

Government of Karnataka Department of Collegiate Education



DEPARTMENT OF ELECTRONICS

B.Sc. SEMESTER SCHEME CURRICULUM STRUCTURE IN ELECTRONICS STATE EDUCATION POLICY(SEP)

DSC | E (I-SEM): Electronic Devices and Circuits

DSC II E (II-SEM): OP-AMP and Linear Integrated Circuits

Academic Year: 2024-25 onwards

Government College(Autonomous)

Sedam Road

KALABURAGI – 585 105



GOVI OF KARANATAKA Department of Collegiate Education

GOVERNMENT COLLEGE (AUTONOMOUS) KALABURAGI

(NAAC Reaccrediated with 'B', Grade)

SEDAM ROAD, KALABURAGI – 585105

No.GCAK/BOS(UG)/ELE/SEP/2024-25/

Date:14-08-2024

OFFICE ORDER

Sub: Appointment of Members of Board of Studies (UG) in ELECTRONICS

Ref: 1. UGC Revised Guidelines for Autonomous College dt.19.01.2018

- 2. Karnataka Govt. Order No: ED 166 UNE 2023, BENGALURU, D::08.05.2024
- 3. Registrar, GUK Letter No.GUK/BOS/2017-18/2547 dated 24/01/2018
- 4. Resolution of the DC meeting held on 14-08-2024

Advert to the above cited subject and references, the Board of Studies(UG) in ELECTRONICS has been constituted as shown below.

BOARD OF STUDIES(UG) IN ELECTRONICS

Sl. No.	Name of the Member	Designation	Address with Phone No & email	Appointed as
1	Prof. Srinivas Ramacharya	Assistant Professor	Department of Electronics Govt. College(A), Kalaburagi Cell No: 9480272509 Email: srcharyamalgi@gmail.com	Chairman
2	Dr. R. L. Raibagkar	Professor	Department of Applied Electronics, Gulbarga University Kalaburagi Cell No:9739302083 Email: rlraibagkar@rediffmail.com	University Nominee
3	Dr. Manjunatha Reddy H. K.	Associate Professor	Department of Electronics Govt. College(A), Kalaburagi Cell No: 9448823002 Email: manjunathareddy002@gmail.com	Member
4	Shaheen Fatima	Assistant Professor	Department of Electronics Govi. College(A), Kalaburagi Cell No: 9945152553 Email: @gmail.com	Member
5	Dr. Syeda Rafath Ara	Associate Professor	Department of Electronics Govt. College(A), Kalaburagi Cell No: 7026690786 Email: s.rafathara@gmail.com	Member
6	Dr. Rekha A	Associate Professor	Department of Electronics Govt. College(A), Kalaburagi Cell No: 9480420661 Email: @gmail.com	Member

7	Prof. S. R. Bharati	Assistant Professor	N.V. Degree College, Kalaburagi Email: 8904579722	External Member (Other than Parent University)
8	Prof. Y. N. Ravindra	Assistant Professor	Smt. V. G. Women's College Kalaburagi Cell no.9482677742	External Member (Other than Parent University)
9	Dr. Vinodkumar Rathod	Associate Professor	Govt. College(Autonomous), Kalaburagi. Cell No. 9448586111	External Member Representing Industry/Corporat e Sector/Allied area
10	Prof. Shivakumar Kalaburagi	Assistant Professor	Govt. College(Autonomous), Kalaburagi. Cell No. 9845944421	External Member Representing Industry/Corporat e Sector/Allied area
1	Dr. Nagraj Kulkarni	Associate Professor	Govt First College, Naubad Bidar Cell.No. 9449619203 Email: nagrajbolewad101@gmail.com	Alumni Member

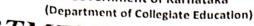
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Govt. College (Autonomous)
KALABURAGI-585 105

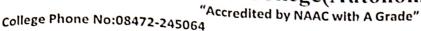
- 1. Chairman, Board of studies (UG) in Electronics
- 2. All the members of BOS
- 3. Academic Dean(UG), Govt College(Autonomous), Kalaburagi
- 4. Office Copy



Government of Karnataka







Website: gcak.ac.in

Ref No: GCAK/BOS(UG)/2024-25/

Date:14.08.2024

The UG BOS Meeting was held on 14.08.2024 in the Department of Electronics, Government College (Autonomous).Kalaburgi. The following members were present in the meeting.

Sl.No	Name of the BOS member	Designation in the BOS	Signature
1	Srinivas Ramacharya	Chairman	Suni
2	Prof. Dr.R L Raibagkar	University Nominee	4
3.	Dr. H.K Manjunathreddy	Member	July
4.	Smt. Shaheen Fatima	Member	Bose
5.	Dr. Syeda Rafath Ara	Member	BILL
6.	Dr. Rekha J Annigeri	Member	- Amoronian
7	Prof S R Bharati	External Member	
8	Sri. Y.N Ravindra	External Member	() Gidi
9	Dr Nagraj Kulkarni	External Member(Alumni)	Albru
10	Sri Shivakumar Kalaburgi	External Member	
11	Dr Vinod kumar Rathhod	External Member	

Following are the resolutions

- 1. The Chairman, UG, BoS in Electronics has mentioned the members
- 2. The B.Sc Syllabus for B.Sc I and II semester has been prepared by referring the Electronics syllabus submitted by State Level Syllabus committee -SEP-2024-25. The existing syllabus is partially modified within 20% in order to implement the Syllabus effectively. If any suitable corrections or modifications are needed, it will be incorporated by the Chairman of BOS.
- 3. The Question paper model (Note-If the examination branch/College prepares common Question paper model it will be followed) and the List Examiners in the Electronics subject is above prepared to carry out the confidential work of the predefined course and examination related works.

4. The meeting is ended with vote of thanks by the Chairman to all the internal, external University members.

RSC I SEMICSTER ELECTRONICS

Program Name Semester	H. Se. in Electronics First semester Flootronic Devices and Circuits		
Chinan Lith			
Church Chips	1786,114	No. of Credity 4	
Paching hours	48 hours	Duration of Exam: Offices	
Formative Assessment Marks	30	Summattre Assessment Marles: 80	

Course Objectives:

On completing the course, H(R) -CTI, the students will be able to understand-

- Various soundeemductor devices and their applications,
- Working principle of Regulators,
- Wave Shaping chemits
- Hipotar and Unipotar devices,
- Anthors of different Network theorems,
- Ownerchanie devices
- Measuring instruments

that 1:12 Hours

Semiconductor Diodes: PN Junction diodes-construction, formation of depletion layer, I-V characteristics, Fener diodes Construction and IV Characteristics,

Recitters: Half Wave recities, Full Wave recities (centre toped, Dridge recities) - circuit dagram, Working and waveforms, Expression for Ripple factor and Efficiency.

Effects: Shuar capacitor filter, its rale in power supply, output waveform and working.

Unit 12:12 Hours

Voltage Regulatory: Block diagram of regulated Power supply. Line and Load regulation. For or diode as voltage regulator,

IC Voltage Regulators: Fixed IC regulatory - IC 78XX and IC 79XX, Variable IC regulators: IC LALME and LALME pin diagram, circuit, working,

Linear Wave shaping circuits: RC and RL differentiator and integrator = Expression for O/P Voltage and study of I/O waveforms.

Non Linear Wave shaping Circuits: Clippers a positive, negative, positive biased, negative biased and combinational elipper. Clampers - Positive and negative clampers; circuit diagram, working and I/O waveforms of all circuits.

Unit III :

12 Hours

Bipolar June?ion Transistors (BJT) (Construction, Types, CE, CB, and CC configurations (mention only), V-1 Characteristics of a transistor in CE mode, Regions of operation (Active, out off and saturation), leakage entrents (mention only), Current pains a, B and their interrelations, transistor as a Switch.

Unipolar devices: Junction Field Effect transistor (JFET) Types (Mention only), construction and working of N-Channel FET, Characteristics, FET Parameters and their relationships, Comparison of FET and BJT,

Uni Junction Transistor (UJT): Basic construction, working, I-V characteristics, Intrinsic stand-off ratio, UJT as a relaxation oscillator.

Uni Junction Transistor (UJT): Basic construction, working, I-V characteristics, Intrinsic stand-off ratio, UJT as a relaxation oscillator.

Unit IV:12 Hours

Network theorems: Kirchhoff's Voltage iaw, Kirchhoff's current law, Voltage divider and current divider theorems, Thevenin's theorem, Norton's theorem, Maximum power transfer

Optoclectronic Devices: Construction and Working of LED, Photo diode, Photo transistor,

Measuring Instruments: Block diagram of Function Generator, Cathode Ray Oscilloscope,

REFERENCE BOOKS:

- 1. Fundamentals of Electronics: B. Basavaraj (Omkar Publications, Bangalore) revised
- 2. Principles of Electronics: V. K. Metha: Edition 1995 (S. Chand & Company, New Delhi)
- 3. Fundamentals of Electrical and Electronics Engineering: B. L. Theraja- (S. Chand. and
- 4. Basic Electronics and linear Circuits: N. N. Bhargava., D C Kulshresta and D C Gupta-TMH Publishers 4th Ed.
- 5. Electronic devices: David A Bell-Reston publishing Company/DB Tarapurwala Publishers.