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## RGPV B.Tech – 1st Semester Syllabus (Common to All Branches)



### Core Subjects

#### **BT-101: Engineering Mathematics-I**

Covers calculus, differential equations, and linear algebra. Topics include limits, continuity, derivatives, integration, matrices, eigenvalues, and Laplace transforms.

#### **BT-102: Engineering Physics**

Introduces wave optics, quantum mechanics, semiconductors, superconductivity, and nanotechnology. Focus on physical principles applied to engineering systems.

#### **BT-103: Basic Electrical & Electronics Engineering**

Covers DC/AC circuits, network theorems, transformers, diodes, transistors, and basic digital electronics. Includes circuit analysis and lab simulations.

#### **BT-104: Engineering Mechanics**

Focuses on statics and dynamics of particles and rigid bodies. Topics include force systems, equilibrium, friction, centroid, moment of inertia, and kinematics.

## BT-105: Communication Skills

Enhances verbal and written communication. Includes grammar, vocabulary, technical writing, presentations, and interpersonal skills for engineers.



## Labs & Practicals

### BT-106: Engineering Physics Lab

Experiments on optics, semiconductors, and mechanics. Includes laser, Hall effect, and resonance studies.

### BT-107: Basic Electrical & Electronics Lab

Hands-on with circuit building, diode/transistor testing, and basic measurements using multimeters and oscilloscopes.

### BT-108: Communication Skills Lab

Activities include group discussions, mock interviews, presentations, and listening comprehension exercises.



## Download Official Syllabus

- [RGPV Scheme Portal](#)
- [Kopykitab Syllabus Hub](#)
- [Career Shiksha Breakdown](#)