



**The Kerala State Higher Education Council**  
Restructured Curriculum for Undergraduate Courses

**Syllabi for Methodology Courses**  
**INFORMATICS**

**Course : 13**

**No. of Credits - 4**

**No. of Contact hours - 90**

**Aim of the Course**

To update and expand basic informatics skills and attitudes relevant to the emerging knowledge society and also to equip the students to effectively utilize the digital knowledge resources for their chosen courses of study.

**Objectives of the Course**

- To review the basic concepts & functional knowledge in the field of informatics.
- To review functional knowledge in a standard office package and popular utilities
- To create awareness about nature of the emerging digital knowledge society
- To create awareness about social issues and concerns in the use of digital technology
- To create awareness about major informatic initiatives in India and Kerala
- To impart skills to enable students to use digital knowledge resources in learning.

**Course Outline**

**Module I - OVERVIEW OF INFORMATION TECHNOLOGY**

Features of the modern personal computer and peripherals, computer networks & Internet, wireless technology, cellular wireless networks, introduction to mobile phone technology, introduction to ATM purchase of technology, License, Guarantee, Warranty, overview of Operating Systems & major application software

**Module II - KNOWLEDGE SKILLS FOR HIGHER EDUCATION**

Data, information and knowledge, knowledge management- Internet access methods – Dial-up, DSL, Cable, ISDN, Wi-Fi - Internet as a knowledge repository, academic search techniques, creating cyber presence, case study of academic websites, open access initiatives, open access publishing models. Basic concepts of IPR, copyrights and patents, plagiarism, introduction to use of IT in teaching and learning, case study of educational software, academic services-INFLIBNET, NICNET, BRNET

**Module III - SOCIAL INFORMATICS**

IT & Society- issues and concerns- digital divide, IT & development, the free software movement, IT industry: new opportunities and new threats, software piracy, cyber ethics, cyber crime, cyber threats, cyber security, privacy issues, cyber laws, cyber addictions, information overload, health issues- guide lines for proper usage of computers, internet and mobile phones. e-wastes and green computing, impact of IT on language & culture-localization issues- Unicode- IT and regional languages

## **Module IV - IT APPLICATIONS**

e-Governance applications at national and state level, IT for national integration, overview of IT application in medicine, healthcare, business, commerce, industry, defense, law, crime detection, publishing, communication, resource management, weather forecasting, education, film and media, IT in service of disabled, futuristic IT- Artificial Intelligence, Virtual Reality, Bio-Computing

## **Module V & VI: STREAM-SPECIFIC/SUBJECT-SPECIFIC MODULES**

**Science-** Typesetting with LaTeX, Introduction to Scilab/Matlab,

**Social Sciences:** Data Analysis with Scilab/SPSS,

**Business Studies:** eCommerce Case Studies, Online trading, Net-banking, Scilab/SPSS,

**Humanities:** Language Computing Tools in Indic languages,

### **Note on course work**

1. The first 4 modules are to be dealt with a very generic manner only (and hence can be taught by non-specialist teachers). The last two modules are to be taught by teachers belonging to the subject.
2. Demonstrations, presentations, hands-on experience etc are to be used wherever possible. Seminars, case studies and discussions are to be encouraged along with traditional lecturer-tutorial method.
3. Practical skills should be evaluated in CA and final exam should be a written exam only.
4. On the choice of OS and application softwares, each institution is free to decide, though it is recommended that Linux and Open Office.org (for Open Office, both windows and Linux versions are available) be preferred. In lectures, generic features may be covered rather than product-specific features.

### **Essential Reading**

- Technology in Action, Pearson
- V. Rajaraman, Introduction to Information Technology, Prentice Hall
- Alexis Leon & Mathews Leon, *Computers Today*, Leon Vikas, Rs. 180
- Peter Norton, Introduction to Computers, 6e, (Indian Adapted Edition),

### **Additional References**

- Greg Perry, SAMS Teach Yourself Open Office.org, SAMS,
- Alexis & Mathews Leon, *Fundamentals of Information Technology*, Leon Vikas
- George Beekman, Eugene Rathswohl, Computer Confluence, Pearson Education,
- Barbara Wilson, Information Technology: The Basics, Thomson Learning
- John Ray, 10 Minute Guide to Linux, PHI, ISBN 81-203-1549-9
- Ramesh Bangia, *Learning Computer Fundamentals*, Khanna Book Publishers

### **Web Resources:**

- [www.fgcu.edu/support/office2000](http://www.fgcu.edu/support/office2000)
- [www.openoffice.org](http://www.openoffice.org) *Open Office Official web site*
- [www.microsoft.com/office](http://www.microsoft.com/office) *MS Office web site*
- [www.lgta.org](http://www.lgta.org) *Office on-line lessons*
- [www.learnthenet.com](http://www.learnthenet.com) *Web Primer*

- [www.computer.org/history/timeline](http://www.computer.org/history/timeline)
- [www.computerhistory.org](http://www.computerhistory.org)
- <http://computer.howstuffworks.com>
- [www.keralaitmission.org](http://www.keralaitmission.org)
- [www.technopark.org](http://www.technopark.org)
- <http://ezinearticles.com/?Understanding-The-Operation-Of-Mobile-Phone-Networks&id=68259>
- <http://www.scribd.com/doc/259538/All-about-mobile-phones>
- <http://www.studentworkzone.com/question.php?ID=96>
- <http://www.oftc.usyd.edu.au/edweb/revolution/history/mobile2.html>

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