles technology
6. Leather technology

Employment opportunities

After taking the GATE exam, one can join public sector companies such as Bharat Heavy Electricals Limited, Indian Space Research Organization, Oil and Natural Gas Corporation, National Thermal Power Corporation, Power Grid Corporation of India, National Telecommunication Institute, Defence Research and Development Organisation, Department of Aeronautics, Ocean (Marine) Department. There are opportunities in organisations like the Central Electronics Limited, Indian Railways, Atomic Energy Commission, Hindustan Aeronautics Limited, and Airports Authority of India.



13.6: Information Technology: An abundance of employment opportunities

Many engineering graduates are in search of a suitable job. Human resource managers often say, we are in search of capable candidates who fulfil our expectations and requirements for the job.

The key to getting a job is to match the qualification, capability of the new graduate with the expectations of the job and organization. Whatever be the field of study in engineering, it is important to understand and learn the connection with Information Technology in that field.

At present, 32% of the jobs are technology related. In the next 5 years, 76% of jobs will be technology related and therefore, this should be kept in mind while studying.

Factories are moving towards manufacturing using automated technology and artificial intelligence. The Internet has taken over in a big way. There are opportunities for graduates who learn and become experts in these areas.

The emerging fields are Artificial Intelligence, Robotics, Machine learning, Data Analytics and Automation. Be it banking or manufacturing, the above-mentioned fields are taking over operations. Therefore, knowledge of digital technology gives one an edge in the jobs market.

In the next five years, India needs 5 lakh professionals in the area of Robotic Processing Automation, but we do not even have 50,000 people. We need computer vision technology professionals but we cannot find the right experts in this field. One can take any field of study in engineering, but developing skills in other areas also enhances the chances of getting a good job.

Participation in counselling to select the course of study

The Directorate of Technical Education, Tamilnadu, conducts a common counselling session. If selected, one can join Engineering colleges in Tamilnadu, choosing core engineering studies such as ECC, EEE, Mechanical Engineering, Civil Engineering or applied engineering courses such as Biomedical, Biotechnology, Food Processing etc.

During counselling, if a candidate produces the first-generation graduate student certificate, the Government will pay the tuition fees of the student. There are other Government scholarships and if a Government College is opted for, there is a tuition fee concession of Rs 30,000.

13.7: Biomedical engineering: Medicine related engineering course

To do research in the medical field, it is not necessary to study in a medical college. Biomedical engineering, Biotechnology and study of sciences like microbiology and biochemistry also help to make a mark in the medical field. If one is interested in both Engineering and Medicine, they can choose Biomedical Engineering.

Those who could not score high in NEET (and thereby could not study Medicine) can opt for Biomedical engineering and still find jobs in the medical field.

Biomedical engineering can be applied in bringing forth changes in healthcare, designing tools for medical treatment, modification of equipment, and designing new tools and equipment that enhance treatment procedures.

13.7.1: Who can study biomedical engineering?

Anyone who has:

- an interest in technology and biology
- an interest in clinical measurements
- an interest in analytical research
- an interest in instrument design and maintenance
- the maturity to work alongside professionals in health and medicine

Anna University and many other colleges offer courses in biomedical engineering and sciences.

Employment opportunities

On completion of Biomedical Engineering, one can get employment in the public sector and multi-national pharmaceutical companies. There is scope for getting jobs in the international space research organization NASA, and World Health Organisation also.

Organizations in India where jobs in the biomedical field are available: Larsen and Toubro, CIPLA, Deloitte Consulting India Private Limited, Stryker Global Technology Centre, Siemens, BPL Health care, Wipro, Phillips healthcare, General Electric Global Research, Texas Instruments Inc.

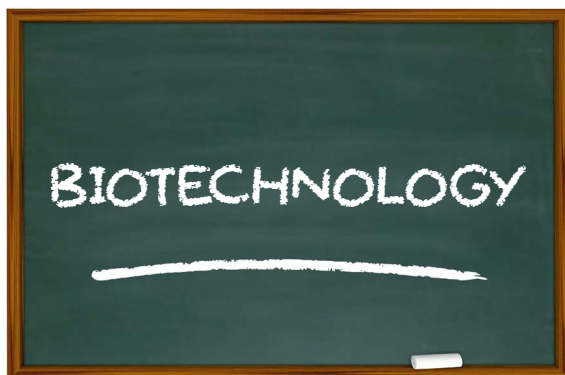
In America, the starting salary for biomedical engineers is \$40,000 annually. For postgraduates, the annual salary is up to \$60,000. In future, there will be an increased demand for medical services and therefore biomedical engineering and sciences will gain more importance in the medical field.



13.8 Biotechnology

Biotechnology has gained importance in the face of emerging diseases such as Covid-19.

We have to rely and trust on biotechnology to find out a solution for such microbiological problems such as Corona and Zika virus.



Major global changes and improvements in agriculture, food production, healthcare, public health and medicine have led to continuous research in biotechnology.

Those who could not get admission in MBBS need not be disappointed. There is another way of being engaged in the medical field. A very important area of medicine is biotechnology and one can still contribute in the medical sector by its study.

What is studied in biotechnology?

In general, the biotechnology course covers the study of medicine and health, and developments in biological research. It also involves research in the spread of microbes and their control. Students should have an interest in research and testing centres and have the ability to keenly observe things and pay attention to detail.

BTech or BSc in Biotechnology?

BTech Biotechnology covers technological aspects and BSc Biotechnology has a scientific approach to the subject. After completing BSc one has to complete MSc Biotechnology. On completing BTech, one can opt for further study, such as MS and move on to research. The BTech course has a higher tuition fee. Financial constraints and affordability should be kept in mind while making a choice between BTech and BSc.

Employment opportunities

On completing a course in Biotechnology one can seek employment in the fields of medicine, agriculture, marine biology, environment, chemistry and control of disease-causing insects and microbial germs.

On completing BTech one can join pharmaceutical companies, healthcare products manufacturers, food processing units, chemicals factories and research centres. These organizations recruit iotechnology graduates.

Students with a degree in biotechnology should be willing to take up further studies such as a MSc/MTech or research studies. Completing higher education and gaining expertise in research gives one an added advantage and possibility of higher salary. Clearing the GATE exam, ensures admission for research in the best educational and research institutions.

Currently, the field of biotechnology is growing rapidly in India. with the concerns arising from the Corona virus, the demand for biotechnologists is much more. Biotechnology is the perfect choice for students who are interested in both biology and engineering.

13.9 Bioinformatics

In the field of biological sciences, there is an increased presence of information technology and therefore bioinformatics is a fast-developing field.

What is bioinformatics?

The field of bioinformatics encompasses the study of information sciences, mathematics, physics, chemistry, medicine, biology and anthropology. The course covers aspects such as collection, compilation and analysis of biological research data, research on action and effect of medicines, formulating new medicines, identification of toxic side effects of medicines, and antidotes to poisonous substances. This is a study that uses information technology to find solutions in the field of biological sciences.

Where can one study bioinformatics?

In Tamilnadu, most of the colleges have an undergraduate course in bioinformatics. The Coimbatore based Tamilnadu Agriculture University offers BTech in Bioinformatics.

Students who study Mathematics, Physics, Chemistry and Biology in their 12th standard are eligible to apply for the undergraduate course. For postgraduation, students must have studied Physics, Chemistry, Biology, and computer science in undergraduate study.





Who can study this course?

Students who have interest in analytical skills can join this course. Protein crystallization, properties of microorganisms and the discovery of molecular design-based pharmaceutical products and cutting-edge research are possible in this field.

Employment opportunities

Bioinformatics offers a wide scope for research. Keen researchers can find employment in IITs and other research institutions such as IISc, TIFR. There are many opportunities in the information technology field in foreign countries also.

For a long time, Indian universities offered only postgraduate courses in bioinformatics under the Department of Biotechnology. Many colleges in Tamilnadu now offer an undergraduate course in bioinformatics.

13.10 food technology

Advances in food production and enhanced employment options in food technology

In the next 15 years, there will be revolutionary changes in food production. There will be huge advancements in agriculture and food technology, thereby increasing job opportunities in this field.



Where to study?

1. Anna University – BTech Food Technology
2. Tamilnadu Agriculture University – BTech Food Technology
3. Veterinary University – BTech Food Technology

One of the premier institutions of the Government of India is the Indian Institute of Food Processing and Technology at Tanjavur, where undergraduate and postgraduate studies are offered in the field of Food Technology.

60 students are admitted for undergraduate study. The candidate must have a minimum of 55% marks in 12th standard (Mathematics, Physics, Chemistry)

and should have cleared the undergraduate joint entrance exam to join this 4-year course. On completion, one can join food research institutes in any part of the world. The starting salary for successful candidates is not less than Rs 50,000 per month.

This is still an emerging field with projections of high level of advancements. Students doing the course now, have a bright future when the field reaches advanced levels of research in food-based technology.

Employment opportunities

Food Corporation of India, the state government's food storage warehouses, food products analysis centres are all possible employment centres for graduates in Food Technology.

13.11: ISRO- Indian Space Research Organisation

Aerospace technology is a very attractive field of employment for interested youngsters. ISRO offers a variety of employment opportunities. It has established the Indian Institute of Space-science and Technology (IIST) close to the Vikram Sarabhai Space Centre in Tiruvananthapuram. Candidates are directly recruited to work in the area of Indian space research.

How to enroll in IIST?

To join here, one needs to have studied Mathematics, Physics and Chemistry in 12th Standard and also pass the joint entrance exam (JEE) conducted by IIT. If a candidate finds a place in the JEE ranking list published by IIT, admission to IIST is easier. Two to three weeks after the declaration of the results, admissions are offered after counselling sessions in Bangalore or Thiruvananthapuram.

What courses are studied in IIST?

The two courses offered are BTech Avionics and BTech Aerospace Engineering. They are 4-year undergraduate studies. The integrated MSc is a five years course. Apart from this, MTech course is also offered.

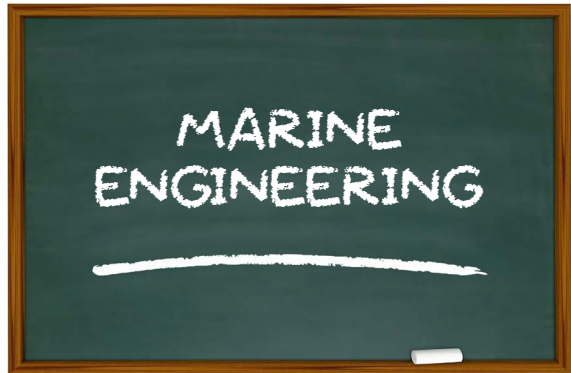
Students who join Indian Institute of Space Science and Technology will have to pay a subsidized nominal fee towards tuition, hostel and food. The research centre is of international standards and the students enjoy a peaceful atmosphere conducive to serious study. After finishing studies here, students have to join ISRO as scientists or engineers.



13.12:

Marine engineering

Marine enthusiasts claim that one cannot find better opportunities and salary than in the shipping and maritime fields. Indian Maritime University at Semmanchery, Chennai, functions under the Ministry of Shipping, Central Government.



This University offers the following courses:

- BSc Nautical Science, BTech Marine Engineering
- BTech Naval Architecture, Ocean Engineering
- BBA (Logistics, Retailing and ECommerce)
- one-year diploma course in Nautical Science
- Diploma holders are eligible for admission in BSc Nautical Science.

For all the above courses (except the Diploma), students must have scored a minimum of 60% in Mathematics, Physics and Chemistry. And they should have scored at least 50% In English. A concession of 5% in marks is given to the reserved community. For diploma studies and BSc Ship Building and Repair, a minimum of 50% marks is required in Mathematics, Physics, Chemistry and English.

To join the above-mentioned courses, candidates must appear for the common entrance test (CET) conducted online by the Indian Maritime University.

Employment opportunities

Indian and foreign shipping companies offer jobs to qualified candidates. Harbours and imports – export businesses within the harbour are also potential employment providers.

For further details about marine studies : <https://www.IMU.edu.in>

Courses in Marine Engineering

1. BTech Marine Engineering - 4 years
2. BTech Naval Architecture Ocean Engineering - 4 years
3. BSc Nautical Science - 3 years
4. BBA Logistics, Retailing and ECommerce - 3 years
5. Diploma in Nautical Science leading to BSc (Applied Nautical Science) - 1 year
6. BSc (Ship Building and Repair) - 3 years

13.13:

Plastic technology

The Central Institute of Plastic Engineering and Technology (CIPET) at Guindy, Chennai, is a self-governed educational institution under the Central Ministry of Chemicals and Fertilizers. One can study plastic technology with Government aid in this institution. 4-year undergraduate BE/BTech degree and certificate courses of one or two years duration are offered here. Interested candidates must participate in the engineering counselling, in order to join the four-year undergraduate course.



For further information <https://www.cipet.gov.in/aboutus/index.php>

Central Leather Research Institute (CLRI)

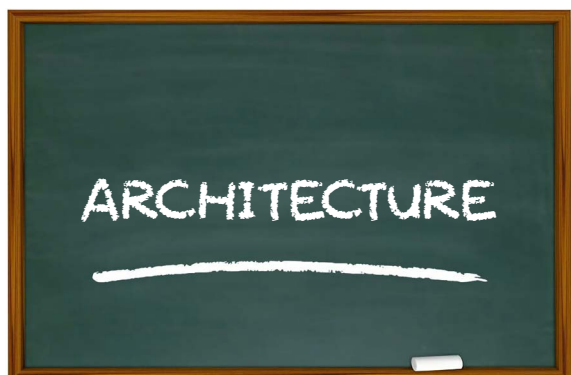
Central Leather Research Institute is one of the premier educational institutions situated in Adyar, Chennai, recognized as one of the best leather research institutes in the world. This research centre has divisional offices in Kolkata, Kanpur, Jalandhar, Ahmedabad and Mumbai. To join BTech Leather Technology course, one has to be successful in the counselling conducted by the Directorate of Technical Education.

For further details: www.clri.org

13.14:

ARCHITECTURE

Architecture is a good option for those interested in building design. Many engineering colleges are now including courses in architecture and that conveys the importance gained by the course and the demand for it by students.





Who can join the Course?

Students who have studied Mathematics in 12th standard (from any group) can join the BA arch degree course. It is a five years course about buildings and construction design. After finishing 12th standard or even before, students can take the national level ability test conducted by the Council for Architecture.

For more information about National Aptitude Test for Architecture (NATA) please visit <http://www.nata.in/>

How is the entrance test conducted?

The National Aptitude Test for Architecture has 200 Marks. To be eligible, a candidate has to score 80 marks. 50% of the 80 marks and another 50%, marks from 12th standard Marks are taken together and counselling is conducted for admission to the course.

In the entrance test, along with general knowledge questions, objective type questions covering the history of architecture comprise one paper. The second paper is designed to assess students ability in drawing and ability for imagination/visualization.

What is studied in architecture courses?

In BA arch course, city planning, building construction, interior design, landscape design, 3D Visualisation, Project Management, Environment design and many more subjects are taught.

Employment opportunities

At present, the central Government is implementing the scheme of Houses for All by 2023. This provides tremendous employment opportunities in the fields of construction and architecture.

After graduation, working for a few years with an architectural firm will give the experience needed to start a lucrative independent business in architecture.

Construction and civil work departments of public sector units, defence, railways, Banking and urban development authorities of state governments offer employment opportunities for qualified architects.

14



In the past few years, there is a renewed interest in arts and science. At present, students get admission in engineering colleges easily, but there is a tough competition to join arts and science colleges. When compared with professional courses, arts and science education is less expensive. Arts and science graduates are also able to get employment in computer and information technology areas. Arts colleges have also introduced many subjects for a BSc degree course. The following is a compilation of employment oriented courses and sources of employment for those graduates.

14.1: BSc Computer Science and BCA

BSc Computer Science has been a favourite course for the past 25 years. On seeing the interest and demand for BSc Computer Science, many colleges have introduced the BCA (Bachelor of Computer Applications) course. Both these courses are offered by govt colleges and govt-aided colleges, so students can study with reduced expenses. Students who study Mathematics in 12th standard can join BSc computer science/BCA course. Schools have also introduced computer classes and therefore it is easy to study.

BCA or BSc Computer Science? Which course should I choose?

In BSc Computer Science, computer software, computer hardware and computer operating systems are studied in detail. The BCA course covers the basics of computers along with programming, data management, applications and project management.



What should one do to get employment?

Students who study BSc Computer science can learn and obtain certification in Computer Networking to gain specialisation and increase their eligibility to get jobs.

While studying BCA, if the students study and complete diploma courses in Automation and Data Analytics, they have a better chance of getting good jobs as soon as they graduate. The above diploma courses can be studied free of cost.

After completing BCA, one can opt to study a two-year MCA course. Earlier, BSc graduates had to study for three years to get the MCA degree. Now, the All India Council for Technical Education (AICTE), has changed the rule and BSc graduates can complete the MCA course in two years.

Automation and Data Analytics have great employment opportunities. The above Diploma courses can be studied free of cost. The Central Ministry of Education has brought the IITs together to offer many Diploma courses free of cost.

For further information -

<https://onlinecourses.nptel.ac.in/>

<https://onlinedegree.iitm.ac.in/>

14.2: Statistics

Every ten years, there is a census to record the population in all villages, Panchayat unions and districts. All this data is collated and valuable information about the population in each area is provided by the Department of Statistics.



Knowledge of Mathematics and Logic are the key strengths needed to be successful in the field of statistics.

Generally, only students who have studied Mathematics in 12th standard will choose to study statistics. But commerce students can also take up statistics. Government and Government-aided colleges offer undergraduate courses in Statistics.

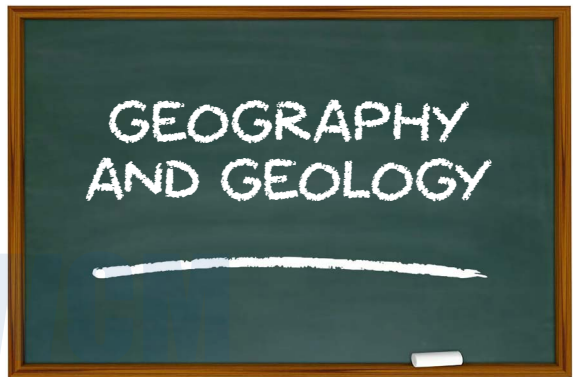
Employment opportunities

Graduates in statistics have plenty of job opportunities not only in India but also in foreign countries. At present, the field of Data Science is fast developing. Therefore, graduates in statistics have more opportunities especially in the areas of data mining, data warehousing and in the areas of finance. Statistics graduates can seek employment with the government also. Clearing the Civil Service Exams or exams conducted by the Indian Statistical Institute and Indian Economic Service Examination leads to a successful career with positions of greater responsibility in government departments.

14.3:

Geography and Geology

In school, after lessons in Mathematics and languages, Social Studies and environmental studies hold the next important place. The basis of environmental studies is Geography.



What is taught?

The subject covers topics such as the different kinds of environment, the formation of earth, change of weather, finding underground resources, judging its age (Period) etc. Students interested in Geography can join courses in Geology.

In Tamilnadu, most of the Arts Colleges have Geology studies. Graduate students can complete postgraduate studies in Geology, Applied Geology, Earth Science, Geophysics, Marine geology, Environmental science, and Environmental geology. They can select any one course from this group and become an expert in that field. Further, remote sensing, natural disaster, city planning, Geo Informatics and Environmental management are other areas for specialisation.

Employment opportunities

Tamilnadu Government Employment Commission conducts tests for selection in the Departments of Geology and Public works. Similarly, tests are conducted by the Geological Survey of India, Central Underground Water Board, Indian



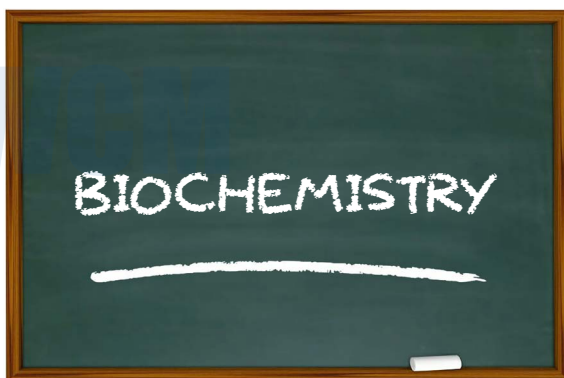
Oil, ONGC, Indian Space Research Organisation (ISRO), National Remote Sensing Centre at Hyderabad, National Remote Sensing Centre (NRSC), National Information and Communication Centre, Indian Meteorological Centre, Department of Environment, Urban Development Authority, and Environmental Research organizations for employing graduates in Geology.

Oil and Natural gas companies, Shell, Reliance, British Gas and many such private oil organisations are great sources of employment for Geology graduates. National Thermal Power Corporation (NTPC), Coal, Iron and steel factories, Department of Water and Land resources, Ministry of Mines, are other government sectors for employment.

Many countries are interested in their underground resources and therefore, graduates in Geology have job opportunities in foreign countries also. If interested in what happens under the surface of the earth and you decide to study Geology, you will have a bright career.

14.4: Biochemistry

Once upon a time, private colleges competed with each other to offer Biochemistry! Later, Government colleges also started offering this course. Now, the Biochemistry course offered by private self-financed colleges is just for the record.



This is because of the Government notification that a BSc in Biochemistry is the same as a BSc in Chemistry

Guaranteed jobs in private sector

Some universities mention that the MSc Biochemistry degree is equal to MSc Chemistry. This is advantageous to postgraduates who wish to join Government schools as PG teachers. Biochemistry graduates interested in research have excellent employment opportunities in the private sector, especially in research institutions.

Who can study biochemistry?

Biochemistry is a combination of biology and chemistry. Students who can appreciate the association between chemistry and biology are perfect candidates to study Biochemistry.

12th standard students who have taken the pure science group (Physics, Chemistry, Biology or Botany/ Zoology) or Mathematics group (Mathematics, Physics, Chemistry) are eligible to apply for BSc Biochemistry.

Employment Opportunities

Graduates in biochemistry have job opportunities in research in private and Government sectors in the areas of Agriculture, Public Health, Forensic Science and Environmental science. Biochemistry graduates are also required in manufacture of surgical instruments, biotechnology research organisations, food and beverage processing units, pharmaceuticals, chemicals production and cosmetic industries.

Biochemistry graduates are required in large numbers in the food processing industry.

14.5: Microbiology

There are many who look for courses that offer scope for higher study as well as the option of a job on graduation. Microbiology is the perfect choice for such students.



Who can study microbiology?

- Students who studied Biology/ Botany/Zoology in 12th standard
- Students who have the ability to approach matters from the angle of research and the ability to pay attention to minute details.

Microbiologists can get jobs in local diagnostic centres and also as healthcare scientists in multinational companies

Where to study microbiology?

Government and Government-aided colleges offer BSc Microbiology course.

Areas of specialisation

Students who do the undergraduate course in microbiology can specialise in biochemistry, bioinformatics, bio technology, environmental microbiology,



genetics, medical microbiology, molecular biology. At present, 40% of those who study BSc Microbiology get jobs immediately on completion of study. 46% choose to go for higher studies in the field.

Employment opportunities

The Central and State Governments in India have established centres and laboratories for standardization and quality certification of goods. These centres are a good source of employment for graduates of Microbiology. The areas of medicine and food production/processing are growing rapidly and microbiologists are essential for these industries.

Postgraduates in Microbiology can find employment in the government and private sectors as Biomedical scientist, Biotechnologist, Clinical Research Associate, Food Technologist, Healthcare Scientist, Medical Chemist, Microbiologist, Nanotechnologist, Pharmacologist, Environmental Scientist, Environmental Engineer, Forensic Scientist, and Marine Researcher.



Microbiologists can get jobs in local diagnostic centres and also as healthcare scientists in multinational companies.



14.6: Food and Nutrition

There is an increased awareness among people about food and therefore food science and food technology are gaining importance.

What are the courses available?

Food Science and Nutrition, Food Service Management, Clinical Nutrition are some of the courses available in many colleges. Some engineering colleges offer courses in Food Technology, Food Science and Technology, Food Technology and Management, Food Processing Engineering, Dairy Technology and Management, Agriculture and Food Engineering.



What is taught?

Food Science and Nutrition is a study about food, the nutrition in food,

logistics involved in the movement of food, the role of nutrition in general medicine, and food supplements used in treatment of health conditions. The Food Technology course, studies the role of chemistry and microbiology in food processing. Studies show that there is a direct



correlation between food and medicine and therefore to succeed in this field one needs to develop one's language and communication skills and also develop one's knowledge in the nutritional aspects of food.

To join a food science course, one should have studied Physics, Chemistry and Biology. Students who have studied Mathematics, Physics and Chemistry are eligible to join BE/BTech courses.

Employment opportunities

On qualifying in Food and Nutrition one can get a job in the Departments of Health, Social welfare, Food and Public Distribution and Sports. One can also get the job of Nutrition Adviser or Planning Director in the Health and Welfare Department. Nutrition advisors are also required in institutions that provide treatment for diabetes.

There are Job opportunities in the area of 'Women and Child' under the Department of Social Welfare. The Central government has implemented the nutritious meal scheme to provide nutritious food for all. The Central Staff Selection Commission conducts tests to select suitable candidates for the Food and Nutrition Board (FNB). NGOs in India, funded by the above-mentioned departments are also suitable sources of employment.

Food and Nutrition specialists get employed in private hospitals with a good salary in the area of Food and Nutrition management.

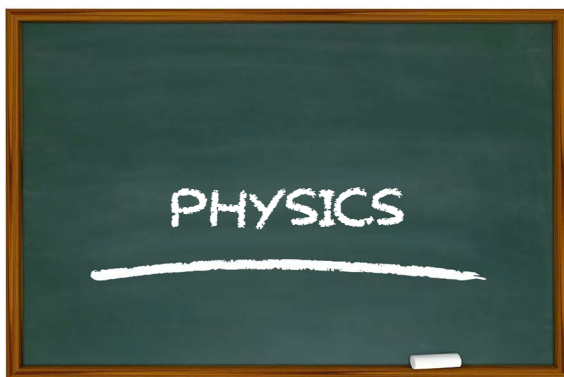
Food processing units and processed food manufacturers like Amul, Britannia, Nestle, ITC, Parle, Hindustan Unilever, Godrej require food analysts, food production managers, supervisors, market researchers, research and planning managers, and quality control specialists.



14.7: Physics

Who can choose to study Physics?

Students who choose Physics as a subject must have a natural interest and attraction for it. They should have an analytical mind and must be curious to know the what and why of things. How does the air flow? Why does ice melt? Why do things happen in nature? Physics provides the answers to satisfy the curiosity of people who want to know about these things.



Employment opportunities

A Physics graduate can join as Junior Research Assistant (JRA) in Bhabha Atomic Research Centre, Defence Research and Development Organisation (DRDO), ISRO, National Thermal Power Corporation, Oil and Natural Gas Corporation, and Bharat Heavy Electricals Limited.

Opportunities for higher studies

There are a number of special fields like, Astrophysics, Astronomy, Biophysics, Fluid physics, Molecular physics, Nuclear physics, Optical physics, Geophysics, Space science, Nanotechnology, Material science and Meteorology. Studies in Nuclear physics, Theoretical physics and Biophysics are offered by University of Madras, Chennai.

The Indian Institute of Mathematical Sciences (IIMS.) offers courses in mathematical sciences and theoretical physics. On completion one can find jobs in the areas of computation and in big research centres. Students who study Biophysics can secure jobs in medical research areas. In Anna University, one can study Medical Physics and Material Sciences. Medical Physics can get one a job in a hospital as a Radio Safety Officer, while graduates in Material Sciences can pursue research in the National Research Laboratories. Those completing MSc Nuclear physics can get jobs in the field of Atomic Energy.

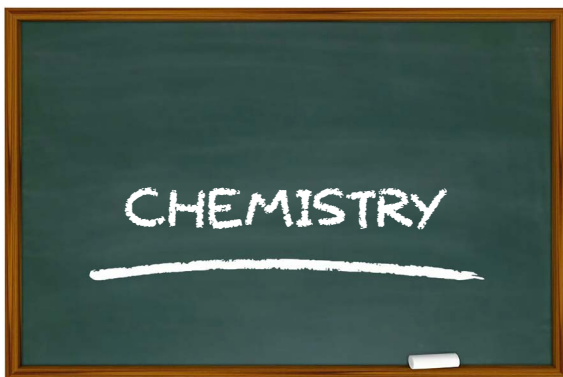


In Government and Government-aided colleges, the fee for BSc Physics is only Rs. 1800. Therefore, choose a good college to study this course.



14.8: Chemistry

Chemistry provides answers to these questions: What is present inside this material? What are the basic materials from which everything is made? What are the basic components needed to make something? Students having this kind of a curiosity can join courses in Chemistry.



What is taught?

There are three basic areas of study in chemistry:

- Organic chemistry – molecular structure of living things
- Inorganic Chemistry – study of molecular structure of non-living substances
- Physical chemistry – study of physical properties and chemical structure of substances and changes

Opportunities for higher studies

On completion of BSc Chemistry, one can pursue higher studies in Analytical chemistry, Biochemistry, Inorganic chemistry, Materials chemistry, Nuclear chemistry, Organic chemistry, Physical chemistry, Theoretical chemistry, and also Chemical Engineering and Pharmaceutical chemistry and Biochemistry. One can also get expertise in areas such as Polymer, Energy, Material Science and Nanoscience. For postgraduate study in Chemistry, one must choose a good university. The options are the Indian Institute of Science, IITs, NITs, University of Madras, Chennai. Apart from this, in all the universities, one can study and complete post-graduation and research programs in Chemistry.

Employment Opportunities

Graduates in Chemistry, can apply for the post of Scientific Assistant in government and private organisations. Jobs are also available in areas of Pharmaceuticals, Petroleum and Nuclear sciences, Chemical and Environmental research centres.

Higher studies with scholarships

After post-graduation, if one is interested in research, Central Government gives

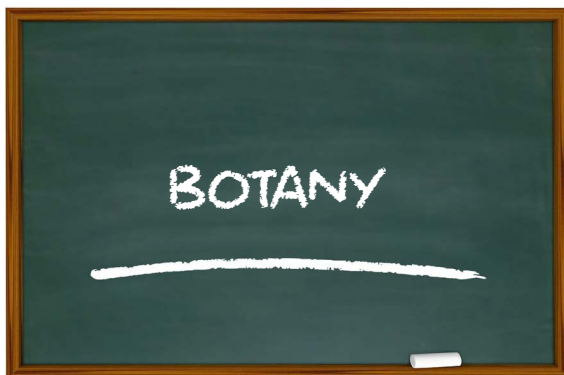


scholarships for research. For the first three years, the student gets Rs. 5000 per month as stipend. For the latter two years, an education stipend of Rs. 7000 is given. The MS by research course is offered by Central Government educational Institutions like Indian Institute of Science Education and Research (IISER)

For further information: <http://www.iiseradmission.in/>

14.9: Botany

BSc Botany is an option after 12th standard. Human life is tightly intertwined with plants and we get our life's needs like air, food, clothes and shelter from plants.



Who can study?

If you have an interest in any one of these branches such as nature, genetics, arrangement of plants in groups (taxonomy), protection of the natural environment, genetic modification, then you can study Botany.

Specialisations in Botany

Specialisation at level undergraduate study are available in the fields of Plant science, Plant biology, Plant biotechnology and HerBA I science

Higher studies, such as MSc Botany or Plant Science or Applied Plant Science, can be undertaken after three years of undergraduate study. Indian Institutes of Technology and Indian Institute of Science offer postgraduate courses in Biotechnology, BioInformatics, Biochemistry and Microbiology.

Employment opportunities

Herbal science is a fast-developing area. There are more than 700 manufacturing units that make herbal products for domestic consumption and exports. Botany graduates are required in these organizations.

Botany graduates can also join the Indian Forest Service by writing the UPSC exam. Unfortunately many are not aware of this information.

14.10: Zoology

Zoology is the forerunner of biology and biotechnology.

Who can study Zoology?

This field is the best for those who have a love for and interest in welfare of all living creatures. It is good for those who have drawing skills and an interest in a disciplined approach to research.



What is taught?

The course would cover the study of animal kingdom spread all over the world, their uses and strategies for their protection. Now-a-days, the study also includes environment, pharmacology, entomology and insect-plant interaction.

Employment Opportunities

One can apply for jobs at the Zoological Survey of India (Headquarters in Kolkata). This government organization has 15 regional offices spread all over the country. Two are in Tamilnadu and there is a large requirement for field study officers. Museums, zoological parks and national parks are other Government institutions where one can apply.

The Biodiversity Authority of India (headquarters in Chennai) needs graduates in Zoology and Botany. Graduates in Zoology also study allied subjects like Botany and Chemistry and therefore they can also get jobs in the areas of food processing, agriculture, dairy farming, poultry and horticulture.

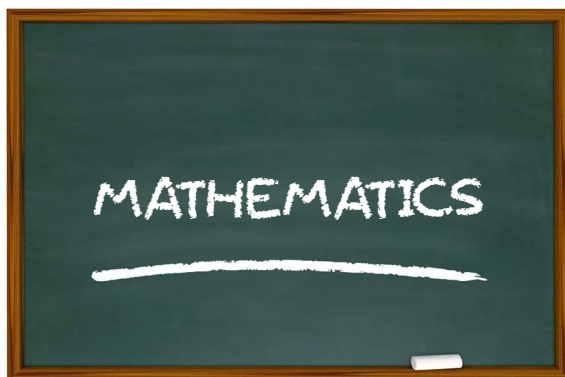
Options for higher studies

BSc Zoology students can pursue postgraduation and research in the Indian Institute of Science, Bangalore. Biotechnology, bioinformatics, human genetics, endocrinology, applied genetics, and microbiology are the areas for study. All these courses are offered by University of Madras, Chennai.



14.11: MATHEMATICS

After engineering, the course that offers good employability with lesser educational expenses is Mathematics. Graduates in mathematics can also find jobs in the field of Information Technology.



Who can study?

Mathematics is highly technical. Take up this study if you have a technical brain and a love for mathematics. BSc Mathematics is offered by all Government and Government-aided colleges. The fee is nominal.

Employment opportunities

After completing MSc and PhD, one can join the teaching profession. ISRO, Defence Research and Development organization (DRDO) and National Aeronautical Laboratory (NAL) are other organizations that employ graduates in Mathematics. The study of mathematics helps you in competitive recruitment exams like those conducted by public sector banks. Mathematics graduates can also enter the field of information technology.

Where to study?

One can study Mathematics in Indian Institute of Science Education and Research (IISER) at Pune, Mohali, Kolkata, Tiruvananthapuram, Bhopal, Tirupati and Bhubaneswar. One can also join the Central Universities to do the 5-year integrated courses. At the Chennai Mathematical Institute, Siruseri, Chennai, students of BSc Mathematics get a monthly stipend while studying.

Postgraduate studies are available in the following institutes:

- Institute of Mathematical Sciences, Taramani, Chennai
- Tata Institute of Fundamental research (TIFR), Mumbai
- Harishchandra Research Institute, Allahabad (A stipend is provided by this institution)

For more information about Chennai Mathematical Institute.

<https://www.cmi.ac.in/admissions/>

For more information about Institute of Mathematics, Chennai at

<https://www.imsc.res.in/>

15



15.1: BCom and BBA

What is taught in BCom and BBA?

Students who study Arts group (Commerce, Economics, History) in 12th standard, generally opt for BCom. Many colleges have created various options of specialised study. The subjects studied in BCom are Accounting, Marketing, Auditing, Taxation, Management Accounting, Financial Accounting and Business law.

Specialisation in BCom

1. BCom (Computer Science)
2. BCom (CA)
3. BCom (Information technology)
4. BCom (Banking)
5. BCom (Marketing)
6. BCom (Financial management)
7. BCom (Advertising)



Currently, each bank conducts its own test for recruitment. Sometimes a group of banks conduct a joint test and after counselling, candidates are selected. One can start preparing for bank examinations even while studying in the first year itself.





Employment opportunities

BCom (General) is sufficient for seeking Government jobs. Tamilnadu Government Staff selection Commission for jobs in Government departments treats specialized BCom as equivalent to BCom (General).

For BCom graduates, there are job opportunities in Auditing, Information Technology, BPO, KPO and banking sector.

There are plenty of employment opportunities for commerce graduates in the banking, insurance, finance, and commerce sectors.

Additional qualification in Data analytics, Financial accounting, Software studies (Tally) lead to better opportunities in IT and banking sectors.

While studying BCom one can learn all technical terms and business terms used in banks. This helps while seeking jobs in international firms, public and private sectors in the areas of accounting and finance.

15.2: Chartered Accountant (CA)

Study CA with a stipend

Chartered accountancy (CA) is a professional course. The total educational expense to study CA would be within Rs. 50,000/-. CA students also get a stipend every month.



There are no rules/conditions to join CA.

There is no age limit to join the CA course. Anyone who has completed 12th standard can join this course irrespective of the marks obtained.

When to register: There is an entrance exam to join CA. It is conducted in June and November. Those who have cleared 10th standard can register for the entrance exam. When you register for the entrance exam, you are provided the necessary books.

Essential training in an auditor's office: Students who have cleared at least 1 group in the Intermediate level should join an auditor's firm for a period of 3 ½ for practical training also called Articleship. They must also complete 100

hours of computer training.

When one can appear for the Intermediate exam: One can appear after 18 months of Articleship with an Auditor's firm. After clearing this exam one can appear for the Final Exams after completing 2 ½ years of Articleship. One has to also attend the Management classes conducted by the Institute of Chartered Accountants before appearing for the Finals.

If one qualifies as a CA in 4 years, one can earn more than a software engineer.

For more information about CA and exams:
Institute of Chartered Accountants of India
122, Mahatma Gandhi Road, PO Box Num 3314
Nungambakkam, Chennai 600 034 Ph : 044 - 3989 3989, 3021 0300
<https://sirc-icai.org/>

15.3: Cost and Works Accountant

A Cost and Works Accountant comes a close second to a Chartered Accountant.

What is taught?

What is the cost of production in a factory? How to determine the price of that product based on the cost of production? How to manage a factory successfully? All the above are taught in this course.

Who can apply?

There is no age limit to join the course. Anyone who has completed 12th standard can join this course irrespective of the marks obtained. The entrance examination is conducted in June and December.

Graduates from any field of study can directly apply for the Inter exam. The total study period is three and a half years.



Employment opportunities

On successful completion of Inter and final examinations, multinational finance companies, banks, heavy investment industries are sources of employment.

**Where to Apply**

One can apply online to The ICWAI Regional Office, at Egmore, Chennai
ICWAI, Chennai

CMA BHAVAN, 4 Montieth Lane, Egmore, Chennai 600.008
Ph.044 28554443, 28554326 Website: <http://sircoficmai.in/>

15.4: Company Secretaryship

Become a Company Secretary to advise companies.

Companies with equity investment of more than Rs 10 crores and companies listed in the stock exchange must appoint a company secretary who is registered with the Institute of Company Secretaries of India. This is a mandatory requirement.



Those who wish to become a Company Secretary can apply after completing 12th standard irrespective of the marks scored or field of study. There is no age limit.

After registering for the Foundation Course and entrance exam has to be taken within eight months.

The next step is the Executive Programme, and on clearing this exam, the Professional Programme exam has to be written. On successful completion of the Executive Exam or soon after writing the Professional Programme test, one has to get trained in an approved firm. During this training a stipend ranging from Rs 5000 to Rs 12,000 could be given.

Institute of Company Secretaries of India

Southern India Regional Council

ICSI SIRC House No 9 WheatCrofts Road. Nungambakkam Chennai 600034

Email: SIRO@icsi.edu

Phone: 044 28279898/28268685

Website: <https://www.icsi.edu/siro/home/>

16



IWCM

A BA degree is a suitable choice for seeking employment with the Government.

People might not respond with enthusiasm when someone says they are pursuing a BA. However, if a careful choice is made and you select an appropriate course, you can end up with a very successful career.

A degree is neither competitive nor expensive. Students who join government colleges can complete their studies by paying a fee of Rs. 10,000 for the full course of three years.

Who can choose an Arts group?

Students with an interest in languages, literature, history, economics and politics can pursue a course in arts.

What are the courses available?

A Bachelor of Arts degree can be in any one of the following subjects: Tamil Literature, English Literature, Economics, Political Science, Sociology, Psychology, Archaeology, Geography, Geology and Social work.



Employment Opportunities:

Recruitment for Central Government departments, banks, Border security, defence services, police, railways etc., is done through competitive exams. Graduates in Arts are eligible to appear for these exams.

Students are advised to prepare well for the exams by practice and taking mock tests even while undergoing their undergraduate study.

Opportunities for higher studies

There are many options in higher studies for Arts graduates. For example, they are eligible to even appear for the Indian Institute of Management exams and join their postgraduate courses leading the way for employment at managerial level. Arts graduates can also complete the BEd course and take up teaching.

For further information

<https://www.iima.ac.in/web/pgp/apply/>

<http://hsee.iitm.ac.in/>

Institutions for higher studies

To specialize in languages, the Central Institute of Indian Languages, Mysore is the best place for it.

<https://www.ciil.org/default.aspx>

To do a Masters degree in English or any other foreign language, the English and Foreign Languages University in Hyderabad is a good choice.

<https://www.efluniversity.ac.in/>

For further study in Economics the Madras School of Economics, Chennai is a good choice. <https://www.mse.ac.in/>

The Central University of Tamilnadu at Tiruvarur offers under-graduate courses also: <https://cutn.ac.in>

Students interested in mass communication and media can study for BA Journalism and Mass Communication studies. Courses in Graphics Design are also available.

What matters most is what you want to do after your BA degree. It is important to be clear about the area of specialization so that you can pursue your interests and succeed in your career.



16.1: Economics and Econometrics

Many people may not be impressed by a BA Economics degree. The study of economics will provide good employment because Economics plays a significant role in agriculture, banking and in every business activity.

Who can study economics?

The ability to predict based on analysis and the skill of written communication are essential strengths to become an expert in Economics. All Government colleges offer undergraduate courses in Economics. Some educational institutions offer an integrated five-year postgraduate degree course in Econometrics.

Employment opportunities:

On successful completion of BA Economics, one can aspire to become an Economist, Financial Risk Analyst, Data Analyst, Financial Planner, Researcher, Financial Advisor, Risk Analyst in the insurance sector in both public and private institutions.

On passing the Indian Economic service and Indian Statistical service exams, one can join Niti Aayog and other Central thinktanks and ministries and Grade B positions in the Reserve Bank,

Employment opportunities in Econometrics

Econometrics is a very important part of Economics. Students can specialise in the areas of data analytics tools, economics research and data analytics for problem solving. Postgraduates in Economics and Econometrics have better prospects. They can seek employment in various divisions of the United Nations and Information Technology companies. Multinational companies require experts in these fields.



16.2: Social Work

Social welfare programs initiated by the UN, Central and State governments are often not successful because the benefits do not reach the intended recipients at the grassroots level. Developmental activities towards eradication of poverty and economic disparities and basic healthcare, are the main focus of many non-Government/ voluntary/ charity organisations.



In India, there are more than 32 lakhs of registered NGOs and voluntary/ charity organisations.

Such organisations employ graduates in social-work. There was a time when people would ask “Does one need any degree to do social work?”. Today, only graduates in Social-work are eligible to apply for jobs in this area.

The Madras School of Social Work is a premier institution In Chennai. The institute offers a degree Bachelor of Social Work.

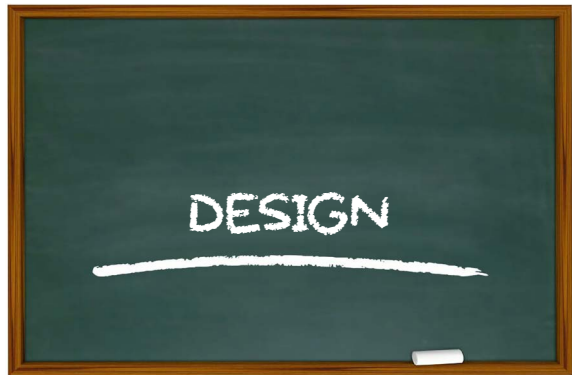
For further information - <https://mssw.in/b-s-w-self-finance/>

Employment opportunities:

Social welfare organisations, NGOs and companies that have a Corporate Social Responsibility (CSR) unit employ graduates in Social work. It is a respectable position and one gets to serve the society.

16.2: Design

Art and skill contribute to design. We generally prefer to buy well designed homes, household objects, décor and clothes. Badly designed products are rejected. Design is the magic wand that persuades people to buy. The study of design finds application in many industries. Every industry has formulated its own design curriculum according to its specific requirement. Interior design, fashion design, graphic design, games design, audio-visual design, textile design and communication are the many special areas in the study of design.



In general, the undergraduate degree course is only for three years but, however, undergraduate courses in design extend to 4 years. Students from any group in 12th standard and less than 20 years of age are eligible to apply for the course if they are interested in design.

In India, only a few educational institutions offer an undergraduate course in design. National Institute of Design at Ahmedabad (NID) is recognized internationally as a premier institute for the study of Design. One has to take a separate entrance test to join this institute: National Entrance Examination for Design (NEED). This exam is usually advertised in newspapers around September/ October in newspapers. The entrance examination is conducted every year in the month of January.

For further information :

https://www.nid.edu/study_at_nid/admission-process/detail

Fashion Technology

Clothing is the reflection of a civilized society. Designing apparel is the main study in Fashion Technology. Students with robust imagination and creativity will succeed in this field. National Institute of Fashion Technology (NIFT) under the ministry of Textiles, Government of India, has more than 20 branches all over the country and offers courses in Fashion Technology. NIFT Chennai is located in Taramani and has a separate entrance test for admission.

For more information: <https://nift.ac.in/admission>



Engineering design

Engineering design can be studied at the Indian Institute of Information Technology, Design and Manufacturing at Vandalur, Kancheepuram. To get admission here the IIT JEE has to be cleared.

For more information: <https://www.iiitdm.ac.in/>

For technology design studies, the course offered by IIT Mumbai is appropriate and for this, there is a separate entrance test.

For more information: <http://www.idc.iitb.ac.in>

16.3: Fine Arts

A BA in Fine Arts comprises many subjects such as painting, sculpture, music, dance, photography. The most famous and oldest art institution in Chennai is the Government College of Fine Arts in Chennai which offers a Bachelor in Fine Arts (BFA).



The Government Arts College in Egmore, Chennai is one of the oldest institutions in India. A 4-year degree course in various specializations are offered here.

<https://artandculture.tn.gov.in/fine-arts-college-chennai>

- BFA Industrial Design in Ceramics
- BFA Industrial Design in Textiles
- BFA Visual Communication Design
- BFA Painting
- BFA Sculpture
- BFA Print Making
- BFA Traditional sculpture
- BFA Traditional Drawing and Painting
- BFA Traditional Architecture

There is a Government Arts College in Kumbakonam and a College for Sculpture in Mamallapuram.

For more information:
<https://artandculture.tn.gov.in/>

16.5: Physical Education

Courses in Physical Education and Yoga are offered by the Tamilnadu Physical Education and Sports University.

More information at: <https://www.tnpesu.org/>

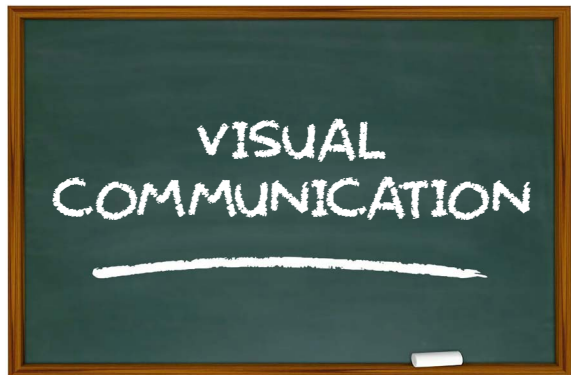
The YMCA College, Nandanam, Chennai, offers full-time and part time courses. They have one-year postgraduate diploma course in yoga, tennis, cricket, swimming, football, hockey, basketball, etc.

More information at:
<http://www.ymcacollege.ac.in/courses-offered.aspx>

16.6:

VISUAL COMMUNICATION

Studying visual communication helps one to succeed in the media. Visual communication is a popular course among students. At present most of the Government and Government-aided colleges have visual communication courses.



Who can study visual communication?

Visual communication is a creative field and therefore it is important to learn more about it before deciding to pursue studies in this area. Cinema, television, news channels, advertisements and online communication are some of the areas in visual communication. One should also obtain a clear understanding of which media is used for what purpose and to communicate with what type of audience.



Students are advised to do their research and find out the best visual communication methods and gain confidence and develop their own abilities in this field.

Selection of college

Before applying for a course in Visual Communication,

- find out if the college has experienced faculty and the infrastructure needed for the course
- contact students who have already graduated and get details of their employment and that will give you an idea about your own career prospects.

Employment opportunities

It is generally believed that studying visual communication will lead to a career in the film industry. However, options for employment are not just limited to the field of films. Some other fields include:

- Television: direction, editing, programme coordination, management of lights, sound recording and programme production
- Advertising: Director, creative head and animation
- Newspapers and magazines: Photographer, creative head

Specialisation in 2D and 3D editing helps when applying for a job in animation and editing.

16.7: Journalism

Everyone has a mobile phone today. The moment anything happens in any corner of the country or world, one gets to know about it almost instantly.

How does media work?

News is constantly and continuously available through online media, television or daily newspapers.



What is taught in journalism?

Presentation of news is an art . This is what is taught in journalism courses. All these years, the study of journalism was limited to postgraduate courses, diploma courses and certificate courses offered by a few universities. Now, many colleges offer an undergraduate course in journalism. Students who have completed 12th standard (in any group) can join this course.

Employment opportunities

After completing this course, one can join a newspaper or magazine, TV news channels and FM radio channels. Those with a keen interest can create their own YouTube channel and present programmes of various genres for different types of audience. Interest and enthusiasm will lead you to success in this field.

16.8: English Literature

Graduates in English are required in several sectors.

How to prepare for a job

During the three-year undergraduate study, students should aim to improve their knowledge of the English language and develop fluency in spoken and written English. This effort will help in getting best opportunities with excellent salary. The course fee for English literature is much less than the fee for other courses and that is another advantage.

Other Opportunities:

After studying BA English, one can,

- Study for MA English. While studying, the NET exam can be taken if interested in becoming a Lecturer or Researcher.
- Do a course in Journalism and get a job in magazines/ journals and electronic media.
- Do MBA with specialization in hospitality, hospital or logistics management, travel and tourism, fashion and design and get a managerial positions in the respective fields.





- Pass the civil service exams and become a civil servant.
- Pass the bank recruitment exams and become a bank officer.
- Complete BEd course and become a teacher.
- Study law and pursue a career in the legal field.
- Complete a course in social work get a job with NGOs and voluntary organizations.

Employment opportunities

There was a time when people believed that the only job opportunities for graduates in English Literature are as teachers or lecturers. Currently there are many jobs such as translator, content editor, journalist and other jobs in corporate sector.

The information technology sector provides handsome salaries to technical writers.

Other areas include research, publications, print media, public relations, human resources and with commercial and multinational information technology firms. The fast developing field of hospitality, travel and tourism, and health industry are all excellent sources of employment for English graduates.

17



Study law to become a legal expert.

Law is a professional course and the study of law enables a person to become an Advocate or Legal Adviser in the corporate sector. The general practice is to get a LLB, become a lawyer and practice in a court of Law. Today advocates are also appointed as Legal Advisers in the corporate sector. Banks, insurance companies, factories and private companies have created positions for legal professionals.

Where to study?

Dr Ambedkar Law University complex at Chennai has an excellent law college where 5year integrated courses BA-LLB, BBA-LLB and BCom-LLB are offered.

Eligibility to join the above courses

- Should have cleared 12th standard examination (in any group) to apply for BA-LLB
- Should have studied computer science in 12th standard to apply for BBA-LLB
- Should have studied commerce in 12th standard to apply for BCom-LLB



Who can apply?

Students in general category who have passed +2 in their first attempt, with a minimum of 45% (excluding the marks in language), can join the 5-year integrated courses offered by the Government law colleges. Reserved category students need to have scored 40% (excluding the marks in language) to qualify. There is no age limit to apply.

To join a prestigious law college one should score an aggregate of 70% in all subjects in 12th standard. Persons belonging to reserved category should have scored a minimum of 60%.

Law colleges in Tamilnadu

Law colleges in Chennai, Chengalpet, Kovai, Madurai, Tiruchi, Tirunelveli, Vizhupuram, Dharmapuri and Ramanathapuram offer a five-year integrated degree course in BA-LLB.

National Law Universities

The National Law Universities play a major role in offering various courses in law. They are located in Bangalore, Hyderabad, Bhopal, Kolkata, Jodhpur, Raipur, Gandhi Nagar, Lucknow, Punjab, Patna, Kochi, Odisha, Cuttack, Ranchi, Assam, Visakhapatnam, Trichy, Mumbai, Nagpur, Aurangabad, Shimla, Jabalpur and Haryana. To join any of these colleges, students have to take the CLAT (Common Law Admission Test).

Applications for the Tamilnadu Dr Ambedkar Law College University are made online.

For More information: www.tndalu.ac.in

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In the hospitality sector there are three types of courses available.

1-year Certificate courses (eligibility – a pass in 10th standard)

A one-year course with certification is offered by the Directorate of Technical Education, Government of Tamilnadu. Over 200 institutions offer this certificate course, the course fee ranges from Rs.10,000 to Rs.20,000. Any one of the following can be selected for certification.

- Front office operation
- Food and beverage Service
- House-keeping operation
- Food preparation and bakery

3-year Diploma course (eligibility – a pass in 12th standard)

Course Fee Rs.30,000/

Admission to the Diploma Course is given by the National Council for Hotel Management and Catering Technology, which comes under the Ministry of Tourism, Government of India.



BSc Hotel Management

Admission for this course is offered by Universities and National Council for Hotel Management and Catering Technology. The annual expense will be around Rs 40,000 to 50,000. Graduates can aspire to join the industry in administrative and managerial positions.

The Institute of Hotel Management Catering Technology and Applied Nutrition is located in Taramani, Chennai. Applicants have to appear for an entrance test in the month of March and attend counselling in June to get admission in this institute. There are 26 Government colleges in India offering this degree. Admission is based on the performance in the entrance exam.

Employment opportunities

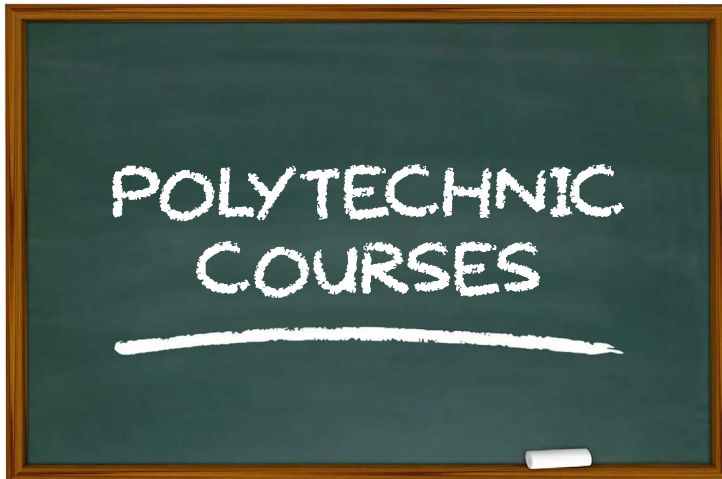
Diploma and Degree holders can aim to become a management trainee, customer relationship executive, marketing/sales executive, kitchen manager, housekeeping manager or catering officer.

The above jobs will be available in Star hotels, restaurants, catering units and canteens, health care units/hospitals, resorts, entertainment centres, Ayurvedic centres, spas, high-end coffee shops, sports clubs and on ships and airline operators.

Hospitality is not limited to hotels only. Hospitality graduates are required in hospitals, real estate, theme parks, event management and airlines.

For further information
<https://ihm-chennai.org/academic>

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Study in polytechnics leads to employment.

Due to unexpected circumstances, some students with high scores in 12th standard are unable to pursue engineering studies. Polytechnic courses are an excellent choice for such students.

Who can join polytechnic courses?

In general, to join a polytechnic a 10th standard certificate is enough. One can join the three-year course. Those who have completed 12th standard with Mathematics, Physics and Chemistry can join the course directly in the second year.

What are the courses offered by a polytechnic?

Six major courses can be studied in a polytechnic.

1. Civil engineering
2. Mechanical engineering
3. Electronics and Communication Engineering
4. Electrical Engineering
5. Computer Science
6. Information Technology



All the 6 courses have many sub-units such as, Automobile Engineering, Marine Engineering, Mechatronics and others. Apart from the above-mentioned courses, special courses like Chemical Engineering, Textile Engineering, Leather Engineering, Printing Technology are also offered.

Practical training and employment opportunities: Courses in polytechnics are all application-oriented courses. On completing such a course it is easy to work in manufacturing units.

Why is it easy to get a job on completion of the course?

Generally, BE graduates prefer white collar jobs. Polytechnic diploma holders are equally capable of working as executives and in the factory shop-floor. They are well equipped to take on additional supervisory responsibilities and move to middle-management levels quickly. For this reason, factories and other industries prefer to employ polytechnic diploma holders. In addition, a polytechnic diploma holder can join directly in the second year of engineering courses.

Fees for study in a polytechnic

Government polytechnics do not charge tuition fees. But Infrastructure development and maintenance fees, special fees and other fees which come to around Rs.2,000 to Rs 2,500 annually have to be paid. A student can complete the diploma in a Government polytechnic by spending less than Rs 10,000. Students in Government polytechnics are eligible for free transport in Government buses and get a concession in train fare also.

First year students are given textbooks free. The annual fees in a private polytechnic may be more than Rs 10,000.

Financial assistance/ Scholarships

A first-generation graduate is eligible for additional financial assistance. They get additional assistance if they reside in the hostel during study. Students from farming/agricultural background are eligible for financial assistance.

Information about Government polytechnics:
<http://www.tndte.gov.in/site/polytechnic-colleges/>

For admissions to Central Polytechnic, Chennai:
<http://cptchennai.ac.in/>



Central Polytechnic and Dharmambal Government Girls Polytechnic colleges

The Central Polytechnic College at Taramani, Chennai is one of the best polytechnics. The college offers diploma studies in many branches.

Some special diploma courses run by Central Polytechnic College are:

- Fisheries-fish culture techniques
 - Printing Technology
 - Chemical Engineering
 - Leather Engineering
 - Textile Engineering
 - Modern Office Practice (only for students from Commerce group)
- Postgraduate Diplomas
- Town and Country Development Planning. This course is available only in Chennai and Bhopal.
 - Quantity Surveying. Civil Engineers have an extra edge for employment if they complete this course also.



Dharmambal Government Polytechnic College for Women is located near the Central Polytechnic campus. The tuition fees in this institutin is only Rs 2160. The following courses are available here.

- Architectural Assistantship
- Civil Engineering
- Computer Engineering
- Electronics and communication Engineering
- Environmental Engineering
- Garment Technology
- Instrumentation and Control Engineering
- Modern Office Practices

Government polytechnic colleges near Chennai

- Government Polytechnic Colleges at Purasaiwakkam and RK Nagar
- The Tamilnadu Government Technical Training Centre, Guindy
- Government Polytechnics at Tiruvallur and Sevvaaypettai
- Industrial Training Institute, Guindy (Central Government) offers Diploma courses
- Tool and Die maker
- Refrigeration and air-conditioning
- AUTOCAD-3

Government-aided polytechnic colleges near Chennai

- Chengelvaraya Naicker Polytechnic College, Vepery
- Ramakrishna Mission Polytechnic College, Mylapore
- AMK Technological Polytechnic College, Poonnamallee
- Murugappa Polytechnic College, Avadi

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IWCM

Upgrade your skills through courses in industrial training institutes (ITI).

If you have scored less marks in 10th and 12th standard exams you need not worry because you can study in ITI. Nowadays students with an ITI certificate get better jobs than engineering graduates.

Those who have cleared 8th, 10th or 12th standard examinations are eligible to apply for study at an ITI. Students who have passed 8th standard have certain choices of industrial training courses. Similarly, students who have passed 10th and 12th examinations have a separate range of suitable courses.

The two types of industrial training courses are engineering and the non-engineering based. The eligibility criteria for courses based on engineering is as per the marks obtained in Mathematics and Science. For other courses, it is based on total marks scored.

Persons in the age group of 14 to 40 years belonging to the general category, reserved categories, and persons with disabilities can apply. Ex-Servicemen can apply until the age of 45. There is no age limit for women, war widows, and women abandoned by their husband.



The general courses in ITI (3 years, 2 years and 1-year)

- | | |
|------------------|--|
| ● Electrician | ● Winder |
| ● Machinist | ● Diesel Mechanic |
| ● Fitter | ● Stenography |
| ● Plumber | ● Draftsman |
| ● Welder | ● TV Mechanic |
| ● Turner | ● Electronics Mechanic |
| ● Motor Mechanic | ● Refrigerator/
Aircondition Mechanic |
| ● AC Mechanic | |

There are more than 60 such courses....

Government ITIs in Chennai are located in North Chennai, Ambattur and Alandur. Candidates can apply online. For more information: <https://skilltraining.tn.gov.in/itiguindychnennai/>

Admission process: At the counselling centres a ranking list of applicants is published based on the marks scored in their qualifying exam and reservation criteria..

For more information: <https://www.skilltraining.tn.gov.in>

Students studying in Government and Government-aided ITIs are eligible for the following concessions:

- | | |
|------------------------------|--------------------------------------|
| 1. Monthly stipend of Rs.750 | 5. Textbooks and drawing instruments |
| 2. Concession in bus fare | 6. 1 set of uniform |
| 3. Bicycle | 7. 1 set of footwear |
| 4. Laptop | |

Students studying under Government quota in private ITIs situated within a Corporation or Municipality limit are eligible for Government financial assistance of Rs.12,000. Students attending ITIs within Villages and Panchayats are eligible for assistance of Rs. 10,000. Some factories set up Government approved training centres and students in these centres get a monthly assistance of Rs 7,000 to Rs 9000 depending on the course pursued by the student.

The training period for students in an ITI varies.

For the one-year course - 7 months training at the centre and 5 months practical training at a factory.

For the 2-year course -15 months of training at the centre and 9 months of practical training at the factory.

Students receive a stipend during practical training.

At the Chennai Corporation ITI, training is FREE!

Applications are submitted directly to the Chennai Corporation ITI at Royapettah, to avail free training.

Those who have passed their 10th standard can join the following courses.

- Computer operator and co-ordinator - 48 seats – one-year course
- Fitter training- 20 seats – 2-year course
- Motor Mechanic vehicle - 24 seats – 2-year course
- Electrician - 20 seats – 2-year course
- Electronic Mechanic - 24 seats – 2-year course
- Plumber training - 48 seats – one-year course (students who have passed 8th standard are eligible)

Preference for students from Corporation Schools: During admission, preference is given to students from Corporation Schools and children of Corporation employees. To join these courses the age criterion is from 14 years to 40 years. There is no age limit for women.



Facilities for students

- Education is free
- Successful candidates are also provided assistance for getting a job
- Students under training receive free uniforms
- Free bus pass
- A monthly financial assistance of Rs 500 throughout the training period
- Students who complete training are given a laptop or computer sanctioned by the government

Announcements are made online at <https://skilltraining.tn.gov.in/DET/>

Application forms will be made available online. Those who have completed an ITI course can join the Diploma courses in polytechnics directly in the 2nd year.

Chennai Corporation ITI,
Near Muthaiah street, Lloyds colony, Royapettah Chennai 14.
Telephone no: 044-284-73117
(Nearest Bus stop is Ice House Police station)

Industrial training institutes in Chennai

1. Government ITI SIDCO Industrial Estate, Guindy
2. Government ITI (for women) SIDCO Industrial Estate, Guindy
3. Government ITI near Stanley Medical Hospital, Tondiarpet, North Chennai
4. Government ITI, RK Nagar, Chennai
5. Government ITI, Thiruvanmiyur, Chennai
6. Government ITI, Chengalpattu
7. Government ITI, Perumbakkam
8. Government ITI, Oragadam
9. Government ITI Ambattur
10. Government ITI (for women) Ambattur
11. Government ITI, Vadakarai, Thiruvallur Dist.



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There are three Community Colleges functioning under the Greater Chennai Corporation. One can get trained as nurses, mechanics, computer operators, catering and Office managers.

During admission to the community colleges, preference is given to students from Chennai Corporation schools, Government and Government-aided schools.

The Community College at Alwarpet, Chennai offers one-year diploma course to become Health Care assistant, Surgical assistant, Radiology assistant and Research assistants. Students who have passed 10th standard can apply for these courses.

Students who have passed 10th standard also receive training in Spoken English, basic English and Computer software.

Application forms are available at the Community College in Alwarpet and students can apply directly.

Community College, CP Ramaswamy Road, Alwarpet, Chennai
For further details contact: 044-2498-8401/ 78463 93630



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IWCM

Completion of 12th standard is sufficient to join the army, navy or air force.

Most people think that a job in the Army means defending India's borders from the enemy. However, along with active duty in the battlefields, there are various technical jobs in the Airforce, Navy and Army for students who have completed +2.

Students who were in the National Cadet Corps (NCC) in school and college can directly apply to join the Army.

Procedure to join the National Defence Academy

Students interested to join the National Defence Academy in Pune have to write the National Defence Academy and Naval Academy Examination after finishing 12th standard. Admitted students undergo a three-year academic course followed by a 1-year training in the Indian Military Academy. During the training, an officer gets Rs 50,000/- as salary.

<https://www.joinindianarmy.nic.in>

Eligibility

Admission notification is given in the newspapers by the National Defence Academy in the month of March and October. All students who have passed their 12th standard, Irrespective of the group, are eligible to apply. To join the airforce or the navy only students who have taken Physics and Mathematics in are eligible.

For further information

<https://www.upsc.gov.in/examinations/exam-calendar>

To study engineering and technology related courses, one has to join the Officers Training Academy at Gaya. The course duration is 5 years. Advertisements regarding this appear in the newspapers during the months of April and September.

<https://joinindianarmy.nic.in/ota-gaya.htm>

Training in Indian Military Academy

One can directly join the Indian Military Academy at Dehradun with a degree in any field. The training course duration is 1½ years. Advertisements appear for this in March-April.

For recent updated information:

<https://joinindianarmy.nic.in/joining-instructions.htm>

After clearing the Common Defence Services Exam (CDS) one may join, Indian Military Academy (IMA), Air Force Academy (AFA), Navy Academy and the Officers Training Academy (OTA).

<https://www.upsc.gov.in/examinations/active-exams>

The notification sample is given in:

<https://www.upsc.gov.in/sites/default/files/Notif-CDSE-I-21-Engl.pdf>



23



It may be thought that only graduates or postgraduates are employed by the Government. However, those who have passed 10th or 12th standard exams are also eligible for many of these jobs.

Employment with the Tamilnadu Government after passing 10th standard,

- eligible to apply for the post of Village Administrative Officer.
- On clearing the Tamilnadu Public State Commission Group IV Examination, one can get selected for the posts of Junior Assistant, Typist and Stenographer.
- On clearing the Tamilnadu Public State Commission Group III Examination, one can get selected for the posts of Executive Officer, Bill Collector, Land Surveyor.

For further information about the exam syllabus please visit this website:

tnpsc.gov.in/English/new_syllabus.html

After passing 12th standard

- can write the TNPSC Group III examinations and apply for jobs in Hindu Religious and Charitable Endowments.
- can also write the test conducted by the Central Government Staff Selection Commission to apply for jobs as Junior assistant, Clerk, Data entry operator or Stenographer with the Union government.

For further information about the exam syllabus please visit this website:

https://tnpsc.gov.in/English/new_syllabus.html

Candidates can appear for the exams conducted by the Tamilnadu Uniformed Services Recruitment Board and join posts in Police, Fire services and CRPF.

For further information

<https://eservices.tnpolice.gov.in/CCTNSNICSDC/Recruitment>

Jobs in other sectors

Indian Railways: A person who has passed their 10th standard can apply for the positions of Guard, Gangman, Assistant, Assistant Pointsman, Cleaner, office assistants and various other positions with the railways.

For further information: <https://www.rrcb.gov.in/rrbs.html#>

Railways also conducts different tests for the post of Ticket Reservation Clerk and Railway Protection force conducts exams for junior grade officers.

For further information: <http://www.rrbchennai.gov.in/>

Defence Sector

Army: The Defence department conducts recruitment tests for the following posts: Soldier (general duty), Soldier(tradesman), Multitasking Staff (non-technical).

Navy: The navy recruits staff for positions like Chef, Sanitary Hygienist, Steward, Musician, and positions in Sports.

For further Information

<http://www.joinindianarmy.nic.in/Authentication.aspx>

<https://www.joinindiannavy.gov.in/en/page/mr-nmr.html>



Central Armed Police Force: Those who have passed their 10th standard are eligible to apply.

Air Force: To join the Indian Air Force in the post of Air Men refer to the recruitment website at <https://airmenselection.cdac.in/CASB/>

For other positions with the Indian Air Force:

<https://indianairforce.nic.in/>

Paramilitary forces: To get jobs in paramilitary forces such as Indian Coast Guard, Central Reserve Police Force (CRPF), Central Industrial Security Force(CISF) visit the websites:

<https://joinindiancoastguard.gov.in>

<http://crpf.gov.in/recruitment.htm>

<https://www.cisf.gov.in/cisfeng/>

<https://www.cisfrectt.in/>

Insurance companies: One can join as an agent with General Insurance and Life Insurance companies.

24



IWCM

Those who are interested in the welfare of the community and those who can coordinate with various agencies are the right candidates for the study of Disaster Management.

The Corona pandemic wreaked havoc and created a heavy loss of life. The Government of India declared Corona as a National Disaster and swung into remedial action. Government of Tamilnadu followed disaster management protocols to implement remedial actions that prevent loss of life and reduce the impact on business and commerce.

Prevention of disasters, planning for reduced impact of disasters, quick relief measures after a disaster, saving lives and repairs and restoration of damaged infrastructure, and rehabilitation of lost livelihood are some of the major activities in Disaster management. Experts with wide experience are always in need. Universities in Tamilnadu and other states have introduced courses in Disaster management.



Where can one study Disaster Management?

- **Indira Gandhi National Open University:** Engineering graduates can study a diploma course in Disaster Management offered by.
- **National Institute of Disaster Management:** Offers online courses are offered. For further details, <https://nidm.gov.in>
- **International Red Cross:** Offers online certificate courses in Disaster Management. For further information: <https://indianredcross.org/ircs/training>
- **University of Madras and Annamalai University:** Offer postgraduate courses in Disaster Management.

Employment opportunities

Those qualified in Disaster management are needed in Government and voluntary organisations to work with volunteer groups..

Government of Tamilnadu has announced that Disaster Management protocols will be followed in every district for prevention and mitigation of disasters. Therefore, candidates doing Diploma and Degree courses will get employment opportunities.

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All students may not be able go to a college to pursue higher studies after 12th standard. Those who need to take employment immediately after school due to their family circumstances, girls and even those who are employed may wish to study further. Some may not have completed even their schooling. Distance education centres provide an opportunity to pursue higher education. At present the University Grants Commission has imposed certain guidelines on distance education centres. In common parlance these courses are also known as correspondence courses.

Pay attention to these points:

In Tamilnadu there are more than 20 Universities with Distance Education Centres. Students are advised to choose a Universities/Course approved by the University Grant Commission.

Nationally approved University

At the national level, Indira Gandhi National Open University (IGNOU) is approved by UGC. It has 42 approved regional centres. It operates through 56 district centres and 3000 education centres. IGNOU has a regional centre in Tamilnadu at Egmore, Chennai.

What are the under graduate courses?

Students who have passed 10th and 12th standard can apply for undergraduate courses.



IWCM

The following undergraduate and postgraduate courses are offered through correspondence:

- | | |
|--------------------------|-------------------------|
| 1. English | 11. Tourism |
| 2. Economics | 12. Philosophy |
| 3. History | 13. Sociology |
| 4. Social Work | 14. Library Services |
| 5. Political Science | 15. Information Science |
| 6. Public Administration | 16. Anthropology |
| 7. Hindi | 17. Physics |
| 8. Psychology | 18. Chemistry |
| 9. Computers | 19. Life sciences |
| 10. Rural Development | 20. Mathematics |

There are many certificate courses also:

- | | |
|--|------------------------------|
| 1. Disaster Management | 7. Human Rights |
| 2. Business Studies | 8. Information Technology |
| 3. Non-government
Organisation Management | 9. Energy Management |
| 4. Tourism | 10. Food and Nutrition |
| 5. Functional English | 11. Nutrition and Child Care |
| 6. Consumer Welfare | 12. Cyber Laws |
| | 13. Water Management |

Can one a get Government job after pursuing distance studies?

Those who have completed their studies through distance education are eligible for jobs in government, factories and non-governmental organizations (NGO).

College students can do certificate courses and gain additional qualifications.

Can one study in Tamil medium?

One can study in both Tamil or English medium. Students who could not complete 12th standard but have completed 18 years of age, can do the 6-month foundation course and continue to do BA , BCom, BSW or BTS (Bachelor in Tourism) in IGNOU. The foundation course can be done in Tamil or English medium. A special BCom course is also offered for students who pursue CA, ACA, ACS or ICWA.

For further information contact:

IGNOU Regional Centre,

Periyar Thidal, 84/1 E.V.K. Sampath Road, Vepery, Chennai

Ph. No 044-26618438/26618039, Email address: rcchennai@ignou.in

Website: <http://rcchennai.ignou.ac.in/>



26



Many parents find it difficult to finance the higher education of children after they complete 12th standard. Banks come to the rescue and offer education loans so that they can continue their education without any hindrance.

A single online platform, Vidyalakshmi (www.vidyalakshmi.co.in) is the best resource to apply for an education loan

Vidyalakshmi is a single online platform with more than 30 banks and 100 loan schemes.

How to apply for an education loan through the Vidyalakshmi platform?

Students and parents have to provide full details for registration of the loan application.

The applicants are required to provide

- PAN cards of both the parents and student
- Aadhar cards
- Details of savings account in bank(s)
- Details of college and course of study
- Name of the College one is seeking admission into
- Course chosen

- Subject of study
- Tuition fee
- Examination fee
- Cost of the books
- Hostel fee/transport fee
- Important equipment required (such as laptop)
- Marks list and college admission letter to be scanned and uploaded.
- Three banks to be selected for application of loan.

Within 15 days of uploading the application with complete details, the nearest branch of the bank chosen will contact the applicant.

How long does it take for the education loan to be sanctioned?

Usually, within a week of lodging an application for loan, a bank official will visit the home of the applicant to meet the applicant for verification purposes. After that visit, if everything is in order; within a week's time, the bank will send money directly to the chosen college. For other expenses the amount will be deposited in the student's bank account. Generally, the loan is sanctioned within two weeks of admission into the educational institute. The loan process has been simplified, so that education of the children is not difficult for parents.

Is surety necessary for education loans?

Surety is required from parents if the loan amount is more than Rs 4 lakhs. If the loan amount is Rs 7.5 lakhs or above, the parents may have to offer other assets as surety.

When does the loan have to be repaid?

The loan repayment starts one year after completion of the studies. This is because it is not possible to repay it while one is looking for a suitable job. In case a student gets a job soon after completion of studies, they are advised to start repaying the loan immediately. During the study period the interest on the loan is paid by the central government.

Loans taken for technical education and loans taken by female students are eligible for further concessions on the interest due.



LIST OF COLLEGES IN CHENNAI & NEIGHBOURING DISTRICTS

Government Autonomous colleges	
1 .	Dr. Ambedkar Government Arts College, Vysarpadi, Chennai-600039. Phone: 044-25520151 Website: www.daga.co.in
2.	Government Arts College for Men (Estd.1969) Nandanam, Chennai-600035. Phone: 044-24351048 Website: http://gacnandanam.com/
3.	Presidency College (Co-Education) (Estd.1840), 100, Kamaraj Salai, Chepauk, Chennai-600005 Phone: 28544894, 28510732 Website: https://www.presidencycollegechennai.ac.in/
4.	Bharathi Women's College(Estd.1964), 85, Prakasam Salai, Chennai-600108. Phone: 044-25286411, 044-25285753 Website: https://bwc.edu.in/
5.	Quaid-E-Milleth Government Arts College for Women, 74, Binny Road, Anna Salai, Chennai-600002. Phone: 044-28520793, 044-28550198 Website: http://www.qmgcw.in/
6.	Queen Mary's College (Women)(Estd.1914), Mylapore, Chennai-600004. Phone: 044-28444995 Website: http://www.queenmaryscollege.com/
7.	L. N. Government College (Estd.1965), T.H. Road,Ponneri, Thiruvallur District-601204 Phone: 044-27972266, 044-27972810 Website: http://www.lngovernmentcollege.com/
Government Colleges	
1.	R. V. Government Arts College (1970), Chengalpattu, Kancheepuram-603001. Phone: 044-27427816,044-27431257
2.	Sri Subramaniaswamy Government arts College, Trivallur District, Tiruttani-631209. Phone: 044-27885220

3.	University of Madras Arts and Science College (University Constituent College), East coast Road, Nemmeli -603104. Phone: 044-27402535 Website: http://uccnemmeli.unom.ac.in/
4.	University of Madras Arts and Science College (University Constituent College), Poonthottam Street, Theradi, Thiruvottiyur-600019. Phone: 044-25730382
5.	Puratchi Thalaivar Dr.M.G.R. Government Arts and Science College, Uthiramerur, Kancheepuram District.
6.	Government Arts & Science College (Co-Education), No.138/33, Kummallamman Kovil Street, Tondaiyarpuram, Chennai
7.	Government Arts & Science College, U-Block, TNSCB, Ezhil Nagar, Perumbakkam, Chennai.
<p style="text-align: center;">University of Madras</p> <p style="text-align: center;">Govt-Aided Autonomous Private Colleges</p>	
1	Dwaraka Doss Goverdhan Doss Vaishnav College, 833, E.V.R. Periyar Salai, Chennai-600106. Phone: 044-23635101,23635102 Website: https://www.dgvaishnavcollege.edu.in/
2	Loyola College, Nungambakkam, Chennai-600034. Phone: 044-28178300,044-28178301 Website: www.loyolacollege.edu
3.	The New College, 87, Peters Road, Royapettah, Chennai-600014. Phone: 044-28351269, 28350297 Website: www.thenewcollege.in
4.	Vivekananda College, 70-72, P.S.Sivasami Salai, Mylapore, Chennai-600004. Phone: 044-24993057 https://rkmvc.ac.in/
5.	The Ethiraj College for Women, Ethiraj Salai, Egmore, Chennai-600008. Phone: 044-28279189 Website: https://ethirajcollege.edu.in/



6.	Stella Mari's College, 17, Cathedral Road, Chennai-600004. Phone: 044-28111987,044-28111951 Website: https://stellamariscollege.edu.in/
7.	Justice BA sheer Ahmed Sayeed College for Women, Old No.310, New No.56, K.B. Dasan Road,Teynampet, Chennai-600018. Phone: 044-24364152,24364140,24350395 Website: https://www.jbascollege.edu.in/
8.	Womens Christian College, 51, College Road, Nungambakkam, Chennai-600006. Phone: 044-28275926 Website: www.wcc.edu.in
9.	The Madras School of social Work, 32, Casa Major Road, Egmore, Chennai-600008. Phone: 044-28195126, 28192824 Website: www.mssw.in
10.	Meenakshi College for Women, 363, Arcot Road, Kodambakkam, Chennai-600024. Phone: 044-24725466 Website: https://www.meenakshicollege.com/
11.	S.D.N Bhatt Vaishnav College for Women, Chrompet, Chennai-600044. Phone: 044-22655450,22655451 Website: www.sdnbvc.com
12.	Dhanraj BA id Jain College, Jothi Nagar, IT Corridor,Thorapakkam, Chennai-600096. Phone: 044-24960889 Website: www.dbjaincollege.org
13.	Madras Christian College, TamBA ram, Chennai-600059. Phone: 044-22390675,044-22396772 Website: www.mcc.edu.in
14.	Gurunanak College, Velacherry Main Road, Velacherry, Chennai-600042. Phone: 044-22451746 Website: https://gurunanakcollege.edu.in/

Government-aided colleges	
1.	C.Kandaswami Naidu College for Men, E7, 3rd Avenue, Anna Nagar East, Chennai-600102. Phone: 044-26262970,26223130 Website: https://cknc.edu.in/
2.	Pachaiyappa's College, 116, E.V.R. Periyar High Road, Shenoy Nagar, Chennai-600030. Phone: 044-26412844, 26482094 Website: none
3.	Sir Theagaraya College, 1047, T.H.Road, Old Washermenpet, Chennai-600021. Phone: 044-25951300,29523996 Website: https://stcchennai.edu.in/
4.	Chellammal Women's College, Anna Salai, Guindy, Chennai-600032. Phone: 044-2235 1217, Website: www.chellammal.edu.in
5.	The Quaide Milleth College for Men, TamBA ram-Velachery Main Road, Medavakkam-600100. Phone: 044-22771202, 22772634
6.	S I. V. E. T. College, TamBA ram-Velachery Main Road, Gowrivakkam, Chennai-600073. Phone: 044-22780777 Website: https://sivet.in/
7.	Pachaiyappa's College for Men, Chengalpet Main Road, Kanchipuram-631501. Phone: 044-27268824
8.	Pachaiyappa's College for Women, Vegavathi Road, Kanchipuram-631501. Phone: 044-27222768
9.	A.M.Jain College, Meenambakkam, Chennai-600114. Phone: 044-22321705, 22316603 Website: https://www.amjaincollege.edu.in/
10.	D. R. B. C. C. Hindu College, Dharmamurthi Nagar, Pattabiram-600072. Phone: 044-26850621 Website: http://drbccchinducollege.edu.in/ Courses offered by Government Colleges



T/M – Tamil medium E/M- English medium

Presidency College (Autonomous)

Chennai -600005 (Co-Education)

presidencycollegechennai.ac.in

Shift - I

- BA Tamil, BA Political Science (E/M), BA Political Science (T/M), BA English, BA Hindi, BA History (E/M), BA History (T/M), BA Malayalam, BA Urdu
- BCom (General) (E/M), BCom (Corporate Secretaryship) (E/M), BA Economics (E/M), BA Economics (T/M), BCom Hearing Impaired (E/M)
- BSc Chemistry (E/M), BSc Chemistry (T/M), BSc Mathematics (E/M), BSc Mathematics (T/M), BSc Geology (E/M), BSc Plant Biology & Plant Biotechnology (E/M), BSc Plant Biology & Plant Biotechnology (T/M), BSc Psychology (E/M), BSc Statistics (E/M), BSc Advanced Zoology & Biotechnology (E/M), BSc Advanced Zoology & Biotechnology (T/M), BSc Physics (E/M), BSc Physics (T/M), BSc Geography (E/M)

SHIFT-II

- BA History (T/M), BA Economics (T/M), B.C.A. Hearing Impaired (E/M), BCom (Corporate Secretaryship) (E/M)

**Queen Mary's College (Autonomous) for Women,
Dr.Radhakrishnan Salai, Mylapore, Chennai - 600 004.**

www.queenmaryscollege.edu.in

- BA History (E/M), BA History (T/M), BA Sociology (E/M), BA Indian Music (E/M), BA English, BA Tamil, BA Telugu Literature, BA Sanskrit
- BCom(General) (E/M), BCom (Corporate Secretaryship) (E/M), BA Economics (E/M), BA Economics (T/M)
- BSc Mathematics (E/M), BSc Mathematics (T/M), BSc Physics (E/M), BSc Physics (T/M)
- BSc Chemistry (E/M), BSc Chemistry (T/M), BSc Biochemistry (E/M), BSc Plant Biology & Plant Biotechnology (E/M), BSc Plant Biology & Plant Biotechnology (T/M), BSc Advanced Zoology & Biotechnology (E/M), BSc Advanced Zoology & Biotechnology (T/M), BSc Geography (E/M), BSc Geography (T/M), BSc Geography Tourism & Travel Management (E/M), BSc Home Science Nutrition Food Service Management & Dietetics (E/M), BSc Home Science Clinical Nutrition and Dietetics, BSc Physical Education, Health Education and Sports, BSc Computer Science (E/M), B.C.A. BA chelor of Computer Application (E/M)

Shift - II

- BSc Mathematics (E/M), BSc Computer Science (E/M), BA Economics (E/M), BCom(General) (E/M)

**Bharathi Womens College (Autonomous),
No.1 Prakasam Salai, Chennai - 600108**

www.bwc.edu.in

- BA Historical Studies (T/M), BA Historical Studies (E/M), BA Economics (T/M), BA Economics (E/M), BA English, BA Tamil
- BCom (Commerce) (E/M)
- BSc Mathematics (T/M), BSc Mathematics (E/M), BSc Physics (T/M), BSc Physics (E/M), BSc Chemistry (T/M), BSc Chemistry (E/M), BSc Botany (T/M), BSc Botany (E/M), BSc Advanced Zoology & Biotechnology (T/M), BSc Advanced Zoology & Biotechnology (E/M), BSc Geography (T/M), BSc Geography (E/M), BSc Biochemistry (E/M), BSc Computer Science (E/M)

Shift - II

- BCom (Commerce) (E/M), BSc Mathematics (E/M), BSc Chemistry (E/M), BSc Biochemistry (E/M), BSc Computer Science (E/M)

**Government Arts College for Men (Autonomous),****Nandanam, Chennai - 600035**www.gacnandanam.com

- BA Tamil Literature, BA English Literature, BA Historical Studies / History (T/M), BA Historical Studies / History (E/M)
- BA Economics (T/M), BA Economics (E/M), BCom (Commerce) (E/M), BCom Corporate Secretaryship (E/M), BBA Business Administration (Human Resource Development) (E/M)
- BSc Mathematics (T/M), BSc Mathematics (E/M), BSc Physics (T/M), BSc Physics (E/M), BSc Chemistry (T/M), BSc Chemistry (E/M), BSc Botany (T/M), BSc Botany (E/M), BSc Zoology (E/M), BSc Zoology (T/M), BSc Computer Science (E/M)

Shift - II

- BA Tamil Literature, BA Historical Studies / History (E/M), BA Economics (E/M),
- BCom (Commerce) (E/M), BCom (Corporate Secretaryship) (E/M), BSc Computer Science (E/M)

Dr.Ambedkar Government Arts College (Autonomous),**Vyasarpadi, Chennai - 600039 (Co-Education)**www.dagac.co.in

- BA Defence & Strategic Studies (E/M), BA English, BA Tamil
- BA Economics (E/M), BCom (Commerce) (E/M), BBA Business Administration (Financial Management) (E/M)
- BSc Computer Science (E/M), BSc Chemistry (E/M), BSc Chemistry (T/M), BSc Physics (E/M), BSc Physics (T/M), BSc Mathematics (E/M), BSc Mathematics (T/M), BSc Statistics (E/M), BSc Plant Biology & Plant Biotechnology (E/M), BSc Home Science - Nutrition Food Service Management & Dietetics (E/M), BSc Advanced Zoology & Biotechnology (E/M), BSc Advanced Zoology & Biotechnology (T/M), BSc Psychology (E/M), BSc Visual Communication (E/M)

Shift - II

- BSc Computer Science (E/M), BCom (Commerce) (E/M)



**Quaid-E-Millath Government College for Women
(Autonomous), Anna Salai, Chennai - 600002**

www.qmgcw.edu.in

- BA Tamil Literature, BA English Literature, BA Economics (E/M), BA Economics (T/M), BA Historical Studies (E/M), BA Historical Studies (T/M)
- BCom (Commerce) (E/M), BCom Corporate Secretaryship (E/M)
- BSc Physics (E/M), BSc Physics (T/M), BSc Chemistry (E/M), BSc Chemistry (T/M), BSc Plant Biology & Plant Biotechnology (E/M), BSc Plant Biology & Plant Biotechnology (T/M), BSc Advanced Zoology Biotechnology (E/M), BSc Advanced Zoology Biotechnology (T/M), BSc Mathematics (E/M), BSc Home Science - Nutrition Food Service Management & Dietetics (E/M), BSc Computer Science (E/M)

Shift- II

- BCom (General) (E/M), BSc Mathematics (E/M), BSc Computer Science (E/M)

**Government Arts and Science College,
RK Nagar, Chennai - 600081**

www.gascrknagar.co.in

(Co-Education)

- BA Tamil, BA English Literature,
- BCom (General) (E/M), BCom (General) (T/M), BCom (Corporate Secretaryship) (E/M)
- BA Economics (E/M), BA Economics (T/M)
- BSc Mathematics (E/M), BSc Computer Science (E/M)



**Government Arts and Science College,
Perumbakkam, Chennai -600131**
(Co-Education)

www.gascperumbakkam.org

- BA Tamil, BA English, BCom (General) (E/M) , BCom (Corporate Secretaryship) (E/M),
- BSc Mathematics (E/M), BSc Computer Science (E/M), BCA. Bachelor of Computer Application (E/M), BSc Physics (E/M), BSc Chemistry (E/M)

Government Arts and Science College, ECR, Nemmeli - 603104
(Co-Education)

- BA Tamil , BA Historical Studies (E/M), BCom (Commerce) (E/M), BCom (C.A.) Commerce with Computer Applications (E/M), BCA. Bachelor of Computer Application (E/M)

**Government Arts and Science College,
Thiruvottiyur, Chennai-600019**
(Co-Education)

- BA Tamil Literature, BA English Literature, BCom (Commerce), BCom (C.A.) Commerce with Computer Applications (E/M), BCA. Bachelor of of Computer Application (E/M)



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