Okay, here's a detailed list of all the topics covered in the BCA syllabus you provided, organized by semester:

Semester I

- **CA-101-T (Problem Solving and Programming in C):** Problem-solving techniques, algorithms, flowcharts, C fundamentals (data types, operators, expressions, input/output), control structures (if-else, switch, loops), functions (user-defined, library, recursion), arrays (single and multi-dimensional).
- **CA-103-T (Computer Organization & Architecture):** Number systems, Boolean algebra, logic gates, combinational circuits, sequential circuits, CPU organization, memory organization, I/O organization.
- **CA-105-T (Discrete Mathematics and Statistics):** Set theory, logic, relations, functions, counting, probability, data presentation, measures of central tendency and dispersion, correlation, regression, sampling.
- **OE-101 (Introduction to Data Science):** (If chosen) Data science introduction, types of data, applications, lifecycle, role of data scientists, statistics for data science, data science models and tasks, data quality, pre-processing, visualization.
- **VSEC-101 (HTML and Web Page Designing):** HTML elements and tags, CSS, JavaScript, website design.

Semester II

- **CA-151-T (Advanced C Programming):** Advanced C features, data types, preprocessor directives, pointers, strings, structures, file handling.
- **CA-153-T (Introduction to Microcontrollers):** Microcontroller basics, 8051 architecture and programming, interfacing techniques, applications.
- **CA-155-T (Linear Algebra):** Systems of linear equations, matrices, vector spaces, dimensions, rank, nullity, eigenvalues, eigenvectors, linear transformations.
- **OE-151 (Data Science using Spreadsheet Software):** (If chosen) Spreadsheet concepts, functions, formulas, charts, graphics, filters, sorting, data analysis.
- **VSEC-151 (Software Tools for Business Communication):** Word processing, spreadsheets, presentations, electronic communication tools, G-Suite.

Semester III

- **CA-201 (Data Structures):** Various data structures. (Specific data structures not listed in the provided syllabus excerpt).
- **CA-221 (C++ Programming):** C++ programming concepts. (Specific concepts not listed in the provided syllabus excerpt).
- **CA-231-FP (Field Project):** A practical project.

- **CA-241-MN (Programming with Python - Minor):** Python programming. (If Minor is chosen)
- **OE-201 (Introduction to Artificial Intelligence):** Basic AI concepts. (If chosen)
- **IKS-100/CA-200 (Generic Course from University Basket/Indian Knowledge for Computing Systems):** Topics vary.

Semester IV

- **CA-251 (Database Management Systems):** Database concepts. (Specific concepts not listed in the provided syllabus excerpt).
- **CA-271-VSEC (Python Programming):** More Python programming.
- **CA-281 (Community Project):** A community-based project.
- **CA-291-MN (Intro to AI & Machine Learning - Minor):** AI/ML Introduction. (If Minor is chosen)
- **OE-251 (Software Tools for Office Administration):** Office software tools. (If chosen)
- **CA-271-EEM (Startup and Entrepreneurship):** Startup and entrepreneurship concepts.
- **AEC-101/Generic Course from University Basket:** Topics vary.

Semester V

- **CA-301 (Software Engineering and Testing):** Software development lifecycle, testing methodologies.
- **CA-302/304 (Fundamentals of AI/Data Science):** Core AI and data science concepts.
- **CA-310 or 312 or 314 (UI/UX Design OR Cloud Computing OR Cyber Security):** One elective is chosen.
- **CA-321 (Core JAVA Programming):** Java fundamentals.
- **CA-331 (Field Project):** A practical project.
- **CA-341-MN (Introduction to AR/VR - Minor):** AR/VR basics. (If Minor is chosen)

Semester VI

- **CA-351 (Software Project Management):** Project management principles applied to software.
- **CA-352 (Web Programming):** Web development concepts. (Specific technologies not specified).
- **CA-354 (Operating System Design):** OS Design principles.
- **CA-360 or 362 or 364 (Prompt & Generative AI OR Big Data and Analytics OR Mobile Application Development):** One elective is chosen.
- **CA-371 (Advanced Java Programming):** Advanced Java topics.
- **CA-381 (On-the-Job Training/Internship):** Practical work experience.

Semester VII & VIII (Hon. with Research and Multidisciplinary Minor)

- Advanced topics including Object-Oriented Modeling and Design, Operations Research, Natural Language Processing, Machine Learning, Full Stack Development, Research Project, etc. The specific minor chosen will add additional courses.

Semester VII & VIII (Hon. and Multidisciplinary Minor)

- Similar to above, but with a stronger focus on a specific multidisciplinary minor and possibly an internship/OJT.

Semester VII & VIII (Double Minor)

- Focus on two minor specializations, chosen from university basket courses, along with a research project.

Let me know if you'd like more detail on any specific course!