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RGPV B.Tech – First Year Syllabus

BT-205: Basic Computer Engineering

Unit I: Computer Fundamentals

- Definition, classification, organization (CPU, registers, buses)
- Memory and storage systems, I/O devices
- System and application software
- Applications in eBusiness, bioinformatics, healthcare, GIS, gaming
- Operating systems: functions, types, file/process/memory management
- Basics of MS Word, PowerPoint, Excel

Unit II: Programming Concepts

- Algorithms, flowcharts, programming languages
- Program design, paradigms, OOP vs procedural programming
- Introduction to C++: syntax, tokens, data types, operators
- Control structures, I/O operations, arrays, functions

Unit III: Object-Oriented Programming

- Objects and classes, scope resolution
- Constructors, destructors, friend functions
- Inheritance, polymorphism, function/operator overloading
- Virtual functions, intro to data structures

Unit IV: Networking & Cyber Security

- Networking goals, OSI & TCP/IP models
- Internetworking devices, internet, WWW, e-commerce
- Security basics: viruses, malware, Trojans, spyware
- Cyber threats: spoofing, DoS, stalking, defamation
- Security measures: firewalls, ethics, cyber laws

Unit V: DBMS & Cloud Computing

- File vs database approach, data models
- DBMS architecture, data independence, dictionary
- DDL and DML, primary keys, role of DBA
- Cloud computing: IaaS, PaaS, SaaS
- Deployment models: public, private, hybrid



Download Official Syllabus

- [RGPV Notes – BT-205 Full Breakdown](#)
- [Career Shiksha – BT-205 PYQs](#)

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