



Department of Computer Science and Engineering (Data Science)

For the last many decades, statisticians and computer engineering professionals have been helping industries to improve their business performance. Researches in both these areas were developing new methodologies to improve their respective domains. Data Science is a field which combines the advancements in Analytics and Computer Science to bring insights to decision makers by analyzing vast amounts of data at very high speeds. As a part of its commitment to bringing the latest in engineering education to the masses, Dwarkadas J. Sanghvi College of Engineering has introduced “**Computer Science and Engineering (Data Science)**” from the academic year 2020-2021, with modern amenities and infrastructure, state of the art curriculum with experienced and dedicated faculty. The institute will continue to strengthen this branch through active industry – academia association throughout the course duration of four years. The department started with 60 intake for the academic year 2020–21 and increased to **120 intake in the academic year 2021-22**.

Overview of the Curriculum for CSE-Data Science

First Year	Common for all Branches
	Basic Science and Engineering subjects with Programming languages using C (Structured Programming Language) and JAVA (OOPs).
Second Year	Focus of the second-year scheme is on the Foundations of Computer Science and Data Science with following subjects
	Mathematics for Intelligent Systems, Statistics for Data Science, Python Programming, DSA, Design and Analysis of Algorithms, Foundations of Data Analysis, DBMS, Introduction to Machine Learning, Web Engineering etc.
Third Year	Pivotal year for all CSE-Data Science students provides Core Data Science knowledge with diverse elective courses in the field of finance, healthcare, space, ecommerce etc.
	Professional Core: Advance Statistics, Advance Machine Learning, Deep Learning, Natural Language Processing, R, Julia and Scala Programming. Professional Electives: Spatial Data Science, Recommender System, Data Science in Banking and Finance etc.
Final Year	Final Year scheme focuses on advance topics in Computer Science and Data Science, Application areas and Project Work.
	Advance Professional Core: Predictive Analytics, Prescriptive Analytics, Data Ethics and Information Security, Computer Vision, High Performance Computing. Advance Professional Electives: Adversarial Machine Learning, Quantum Machine Learning, Healthcare Data Science, etc. Major Project: In the field of Computer Science and Data Science

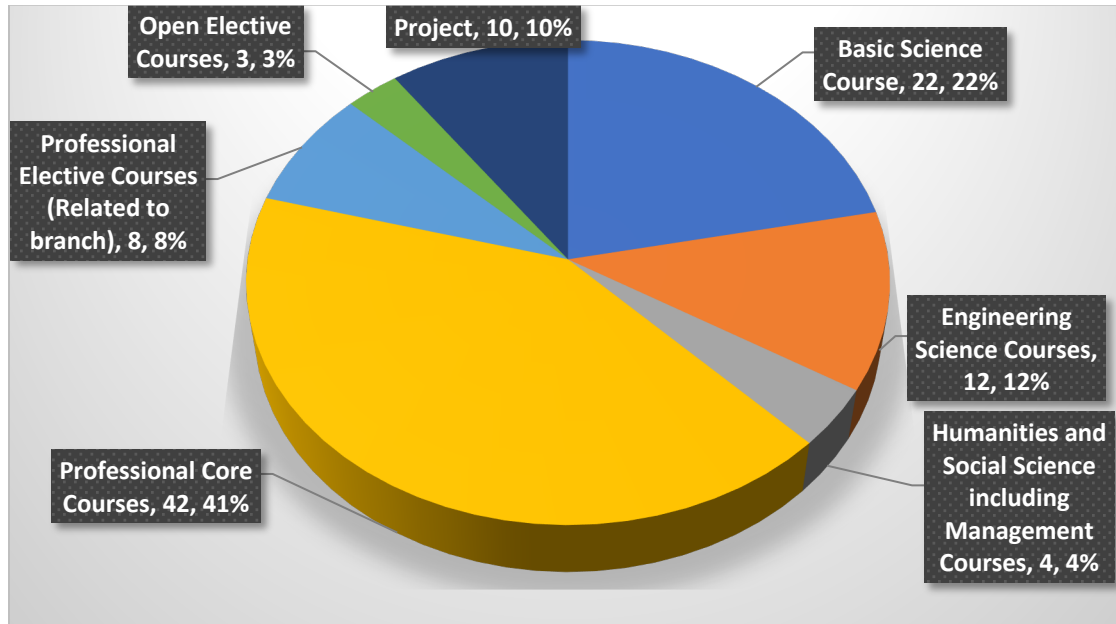


Figure 1: Distribution of credits for the scheme of CSE-Data Science as per AICTE

FAQs

1. What are the placement opportunities for your branch?

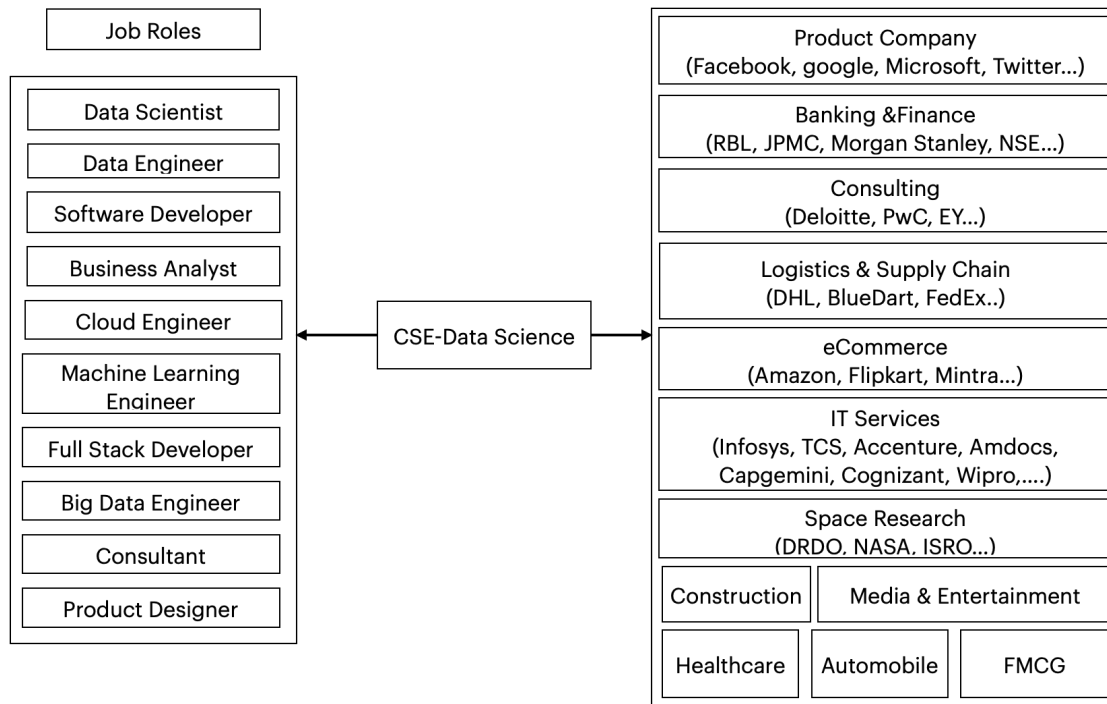


Figure 2: Prospective job roles and categories of companies for placements for CSE-Data Science



2. Why will my ward choose your branch?
It depends on the interest of the student. If he/she would like to pursue a career in Computer Science and/or Data Science, then Computer Science and Engineering (Data Science) will be a good choice.
3. Prerequisites/ Interests required from a particular student for choosing the branch.
Prerequisites are same as for other engineering branches in DJ Sanghvi and Interest should be in Computer Science and/or Data Science
4. If my ward chooses your branch, what are his/her higher study prospects?
 - All foreign Universities offering master's in computer science, Data Science and Artificial Intelligence.
 - MBA
 - M.Tech in Computer Science.
5. What is the overlap of subjects between different branches offered from Computer & IT?

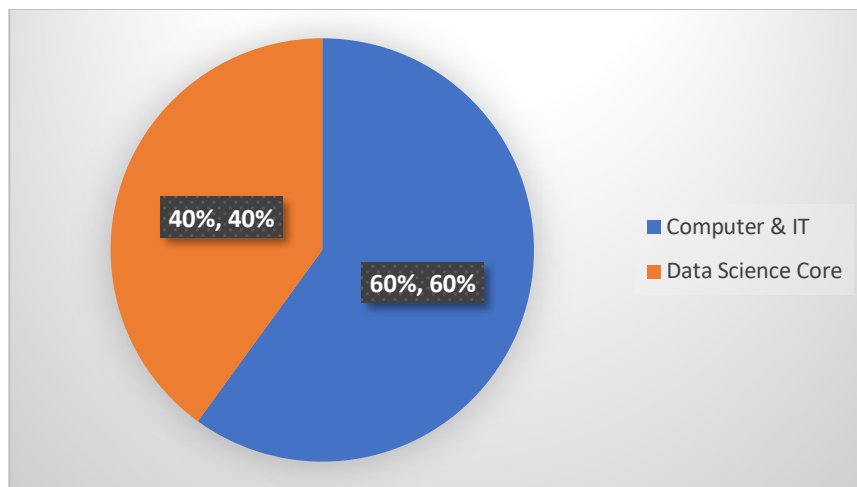


Figure 3: Difference between Computer- IT and CSE-Data Science