

Centenary Celebrated Sharnbasveshwar Vidya Vardhak Sangha's



# Sharnbasveshwar

College of Science, Kalaburagi, Karnataka

(Affiliated to Gulbarga University, Kalaburagi)

(Diamond Jubilee Celebrations Year 1956 - 2016)

IQAC CELL & DEPT. OF PHYSICS

organizes

## Add-On Course: Basic Physics & Value-Added Course: Yoga

In the Benign Presence of

**Poojya Dr. Sharnbaswappa Appaji**

Mahadasoha Peethadhipathi, Sharnbasveshwar Samsthana,  
President, Sharnbasveshwar Vidya Vardhak Sangha, Kalaburagi  
President, Akhil Bharata Anubhava Mantapa,  
Chancellor, Sharnbasva University, Kalaburagi

Inaugurator & Chief Guest:

**Prof. P. S. Naik**

Registrar,  
Karnataka State Open University, Mysore

Guest of Honour:

**Dr. Nirmala C.**

Professor, Department of Dravyaguna  
Shri Hingulambika Education Society's Ayurvedic Medical College  
& Research Center.

President:

**Dr. Sannabasanna G Dollegoudar Patil**

Principal,  
Sharnbasveshwar College of Science, Kalaburagi

Venue: Appa Seminar Hall

Date: 13-08-2019 at 11.30 Am

*All Are Cordially Invited*

IQAC Co-ordinator  
**Dr. S. T. Sulepetkar**  
**Dr. Omprakash S.**

Principal  
**Dr. S. G. Dollegoudar**

Program Coordinator  
**Smt. Jayashree C.**  
**Dr. Chitralekha A.**

**SHARANBASAVESHWAR COLLEGE OF SCIENCE, KALABURAGI**  
**DEPARTMENT OF PHYSICS**

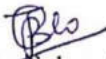
**NOTICE**

All the B.Sc.-I semester(PCM, PME, & PMCs) students are hereby informed that, Department of Physics conducting the following **value-added Course**

**and add on course in:**

- i) BASIC PHYSICS (addon)
- ii) YOGA (value-added)

The interested students can register their names with the faculty members **Mr. Abhishek. S. & Miss. Pooja. C**, Department of Physics on or before 02/08/2019.

  
Head of the department  
Head  
Department of Physics  
Shambasveshwar College of Science,  
GULBARGA-585 103

  
Principal  
SHARANBASAVESHWAR COLLEGE  
OF SCIENCE, KALABURAGI

**Sharanbasaveshwar College of Science, Kalaburagi**  
**Department of Physics**

**ADD ON COURSE: BASIC PHYSICS**

CourseCode: -ACBP-001

**COURSE DESCRIPTION**

Major Concepts in Physics, deals with energy and the allied ideas of motion, forces, heat, and thermodynamics. This course will give you a comprehensive grounding in physics and introduce you to Units & Measurements, Mechanics, Heat & Thermodynamics, and Oscillation & Waves. We will learn how physicists have successfully described our world. Our study will help you build your scientific understanding of the world and develop skills necessary for critical thinking and problem solving.

The Department Physics, Shambasveshwar College of Science, Kalaburgi started a three months Value added Course in "Basic Physics" during the academic session of 2019-20. The Certificate course is brought under the Self-financing programme and the re-nomenclature as **value added course in Basic Physics:**

**Batches:**

This program runs in two batches, the batches starts in August and runs till October. The applicants are advised to keep visiting regularly for announcements, notices and updates

1	No. of Seats	50 (per batch)
2	Eligibility	B.Sc.-I semester
3	Course Fees	Nil
4	Timing : (August-October)	4.00 p.m. – 5.00 p.m.
6	Registration Fees	Rs. 50=00 for all candidates
7	Last date	02.08.2019

**Contact Information:** Head Department of Physics.

Programme Co-ordinator : **Dr. Jayashree Chalageri.**

Asst. Programme Coordinator : **Mr. Abhishek C. S.**

**Course Objectives:**

The Department of Physics offers Value-added course in Basic Physics for duration of 3 months for the B.Sc.-I semester students. The course aims to equip students with deeper knowledge of Basic Physics and to bridge the gap especially for students coming from the rural area who are advancing from the higher secondary course to the degree level.



**Grades:**

Grades will be based on attendance, two internal examination and main examination.

A = 90 – 100%; B = 80 – 89%; C = 70 – 79%; D = 50 – 69%; F = 0 – 49%


**Curriculum:**

Credits: 30

Unit	Chapter / Topic	Credits
I	<b>Physical World and Measurement:</b>	3
	<b>Chapter-1: Units and Measurements:</b> Units of measurement; systems of units; SI units, fundamental and derived units. Accuracy; errors in measurement; significant figures. Dimensions of physical quantities, dimensional analysis and its applications.	
II	<b>Kinematics:</b>	6
	<b>Chapter-2: Motion in a Straight Line:</b> Frame of reference, Motion in a straight line: Position-time graph, speed and velocity. Uniform and non-uniform motion, average speed and instantaneous velocity. Uniformly accelerated motion.	
	<b>Chapter-3: Motion in a Plane:</b> Scalar and vector quantities; Position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors; addition and subtraction of vectors. Unit vector; Scalar and Vector product of vectors. Motion in a plane: uniform velocity and acceleration; Uniform circular motion.	
III	<b>Laws of Motion:</b>	5
	<b>Chapter-5: Laws of Motion:</b> Concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Static and kinetic friction, Dynamics of uniform circular motion: Centripetal force, examples of circular motion .	
IV	<b>Work, Energy and Power :</b>	3
	<b>Chapter-6: Work, Energy and Power:</b> Work done by a constant force and a variable force; kinetic energy, power. Conservative forces & non-conservative forces; elastic and inelastic collisions.	
V	<b>Motion of System of Particles :</b>	4

	<b>Chapter-7: System of Particles and Rotational Motion:</b> Centre of mass of a two-particle system, momentum conservation and center of mass motion, Moment of inertia, radius of gyration.	
VI	<b>Gravitation :</b> <b>Chapter-8: Gravitation:</b> Keplar's laws of planetary motion, The universal law of gravitation, Acceleration due to gravity and its variation with altitude and depth, Escape velocity, Orbital velocity of a satellite, Geo-stationary satellite	3

VII	<b>Heat &amp; Thermodynamics :</b> <b>Chapter-11: Thermal Properties of Matter:</b> Heat, temperature, thermal expansion: thermal expansion of solids, liquids and gases, specific heat capacity: change of state - latent heat capacity. <b>Chapter-12: Thermodynamics:</b> Thermal equilibrium and definition of temperature, Heat, work and internal energy, First law of thermodynamics, Isothermal and adiabatic processes, Second law of thermodynamics: reversible and irreversible processes.	3
VIII	<b>Oscillation &amp; Waves :</b> <b>Chapter-14: Oscillations &amp; Waves:</b> Periodic motion - time period, frequency, displacement as a function of time, Periodic functions, Simple harmonic motion (S.H.M) and its equation; Wave motion, Transverse and longitudinal waves, speed of wave motion, Displacement relation for a progressive wave.	3

  
 Head of the department  
**Head**  
 Department of Physics  
 Sharnbasveshwar College of Science,  
 GULBARGA - 585 103

  
 PRINCIPAL  
**SHARNBASVESHWAR COLLEGE**  
**OF SCIENCE, GULBARGA**

**Sharanbasaveshwar College of Science, Kalaburagi**  
**Department of Physics**

**ADD ON COURSE: BASIC PHYSICS**  
Course Code: - FACBP-001

**List of students**

Sl.No	Roll .No	Name	Mobile No
1	11	Ambika .S. S	9449933879
2	15	Ankita .R. B	7899523656
3	19	Ashwini .S .M	
4	23	Bhagyalaxmi .S. N	
5	24	Bhagyalaxmi .Kole	9900769075
6	28	Bhagyashree .S	9731808628
7	29	Bhagyashree .S. M	
8	31	Bhavani G K	9743104317
9	32	Bhavani . M.K	
10	34	Bhuvaneshwari	9741094974
11	35	Chaitra .M. K	9341974756
12	39	Chetan .S. G	9686741137
13	41	Chitra .M. K	9902389144
14	42	Chaitra .S. P	9535605839
15	43	Chitralkha	9480042210
16	44	Dakshyani .R. C	
17	45	Daneshwari .M	9620791509
18	47	Devika .M. Goled	9008456860
19	49	Divya .N. patil	
20	51	Girija .R.W	6360622370
21	53	HaresaFirsous	9741731742
22	54	Indu .K. J	7483202530
23	57	K .Ranjita Reddy	6366319200
24	59	Kavita .Gundappa	9972687345
25	63	Mahalaxmi .S. P	9342332420
26	65	Malikarjun	9900809253
27	66	Mamata .C. S	9902424332
28	68	Meenakshi . A. S	7259428258
29	69	Megha .K. J	7051905374



30	70	Megha .N	8197394373
31	71	Meghana .M. N	
32	77	Pooja .M. Rodagi	8550066666
33	79	Preeti .S.C	7482994499
34	81	Pushpa .Patil	9449906975
35	89	Rashmi .J. B	9740480923
36	91	Revamma .Halli	9945297603
37	95	S. Mahadevi	7760668678
38	107	Shilpa .B	9449439730
39	108	Shilpasiddharood	8217444232
40	110	Shivanad .R.P	7338292822
41	114	Shraddha .Sanjeev	9972783365
42	129	Sushail .M. M	8151053106
43	133	Surekha .C. J	9845934176
44	134	Sushma .S.G	9342213050
45	143	Varsha .V. S	9663924932
46	151	Ambika .J. A	9901669251
47	162	Alokumar .S.S	6364077110
48	164	Bhagyashree .B. patil	9742065774
49	169	Chetan .K.D	8150090108
50	172	Ganga patil	9353977358
51	175	Kirankumar y d	9916766815
52	176	Mahalaxmi k	9845558505
53	177	Mallikarjunsagar	8217071168
54	178	Nikhil sheelavant	9740580487
55	190	Savita v reddy	7676829065
56	206	Vishal rathod	953897683
57	276	Aditya D P	9108261379
58	288	Pramodreddy	7619282628
59	289	Praveen j hibare	8861928356



HOD

Head

Department of Physics  
Sharnbasveshwar College of Science,  
GULBARGA - 585 103



PRINCIPAL  
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OF SCIENCE, GULBARGA

SHARNBASVESHWAR COLLEGE OF SCIENCE, KALABURAGI  
DEPARTMENT OF PHYSICS

Add-on Course in Basic Physics  
(Course Code: 'ABPHY-001')


Academic Year 2019-20

APPLICATION FORM



Name of Student : Bhavani M. Kadam  
Father's Name : Mallikarjun S. Kadam  
Male/Female : Female  
Date of Birth : 25<sup>th</sup> June 2001 Nationality: Indian  
Current Course : Bsc. I Sem  
Roll No : 32  
Combination : PCM Percentage: \_\_\_\_\_  
Caste : Hindu Category: III B  
Permanent Address : Block number 8, Varada block H.no:10  
Police quarters behind government  
hospital kalaburagi  
Contact No : 9019247171

  
Signature of Father/Mother/Guardian

  
Signature of the candidate

----- Office Use Only -----

ADMISSION IS GRANTED

SL.NO Bhalageri  
SIGNATURE OF COORDINATOR

  
PRINCIPAL  
SHARNBASVESHWAR COLLEGE  
OF SCIENCE, GULBARGA



SHARNBASVESHWAR COLLEGE OF SCIENCE, KALABURAGI  
DEPARTMENT OF PHYSICS

Add-on Course in Basic Physics  
(Course Code: VABPHY-001)

Academic Year 2019-20



APPLICATION FORM

Name of Student : Megha. N.  
Father's Name : Nagaraj  
Male/Female : Female  
Date of Birth : 29-03-2002 Nationality: Indian  
Current Course : Physics  
Roll No : 70  
Combination : PCM Percentage: 74.8%  
Caste : Vishwasha Lingayat Category: 3B  
Permanent Address : Near S.B college road  
Vidya Nagar Kalburgi  
Contact No : 8197394373.


  
Signature of Father/Mother/Guardian

  
Signature of the candidate

Office Use Only

ADMISSION IS GRANTED

SL.NO Bhalageri  
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PRINCIPAL  
Date: PRINCIPAL  
SHARNBASVESHWAR COLLEGE  
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1. Force acting on two point masses is directly proportional to
  - A. sum of masses
  - B. difference of masses
  - C. distance between masses
  - D. product of masses
2. Work done on an object to bring it to certain point in space is called
  - A. gravitational potential energy
  - B. potential energy
  - C. kinetic energy
  - D. mechanical energy
3.  $\text{N kg}^{-1}$  is equivalent to
  - A.  $\text{ms}^{-2}$
  - B.  $\text{m s}^{-1}$
  - C.  $\text{m s}$
  - D.  $\text{m s}^{-3}$
4. Spacing between field lines indicates
  - A. direction of field lines
  - B. strength of field lines
  - C. magnitude of field lines
  - D. work done by field lines
5. As distance increases, value of gravitational field strength
  - A. also increases
  - B. decreases
  - C. remains constant
  - D. may increase or decrease
6. At fairground, force that balances out our weight is
  - A. centripetal force
  - B. centrifugal force
  - C. friction
  - D. gravitational force
7. Centripetal force is directed towards the
  - A. tangent to circle
  - B. center
  - C. normal to circle
  - D. parallel to circle
8. Rate of flow of electric charge is
  - A. electric current
  - B. conventional current only
  - C. electronic current only
  - D. potential difference
9. Instrument which transfers energy to electric charges in a circuit is
  - A. battery
  - B. voltmeter
  - C. ammeter
  - D. galvanometer
10. Electric power is related to
  - A. current in component
  - B. potential difference
  - C. electrical resistance
  - D. both A and B
11. Magnitude of charge is known as
  - A. charge count
  - B. elementary charge
  - C. elementary count
  - D. charge number
12. A voltmeter arranged across power supply measures
  - A. potential difference
  - B. e.m.f
  - C. current
  - D. resistance
13. By increasing current, drift velocity
  - A. decreases
  - B. increases
  - C. remains constant
  - D. becomes zero
14. Strength of magnetic field is known as
  - A. flux
  - B. density
  - C. magnetic strength
  - D. magnetic flux density
15. Weakest force in nature is
  - A. electric force
  - B. gravitational force
  - C. weak force
  - D. magnetic force
16. Magnetic field can be produced by using
  - A. permanent magnet
  - B. electric current
  - C. temporary magnet
  - D. both A and B
17. 1 Tesla is equal to
  - A.  $50 \text{ N A}^{-1} \text{ m}^{-1}$
  - B.  $100 \text{ N A}^{-1} \text{ m}^{-1}$
  - C.  $1 \text{ N A}^{-1} \text{ m}^{-1}$
  - D.  $1000 \text{ N A}^{-1} \text{ m}^{-1}$
18. In Fleming's left hand rule, thumb shows direction of
  - A. current
  - B. field
  - C. motion
  - D. charge

19. Radioactive decay is a
  - A. random process
  - B. non-spontaneous process
  - C. regular process
  - D. massive process
  
20. Process by which energy is released in sun is
  - A. fission
  - B. Haber's process
  - C. fusion
  - D. radioactivity
  
21. Supply of energy depends upon
  - A. mass of material
  - B. the change in temperature
  - C. the material itself
  - D. all of above
  
22. If there is no transfer of energy between two objects then their temperature is
  - A. same
  - B. different
  - C. zero
  - D. infinite
  
23. In transformer, alternating current is induced in
  - A. primary coil
  - B. secondary coil
  - C. iron core
  - D. resistor
  
24. Process in which A.C is converted into D.C is called
  - A. induction
  - B. rectification
  - C. inversion
  - D. dispersion
  
25. If output voltage is greater than input voltage, then transformer is
  - A. step up
  - B. step down
  - C. faulty
  - D. fatal



Sharanbasaveshwar College of Science, Kalaburagi  
Department of Physics


ADD ON COURSE: BASIC PHYSICS

Course Code: - VACBP-001


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55	190	Savita v reddy	19
56	206	Vishal rathod	18
57	276	Aditya D P	19
58	288	Pramodreddy	21
59	289	Praveen j hibare	20
60	76	pranjali	23
61	121	Megha.H.B	22

  
Head of the department

**Head**  
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Principal  
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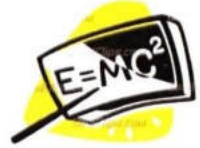
Centenary Celebrated Sharanabasaveshwar Vidya Vardhak Sangha's

# Sharanabasaveshwar College of Science, Kalaburagi

(Diamond Jubilee Celebrated 1956-2016, ISO Certified 9001-2015)  
In association with

## Add On Course in Basic Physics

Organized by Dept. of Physics



This is to certify that ~~Kum~~/Kumari..... KAVITA GUNDAPPA.....  
of ..... B.Sc.I ..... Semester has Successfully Completed 30 hours Add on Course in Basic Physics  
From..... 23<sup>rd</sup> Aug 2019 ..... to..... 10<sup>th</sup> Oct 2019 ..... organized by Department of Physics  
Sharnbasweshwar College of Science, Kalaburagi.

  
Smt. Jayashree C.  
Course Coordinator

  
Dr. U. S. Biradar  
Chief Guest

  
Dr. S. G. Bollegoudar  
Principal