

B.Sc. Cognitive Science

(DEI is the first university in India with undergraduate course in Cognitive Science)

3 Year undergraduate Interdisciplinary degree program

run Jointly by Science Faculty and Psychology Department of Social Sciences

Dayalbagh Educational Institute



INTRODUCTION

- **What is Cognitive Science**
- Cognitive Science is an interdisciplinary field with applications in a number of fields like medical neuroscience, neural prosthetics, development of Artificial Intelligent Systems and Machine Learning, Behavioral Economics, NeuroMarketing and Consciousness Studies

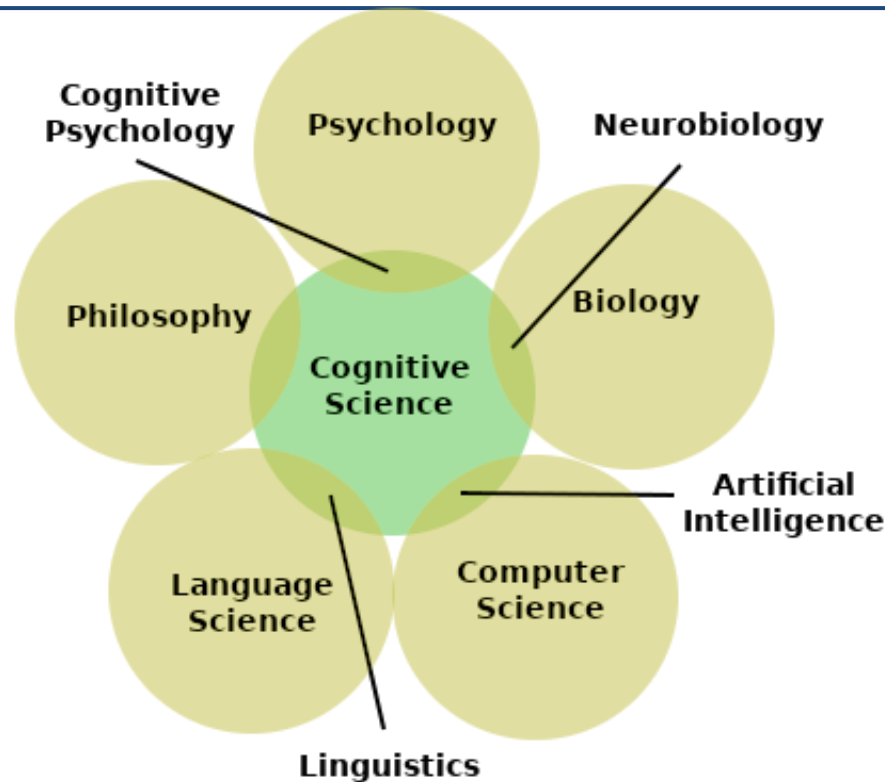
NOVELTY

Is cognitive science like psychology?

Psychology is the study of the human mind and the different functions that the mind can do. It involves how humans behave and think. It is a study of behaviour. It is a part of Social Science, like B.SSc or BA.

Cognitive Science, however is a more interdisciplinary study between Psychology, Neuroscience, Philosophy, Linguistics, Physics and Computer Science. It is a study of brain/neural function using modern neuroimaging tools.

This is a Science course like B.Sc.



What is the difference between cognitive science and neuroscience?

Cognitive science studies how the brain is organized, including thought processes and learning. Neuroscience studies the nervous system, including the brain, neurons, and cellular processes.

What tools or methods are used?

Many brain imaging tools, including **positron emission tomography (PET)**, **near infrared spectroscopy (NIRS)**, **functional magnetic resonance imaging (fMRI)**. **Transcranial Magnetic Stimulation (TMS)** **magnetoencephalogram (MEG)**, **electroencephalography (EEG)**, **eye tracking**, **Galvanic Skin Response**.

ELIGIBILITY

Who can study Cognitive Science

Any student who has completed XII in any science subject e.g. Maths, Physics, Botany, Zoology, Chemistry.

COURSES

Program – B.Sc Cognitive Science

Duration – 3 years

Major#1 – Cognitive Science

Major#2 – Any one from Botany, Zoology, Chemistry, Maths, Physics

Course taught in 3 yrs of Cognitive Science

1 st Year (I Semester)	
Course Code - Course Title	Credit
CGM 101 Basic Cognitive Processes	3
CGM 102 Structure of Nervous System	3
CGM 103 Practicum-I	2
CGM 104 Seminar & GD	0.5
CGW 101 Intro to Psycholinguistic Instrument	2
1 st Year (II Semester)	
CGM 201 Higher Cognitive Processes	3
CGM 202 Functions of Nervous System	3
CGM 203 Practicum-II	2
CGM 204 Seminar & GD	0.5
CGW 201 Practice of Psycholinguistic Instrument	2
IIInd Year (III Semester)	
CGM 301 Math Methods for Cognitive Science	3
CGM 302 Psycholinguistics	3
CGM 303 Cognitive Development	3
CGM 304 Practicum-III	3
CGM 305 Seminar & GD	0.5
IIInd Year (IV Semester)	
CGM 401 Measurement Methods in Cog. Sci.	3
CGM 402 Philosophy of Mind	3
CGM 403 System & Cognitive Neuroscience	3
CGM 404 Practicum-IV (Signals & System)	3
CGM 404 Seminar & GD	0.5
IIInd Year (V Semester)	
CGM 501 Natural Language Processing	5
CGM 502 Social Cognition	5
CGM 503 Cognitive Disorders	5
CGM 504 Computational Intelligence	5
CGM 505 Practicum -V	5
IIInd Year (VI Semester)	
CGM601 Theories of Consciousness	5
CGM602 Introduction to Quantum Theory	5
CGM603 Neuroimaging Technique/ Psychoacoustics	5
CGM604 Decision Making	5
CGM 605 Practicum-VI	5

TRACK RECORD

When was this program started - 2019

How many batches has passed - One

AWARDS & RECOGNITIONS

Manvi Jain, B.Sc (Hons) Cognitive Science, Passout

- Research Intern, IITD, MSc Cognitive Science @ IITD
- Best Paper Award at NSC
- Research Paper in Journal

Abhishek Gupta, B.Sc Cognitive Science-Zoology

- Best Paper Award at NSC
- Research Paper in Journal

Shreya Satsangi, B.Sc Cognitive Science-Physics

- Best Paper Award at NSC

Afifa - B.Sc Cognitive Science-Physics

- Conference Research Paper, Internship IITD

Madhvi Nibauria - B.Sc Cognitive Science-Zoology

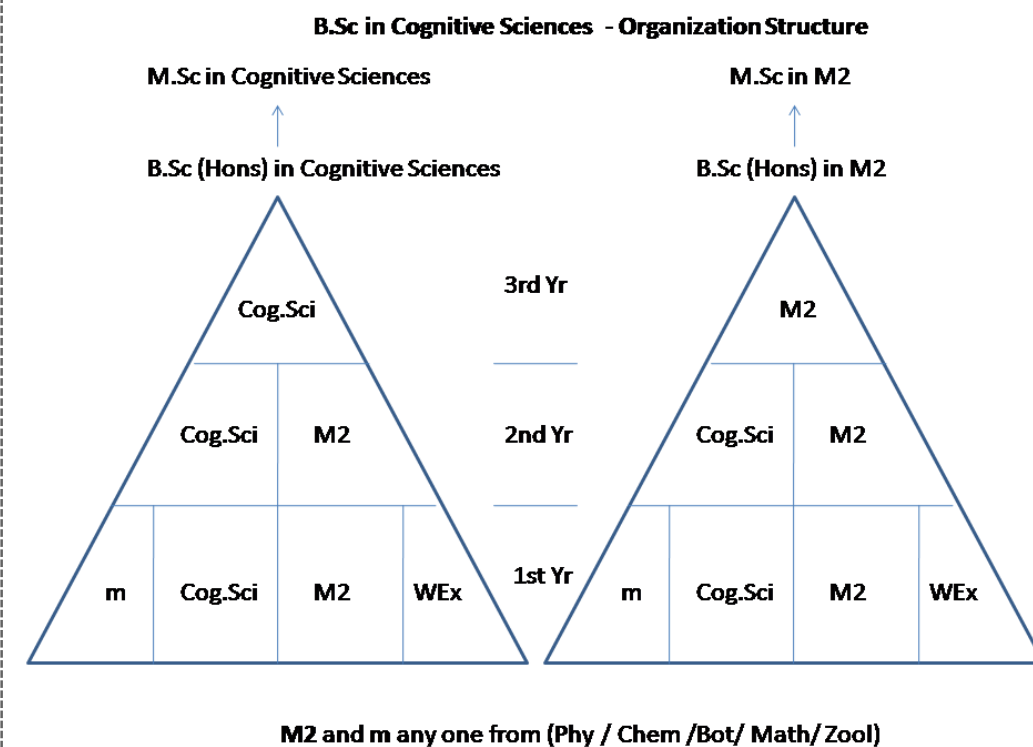
- Conference Research Paper, , Internship IITD

D. Geeta, Pursuing PhD

- Best Poster Paper Award
- Doctoral Scholarip from MP govt.

CONCLUSION & DISCUSSION

What if I wanted to do B.Sc so why I must pursue B.Sc Cognitive Science



Whether you do B.Sc or B.Sc Cognitive Science, you study one science subject of your choice and can still do B.Sc (hons) & M.Sc in the same science subject (M2) if you want. But if you begin to like Cognitive Science you have a new career possibility

SCOPE

What is the Scope of Cognitive Science

The interdisciplinary approach of cognitive science enables one to acquire a host of highly transferable hard and soft skills. They attract lucrative offers in different domains such as:

- Psychological and psychiatric therapy
- Healthcare analytics
- Teaching
- Research and development
- human centered (UX) designing
- Product development
- Linguistic analysis
- Data analysis
- Software engineering
- machine learning
- HR management

Those interested in further research can also engage with the following domains:

- Neurobiology
- Educational neuroscience
- Clinical psychology
- AI and robotics
- Medicine
- Consciousness Studies

What are students who passed out of this course doing

M.Sc, PhD, in Cognitive Science from IITs, Project Assistant in Cognitive Science, AI, Machine Learning, Neurology, Counselling Psychiatry, Mental Health Institutes, MBA, HR