There are no ideal careers, only ideal choices

SUBJECTS AND THEIR CAREER LINKS

Institute for Career Studies

Email: institute@icsmail.in
Website: www.icscareergps.com
Mobile: +919335912616, +919335233873

Mapping the Ever-Changing Career Cosmos

The fast-paced AI driven technologies with frequent 'disruptions' have impacted every aspect of our lives specially the education and career scenarios.

While education has become interdisciplinary and hybrid (with online and offline modes of learning), most careers have acquired a tech-oriented digital avatar e.g. digital marketing, e-sports, immersive art, UX/UI in design, e-commerce, e-governance, fin-tech, telemedicine, cloud kitchens, digital media etc, with work from home options.

There are now numerous opportunities for students to upgrade their knowledge and skills through high-tech online learning platforms like Coursera. Hence, they have multiple flexible pathways for learning and earning.

With infinite educational and career opportunities, it is imperative to make informed decisions for tapping one's inherent potential to the fullest. There are no ideal careers only ideal choices!

Most careers can be accessed from any subject combination. Choosing subjects based on one's aptitudes and interests develops our intellect, cognitive skills and creativity. These are essential requirements for any career. The stereotypical linear 'equations' or connections, e.g. PCM = Engineering; PCB = Medical field; Commerce = CA and Management are far from being relevant today.

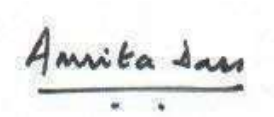
It is predicted that 85% of the jobs by 2030 don't exist today. Hence, with such fast -paced changes, rather than preparing for any specific career one has to have domain knowledge and expertise in our areas of interest along with employability skills and become a lifelong learner with a growth mindset. Be prepared for at least five career innings and a 'gig economy' wherein you may provide your expertise to a number of organisations and these could be multiple ones for example playing in an orchestra, designing a website and managing an event or teaching.

As more than 75 percent of our students do not have access to career guidance by expert counsellors, the Institute for Career Studies (ICS) has created an App that bridges the Gap, known as the ICS Career GPS. This can be downloaded free of cost and provides students with opportunities to discover their interests with all the relevant information regarding courses, campuses, careers and future trends. They can also connect with our expert career counsellors for further guidance regarding careers or any other concern.

The pandemic has taught us that we are living in a Volatile, Uncertain, Complex and Ambiguous (VUCA) world with a lot of turbulence. Being future ready requires one to develop the required employability skills, adversity-quotient, have 'flexpertise' i.e. to be able to apply our knowledge and expertise across domains, be able to pivot fast for responding to change. From survival of the fittest, the dictum today, according to me is survival of the fittest and quickest!

Well paid jobs in our respective career fields, require domain knowledge along with the requisite 21st century employability skills namely - Critical thinking, Complex Problem Solving, Creativity and Originality, Leadership, Collaboration, Communication, Digital Literacy, Initiative and Enterprise.

The ICS mantra is Know-Yourself, Inform Yourself, Plan for Yourself for a 'career by choice not chance'! Fine-tune the educational and career choices to your unique frequency by bringing together what you are great at and what you love doing. This will culminate in a career that will give you purpose and meaning in life, fulfillment and happiness. Recognition and remuneration will follow.



Dr. Amrita Dass
Founder Director
Institute for Career Studies

SUBJECT SELECTION

The right subject combination serves as a strong foundation for building a successful career in life. The subject selection process involves awareness of **aptitudes and interests**, **class performance** and **eligibility requirements for courses and careers**.

While making informed choices it is also important to **be aware of** various misconceptions and facts regarding subjects and their career links.

- **Misconception**

  There is not much scope for students who opt for Humanities.

  As a result, regardless of a student's aptitude and interests he/she is encouraged to take either the science or commerce subjects. This trend is highly detrimental for the intellectual development of the students who have a humanities bent of mind and in fact retards their progress.
- **Fact**

  Most careers are open to students from all subject streams.

  It is **only** the Engineering and Medical related fields that require a student to take up Physics, Chemistry and Maths or Physics, Chemistry and Biology respectively. **Moreover, it is essential to emphasise that subjects like History, Political Science, Philosophy and Sociology help to develop higher order thinking skills which are a critical success factor for most careers.**

- **Misconception**

  Taking up Physics, Chemistry, Maths and Biology opens up wider career options in both the Engineering and Medical fields, increasing the chances of success.

  Consequently, students take up these subjects whether they can cope with them or not and appear for both the engineering and medical exams without considering their aptitudes for these careers.
- **Fact**

  Whereas the engineering and medical entrance examinations are an extension of the subjects students have studied in school, the careers they lead to require different skill sets and attitudes. In Engineering you deal with machines while in medicine you deal with human beings. You see patients at their worst and have to give of your best! **Leaving the career entry to chance can jeopardize your future.**

- **Misconception**

  Students who take up PCM must appear for the IIT JEE examinations as this is the best possible career route for them.
- **Fact**

  Those who join the IIT-JEE band wagon without considering their aptitudes and interests may face their first career dilemma after they get in and discover that they were more suited for scientific research, economics, finance, media, law or some other field. Thus, many a time the engineer 'kills' the scientist, architect or lawyer! **It is essential to take up the right course at the right campus.**

- **Misconception**

  There is more scope for careers in the fields of engineering, medicine and management than in the design, media or hospitality sectors.
- **Fact**

  There are no ideal careers, only ideal choices. Each career is as good as the other. The choice depends on what matches with your profile and brings out the best in you.

- **Misconception**

  It is better to opt for a professional degree after Plus Two as the academic subjects have no value.
- **Fact**

  There should be no bias regarding the pursuit of academic or professional courses. For example, if the goal is Management or Mass Communication or Law etc. there are two key routes after Plus Two. The students who are academically oriented should ideally pursue their Bachelor's degree in an academic field followed by a postgraduate academic or professional qualification. However, for those who have a vocational bent of mind a professional programme may be more suitable after Plus Two. **Thus, we must avoid generalizations and facilitate an individualised educational and career path that will tap one's potential to the fullest.**

- **Misconception**

  High marks are the only indicator of future success. Consequently, students are compelled to take up tuitions at the cost of co-curricular activities.
- **Fact**

  The emphasis is on the knowledge acquired and not merely marks. In addition, hobbies like reading, painting, music and participation in extracurricular activities are essential as they develop employability skills like leadership, effective communication, and creative ability etc.

University entrance exams like CUET give more emphasis to the application of knowledge along with logical and analytical aptitude. Board marks are no longer the criteria for the selection of students

- **Misconception**

  Once you embark on a career you cannot change tracks and certain careers don't go together e.g. medicine and music.

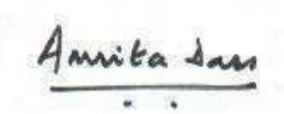
- **Fact**

  A multi-disciplinary approach is ideal for a multi-skilled person. The film 'Soch' has been produced by Dr. Wajahat Kareem who is a successful surgeon. Keki Daruwala former Director General of Police is a renowned writer. Ambassador Nirupama Rao is a singer who has established the South Symphony Orchestra.

Hugh Prather has expressed this concept succinctly in the following words "There is a part of me that wants to write, a part that wants to theorise, a part that wants to sculpt, a part that wants to teach. To force myself into a single role, to decide to be just one thing in life, would kill off large parts of me."

PREPARE FOR THE YET UNKNOWN

- Fine-tuning choices to the one's own unique frequency for developing one's potential and talents to the fullest
- Confronting misconceptions
- Pursuing interwoven learning and all-round education
- Being informed and keeping track of the new specializations
- Taking up the Right Course at the Right Campus
- Preparing for **Career by Choice not Chance**



Dr. Amrita Dass
Founder Director
Institute for Career Studies

Subject Eligibility Criteria Chart

Course	Physics	Chemistry	Math	Biology	Biotech
Engineering	✓	✓	✓		
Architecture*	✓		✓		
Pharmacy Engineering institutes	✓	✓	✓		
Pharmacy - others	✓	✓		✓	
Air Force and Navy	✓	✓	✓		
Civil Aviation	✓		✓		
Merchant Navy	✓	✓	✓		
Medical Field	✓	✓		✓	
Biotechnology – B.Tech**	✓	✓	✓		
Biotechnology – B.Sc.	✓	✓	✓		
Economics (Hons)***			✓		
BCA******			✓		
Veterinary Science	✓	✓		✓	
B. Com (Hons.) ***			✓		

NB:

* Third subject: Chemistry/ Biology/ Technical Vocational subject/ Computer Science/ Information Technology/ Informatics Practices/ Engineering Graphics/ Business Studies

**A few Engineering colleges accept Physics, Chemistry and Biology without Maths

***Maths is required by most universities in India and Abroad

****Computer Science is also accepted

ALL other careers can be accessed from any subject combination

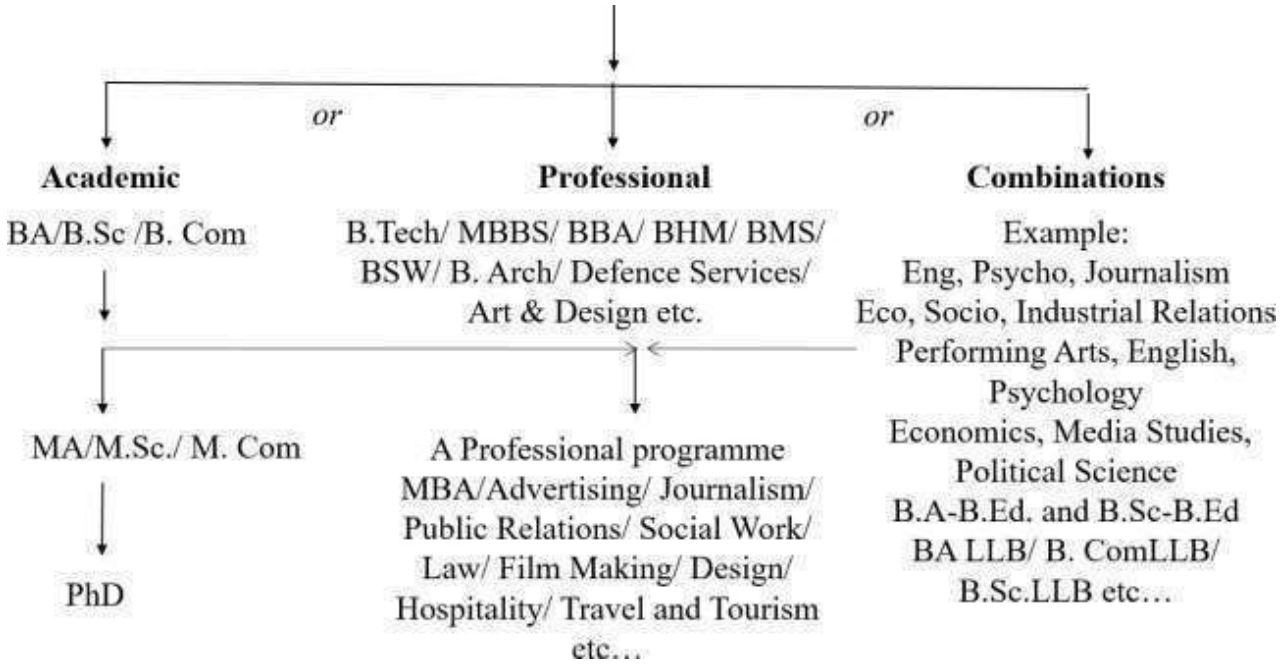
CAREERS AVAILABLE FROM ALL SUBJECTS

There will be digital transformations in each career field

- **Advertising and Corporate Communication**
- **Art and Design**
- **Accountancy, Analytics, Banking and Finance**
- **Business Management**
- **Career Guidance**
- **Civil Services**
- **Computers and IT (Applications, Animation and Graphics)**
- **Defence Services (Army)**
- **Educational Field**
- **Hospitality (Hotel / Travel & Tourism)**
- **Insurance**
- **Law**
- **Mass Communication**
- **Psychology related fields**
- **Performing Arts**
- **Social Work**
- **Sports**

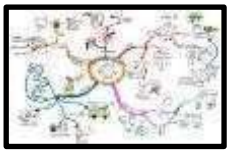
and many more…

PATHWAYS AFTER Grade 12



A brief description of subjects and their career links

BIOLOGY AND CHEMISTRY



Biology is the study of the structure, function, behaviour and evolution of cells, organisms and ecosystems.

Chemistry is the science of the structure, properties and reactions of matter. Chemists analyze, synthesize, quantify and design materials.

Careers/ Specializations

- Agriculture and allied fields like Forestry, Horticulture, Animal Husbandry etc.
- Biochemistry
- Biomedical Sciences
- Biomimetics
- Biometrics
- Biotechnology
- Bioinformatics
- Biomedical Engineering
- Cheminformatics
- Engineering (Physics, Chemistry, Maths)
- Environmental Science
- Forensic Science
- Metallurgy
- Genetics and related specilizations
- Genetics Law
- Geology
- Hospital / Health Management
- Indian Forest Services
- Medical and Paramedical fields like Physiotherapy, Optometrics, Audiology etc. (Physics, Chemistry and Biology)
- Neurosciences
- Oceanography
- Pharmacy and Drug Design (Physics, Chemistry and Maths or Biology)
- Public Health specialist
- Scientist
- Teaching and Research
- Veterinary Science (Physics, Chemistry and Biology)
- Microbiology
- Technical and Scientific Writing

- All other health-related professions
- All other non-subject specific careers*

BIOTECHNOLOGY

Biotechnology is a study of cell biology, genetics cell culture technology, molecular biology, genetic mapping, genetics engineering and Bioinformatics.

Careers/ Specialisations

- Biotechnology- Engineering with specialisation like Medical, Agriculture, and Industrial Biotechnology etc.
- Bioinformatics
- Biotechnology Management
- Genetics related Specialisations
- Scientific Research
- Teaching and Research
- All other non-subject specific careers*

COMMERCE AND ACCOUNTS

Commerce is concerned with the sale, purchase and distribution of goods. Its main function is to take the goods from their place production to the people who make use of them. Commerce performs the function of a link between the producer and consumer.

Accountancy has been called the "language of business". It is the art of recording, classifying and summarising in terms of money, transactions and events which are of a financial nature and interpreting the results.

Careers/ Specialisations

- Banking
- Business Management
- Chartered Accountancy (CA)
- Certified Public Accountant (CPA)
- Chartered Certified Accountant(ACCA)
- Company Secretary (CS)
- Cost and Management Accountancy
- Chartered Financial Analyst (CFA)

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Data Analytics
- Finance and Investment related fields
- Forensic Accounting
- Insurance
- Real Estate
- Teaching and Research
- All other non-subject specific careers*

COMPUTER SCIENCE

Computer Science is a study of automating algorithmic processes. Providing a scientific and practical approach to computation and its applications

Careers/ Specialisations

- Applications Architect
- Block Chain Technology
- Business Intelligence
- Cloud Computing
- Computer Science Engineering
- Computer Support Specialist
- Computer & Information Research Scientist
- Computer Systems Analyst
- Data Architecture
- Data Mining Specialist
- Ethical Hacker
- Machine Learning
- Network Architecture
- Robotics
- Software Quality Assurance
- Teaching and Research
- Web Developer
- All other non-subject specific careers*

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

ECONOMICS

It is the branch of social science that deals with the production, distribution and consumption of goods and services and their management. It also deals with related problems of labour, finance, taxation, etc.

Careers/ Specialisations

- Behavioural Economics/ Finance
- Business Economics
- Data Analytics and Economic Analysis
- Development Economics
- Economics of Education
- Econometrics
- Economist
- Environmental Economics
- Economic History
- Financial Economics
- Health Economics
- Indian Economics Services (IES)
- Mathematical Economics / Econometrics
- Political Economics
- Public Health Economics
- Statistics
- Teaching and Research
- All other non-subject specific careers*

ENGINEERING GRAPHICS

Engineering Graphics is a graphic language incorporating- the ability to visualize or perceive a graphic; knowledge and understanding of principles and practices of engineering technology; freehand, instrument and CAD drawings, and the Design Process. It serves as a bridge between high school technology and University Engineering.

Careers/ Specialisations

- Architecture
- Graphic Software Engineer

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Industrial Design
- Project Management
- Technical Drawing Professional
- All other non-subject specific careers*

ENGLISH (LITERATURE)

English Literature is the study of the development of literature over the ages. It includes studying the profiles and work of various poets, novelists, writers etc . both classical and contemporary.

Careers/ Specializations

- Advertising (Copywriting)
- Creative Writing
- Editing
- Journalism (Print and Electronic)
- Linguistics
- Public Relations
- Publishing
- Script Writing
- Technical Writing
- Teaching and Research
- Translation
- All other non-subject specific careers*

GEOGRAPHY

Geography is an all-encompassing discipline that seeks to understand the world - its human and physical features - through an understanding of place and location. Geography looks at the spatial connection between people and places and how people interact with the environment. Geographers study the linkages between human activity and natural systems.

Careers/ Specialisations

- Analysing Remote Sensing Data
- Cartography

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Climatology
- Demography
- Disaster Management
- Economic Geography
- Energy Analyst
- Environment and Ecology
- Environmental Management
- Forest Management
- Geographic Information Systems
- Globalisation, Governance and Development
- Human Resources Development
- Journalism
- Meteorologist
- Population Studies
- Rural Management
- Social Work
- Soil Conservationist
- Teaching and Research
- Travel and Tourism
- Urban and Regional Planning
- All other non-subject specific careers*

HISTORY

History is a branch of knowledge that records and analyses past events – political, economic, social and cultural. It is, in effect about knowing and interpreting our past in order to understand present and perhaps even predict our future. Historians delve into significant phases of human activity and study its influences on life. A study of history develops higher order thinking skills (HOTS!)

Careers/ Specialisations

- Archaeologist
- Archivist
- Cliodynamics (History & Mathematics)
- Cultural Resources Management
- Digital History
- Economic History
- Gender Studies
- Historian

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- International Relations
- Journalism
- Museology, Curator
- Public Administration
- Teaching and Research
- All other non-subject specific careers*

HOME SCIENCE

Home Science is a multi displinary field of study which draws upon many subjects such as chemistry, physics, physiology, biology, sociology, economics, hygiene, child development, art, food, nutrition and home management.

Careers/ Specialisations

- Culinary Arts
- Child Development
- Cosmetology
- Dietetics
- Fabric and Textile Design
- Food and Nutrition
- Health care related fields
- Interior Decoration
- Resource Management
- Teaching and Research
- All other non-subject specific careers*

INFORMATICS PRACTICES

Informatics Practices includes the science of information and the practice of information processing. It incorporates the structure, algorithms, behavior, and interactions of natural and artificial systems that store, process, access and communicate information. It also includes simple programming and visual basis.

Careers/ Specialisations

- Software Programmer
- Animation and Graphics
- Web Designer
- Network Administrator

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Web / Multimedia Programmer
- Computer Games
- All other non-subject specific careers*

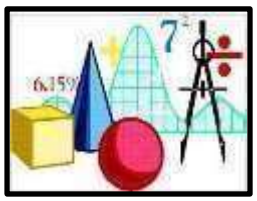
Multimedia & Web Technology

Multimedia & Web Technology is a study of WEB Development using HTML/XML it focuses on proficiency in Web Management; creating Web Sites; designing Graphical images using Image-Editing tools; audio & video capturing and using software editing tools.

Careers/ specialisations

- Advertising
- Computer System Design
- Content Developer
- Game Designer and Programmer
- Graphic Artist
- Illustrator
- Image Editor
- Multimedia Designer
- Online Publishing
- User Interface &User Experience (UI &UX)
- Video and Motion Picture Professional Animators
- Web Developers
- All other non-subject specific careers*

MATHEMATICS



Mathematics is the study of number, form, arrangement and associated relationships using numerical and operational symbols. It is the science of order. Mathematicians seek to identify instances of order and to formulate and understand concepts that enable us to perceive order in complicated situations.

Careers/ Specialisations

- Actuarial Science (Insurance)
- Architecture
- Banking, Finance and Investment
- Behavioural Finance (Psychology and Math/Finance)
- Civil Aviation (Physics and Maths)

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Computer Science, Artificial Intelligence, Programming, Software Engineering, Cybernetics
- Data Analytics
- Defence Services - Airforce and Navy (Physics and Maths)
- Engineering (Physics, Chemistry and Maths)
- Financial Engineering
- Indian Statistical Services
- Management and Finance related fields
- Market Research
- Merchant Navy (Physics, Chemistry and Maths)
- Operational Research (finding mathematical solutions to business problems)
- Pharmacy (Physics, Chemistry and Maths)
- Teaching and Research
- All other non-subject specific careers*

PHYSICS

The physicist's quest is to know Nature, to describe its precise and elegant laws, and to predict the behaviour of the universe. Physicists have led the development of 20th century technology. They have played an essential role in the beginnings of the transistor, the laser, the nuclear reactor, fiber optics, holograms, global positioning systems, medical imaging techniques, computers, space exploration, atomic power and radar, cable television and compact discs.

Careers/ Specialisations

- Applied Physics
- Architecture (Maths)
- Astronomy
- Astrophysics
- Biophysics
- Chemical Physics
- Civil Aviation (Physics and Maths)
- Defence Services - Airforce and Navy (Physics and Maths)
- Engineering (Physics, Chemistry and Maths)
- Earth and Planetary sciences
- Geophysics
- Indian Forest Services
- Medical and Paramedical fields like Physiotherapy, Optometrics, Audiology etc. (Physics, Chemistry and Biology)

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Merchant Navy (Physics and Maths)
- Pharmacy and Drug Design (Physics, Chemistry and Maths or Physics, Chemistry and Biology)
- Space Systems Engineering
- Teaching and Research
- Technical and Science Writing
- All other non-subject specific careers*

POLITICAL SCIENCE (CIVICS)

Political Science is a branch of knowledge that deals with the state and system of Government. It examines social and political behaviour and practices, the varied contexts in which they occur, and the ideas and ideals which motivate people in public life.

Careers/ Specialisations

- Human Rights
- International Relations
- Political, Social Activist
- Policy formulation and advocacy
- Policy Analyst
- Public Administration
- Political Advisor
- Political Commentator
- Research Analyst
- Social Work
- Teaching and Research
- Writer
- All other non-subject specific careers*

PSYCHOLOGY

Psychology is a behavioural science. It is the scientific study of thought and behaviour and deals with sensation, perception, memory, cognition and motivation etc.

Careers/ Specialisations

- Animal Psychiatry, Behaviour
- Applied Psychology
- Behavioural Economics/Finance (Psychology and Economics/Finance)

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Cognitive Sciences
- Child Psychology
- Counselling specilisations (children and adolescents, health, marriage, family, education, career etc.)
- Clinical Psychology
- Educational Psychology
- Experimental Psychology
- Forensic Psychology
- Human Resource Development
- Industrial Psychology
- Neuro-sciences
- Occupational Psychology
- Organizational Behaviour
- Paramedical Psychology
- Personnel Management and Industrial Relations
- Public Relations
- Psychotherapy
- Social Psychology
- Special Education
- Teaching and Research
- All other non-subject specific careers*

SOCIOLOGY

Sociology is the scientific study of society which includes patterns of social relationships social interactions and culture. It encompasses various aspects of human life - political, cultural, economic, psychological, historical etc. and establishes interconnectivity between these dimensions. As Sociology can address some of the most critical and challenging issues of global importance, it is a fast expanding field.

Careers/ Specialisations

- Counselling
- Consultancy
- Computational Social Science (Computer and Social Science)
- Environment related fields
- Gender Studies
- Health Care
- Market Research
- Political Sociology

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

- Population studies/ Demography
- Social Analytics
- Socio-Legal fields
- Social Work / NGOs
- Teaching and Research
- Urban Studies
- Women Studies
- All other non-subject specific careers*

**** Advertising and PR, Design, Law, Government Services, Hospitality Sector, Management, Mass Communication and Social work etc.***

Explore ICS Career GPS™

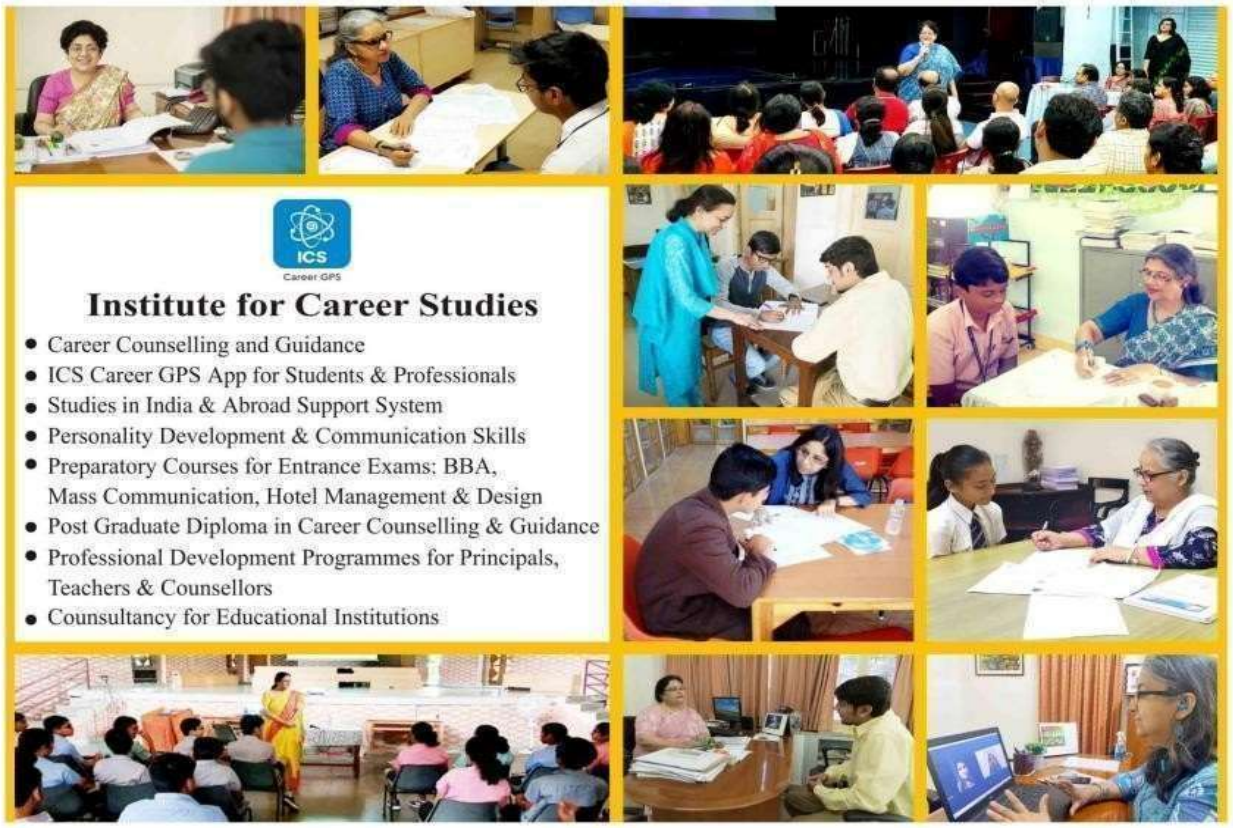
Career Clarity in 3 easy steps: KNOW-INFORM-PLAN

- Discover your short-listed Career fields through a Unique Algorithm
- Latest Career Specialisations
- Pathways
- Courses and Campuses (Globally)
- Connect with ICS team of Expert Counsellors

Scan QR Code to download the App

GET IT ON Google Play

Download on the App Store



www.facebook.com/ICSCareerGPS

ICS Career GPS - Institute for Career Studies

www.instagram.com/instituteforcareerstudies/