



UNIVERSITY OF CALCUTTA

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Dated the 19th December, 2016

To
The Principals /T.I.C.
of all the Undergraduate Colleges
offering B.A./B.Sc. (Honours) in Computer Science
affiliated to the University of Calcutta

Sir/Madam,

The undersigned would like to forward you the **Draft Syllabus for Computer Science (Honours)**, to be implemented from the academic session 2017-2018 to get feedback from the Department of Computer Science in your college.

You are requested to send your feedback within 06th January, 2017.

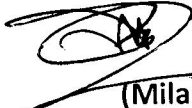
In this regard you may send your observation/ suggestion to the **Department of U.G. Councils, C.U.** or through **email (u.g.councilsc.u@gmail.com)**, C.U. or you may contact **Prof. Paramita Sikdar (Mob:9903980667; email: psikdar1961@yahoo.com)**.

Your cooperation in this regard will be highly appreciated. Kindly treat the matter as urgent.

Thanking you,

Encl: Copy of the Draft Syllabus.

Yours faithfully,


19.12.16
(Milan Kr. Pal)
O.S.D., C.U.

**Proposed Syllabus for B.Sc in Computer Science Honours 2018-19,
University Of Calcutta**

| Semester - 1 | | | |
|-----------------------|---|---|--|
| Course Type | Subject | Practical | Remarks |
| Core | Digital Logic and System Design | Hardware Practical | Combinational and Sequential Circuits |
| | Problem Solving by Computer Programming Language | Programming language | Different Types of Problem Solving |
| Interdisciplinary | Business Software & its Commercial Application | Practical using related packages | |
| | Introduction to Electronic Devices | Analog Devices | |
| Ability | Communicative English | Improving communication skill in English. | |
| Semester - 2 | | | |
| Course Type | Subject | Practical | Remarks |
| Core | Computer organization and Architecture | Computer Architecture Hardware Practical | Construction of ALU, Control Unit, Registers etc |
| | Discrete Mathematics - I | Statistical Problem Solving | |
| Interdisciplinary | E- Commerce & Financial Management | Related Packages | |
| | Industrial Electronics | Electronic instruments/Devices in Industries | |
| Ability | Writing Document Generation | | |
| Semester - III | | | |
| Course Type | Subject | Practical | Remarks |
| Core Course | Data Structure | Implementation using Computer Programming Language. | |
| | Operating System | UNIX Shell Programming | |
| | Discrete Math - 2 | Problems using Programming Language | Problems related to Graph Theory, Differential Equations, Numerical Analysis, Matrix Algebra |
| Interdisciplinary | Business Management and Operation Research | Related Practical | Tools, Assignment problem. |
| | Industrial Electronics System and Design | Different types of Control Circuits and their design | |
| Skill Based | Office Automation Tools | Office Automation packages e.g, MS office, Libre or Open Office etc | |
| Semester - IV | | | |
| Course Type | Subject | Practical | Remarks |
| Core | Data Base Management System (DBMS) | Relational database Management System Package e.g. MySQL, PostgreSQL, Oracle, Microsoft SQL Server. | |
| | Microprocessor and its Application | Programming Microprocessor 8085 using Assembly Language Programming Techniques. | |
| | Programming Language - 1 | Algorithms Design / Implementation using PYTHON | |
| Interdisciplinary | Multimedia Design | Related Packages | |
| | Introduction to Robotics including microcontroller. | Microcontrollers, Embedded Systems | |
| Skill Based | Image Based Document Processing | Photo Editing and other related packages for document and image based processing. | |
| Semester - V | | | |
| Course Type | Subject | Practical | Remarks |
| Core | Introduction to Analysis of Algorithms | Analysis/Different Algorithms using Computer Programming Language | |
| | Theory of Computation | Object Oriented Programming Using JAVA | |
| Disciplinary | Compiler Design | Related Practical | |
| | Computer Graphics | Related Practical | |
| Semester - VI | | | |
| Course Type | Subject | Practical | Remarks |
| Core | Software Engineering | Project | |
| | Data Communication | Networking, LAN, WiFi based practical | |
| Disciplinary | Digital Image Processing | Related Package, Matlab/Open source | |
| | Computational Biology | Project - Related to any practical problem | |