| Gen 2005 | **INTRODUCTION TO COMPUTING** | (CR3) |
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| **Preq.** | **FSc/A-Level or equivalent** | |

**Objectives**

*To acquaint the students with the structure, operation, programming, and applications of computers.*

**Syllabus**

Fundamentals of a digital computer, computer operations, components of a computer, hardware and software, operating systems, processing and storing data, network basis, database management, devices, physical and logical storage, data organization, file storage, programs and software, application software, problem specification, flow chart, variables and constants, arrays, input/output, termination, social impact of computer age, computers in office, industry and education, networking devices, use of flow charts, introduction to office tools including spreadsheet, word processing and presentation, introduction to mathematical softwares such as MATLAB, MATHEMATICA, MAPLE, overview of different browsers, coding, executing and debugging simple programmes, the future of computing, application, algorithm development and writing flowcharts, flow control and loops, programming languages, software development methodologies, data types, string and operators, introduction to writing documents in MS office and power point presentation, introduction to a scientific language (C/C++).

*Recommended Books*
1. *Discovering Computers, by M. E. Vermaat, S. L. Sebok, S. M. Freund, J. T. Campbell, M. Frydenberg, Cengage, (2017)*
2. *Software Engineering Concepts, by R. Fairely, McGraw-Hill (2001)*
3. *Introduction to Computers, by G. B. Shelly, S. M. Freund, M. E. Vermaat, Cengage, (2010)*
4. *Introduction to Computers, by P. Norton, Career Education, (2002).*