



गोंडवाना विद्यापीठ, गडचिरोली

(महाराष्ट्र शासन अधिसूचना क्रमांक २००७/(३२२/०७) विशि -४ महाराष्ट्र अधिनियम १९९४ (१९९४ चा महा.३५) च्या कलम ३ च्या पोटकलम (२) अन्वये दिनांक २७ सप्टेंबर, २०११ रोजी स्थापित राज्य विद्यापीठ)

महाविद्यालय व विद्यापीठ विकास मंडळ

डॉ. जे.व्ही.दडवे
संचालक (प्रभारी.)

एम.आय.डी.सी. रोड कॉम्प्लेक्स गडचिरोली - ४४२६०५(महा.)

फोन: ०७९३२.२१६५५४, २२३१०४ फॅक्स : ०७९३२.२२२६५१

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क्रमांक/गो.वि./७४४/२०१६

दिनांक : १९/१० /२०१६

प्रति,

मा.प्राचार्य,
सर्व संलग्नीत विज्ञान महाविद्यालये,
गोंडवाना विद्यापीठ, गडचिरोली

विषय:— Degree College Teachers Training Program बाबत.

संदर्भ:— Gajanana.J, Talent Development Center India Institute Of Scienc Kudapura. यांचा ईमेल दि.२० सप्टेंबर २०१६.

महोदय,

उपरोक्त संदर्भाकित विषयान्वये कळविण्यात येते की, दि.२३ नोव्हेंबर ते १३ डिसेंबर २०१६, या कालावधीत Physics, Biology, Mathematics, and Chemistry, या विषयाकरिता 'Degree College Teachers Training Program' चे आयोजन Indian Institute of Science, Kundapura, Challakere Taluka, Chitradurga District, येथे करण्यात येणार आहे. सदर प्रशिक्षणामध्ये सहभागी होण्यासाठी महाविद्यालयांनी संदर्भीय पत्राचे अवलोकन करून आवश्यक कार्यवाही करावी, ही विनंती.

सधन्यवाद.

सहपत्र:— सदर्भीय पत्र

संचालक (प्रभारी)

महाविद्यालय व विद्यापीठ विकास मंडळ

गोंडवाना विद्यापीठ, गडचिरोली.

महाविद्यालये व विद्यापीठ विकास मंडळ

गोंडवाना विद्यापीठ

गडचिरोली (म.रा.)



**Degree College Teachers Training Program in
Physics, Chemistry, Biology, Mathematics**
at the
Centre of Excellence in Science and Mathematics Education
under
**Pandit Madan Mohan Malaviya National Mission on Teachers and
Training**
(PMMNMTT, MHRD, Govt. of India)
Indian Institute of Science at Kudapura - Challakere Campus
Chitradurga District, Karnataka 577536

From: Professor M. S. Hegde, Convener, TDC, IISc Kudapura Campus (9448191880)

To: The Principal

Dear sir,

Date: Sept. 20 2016

Knowledge imparted to the students is proportional to teacher's knowledge. One teacher teaches over 100 students per year and therefore training a teacher has a huge multiplier effect. Therefore Indian Institute of Science in its new campus at Kudapura-Challakere in Chitradurga district has established a Talent Development Centre to train teachers at all levels. Over 5500 high school and 3300 PU College teachers have received training so far. A "Centre of Excellence in Science and Mathematics Education" has now been established here to train teachers in Degree Colleges and Universities teaching Physics, Chemistry, Biology (Botany & Zoology) and Mathematics.

We are conducting a three-week Residential Training Program equivalent to The UGC Refresher Courses supported by MHRD, Govt. of India. The courses in Physics, Chemistry, Mathematics and Biology will be held from November 23 to December 13, 2016(21 days) in our new campus in Challakere. All expenses will be borne by us. I have enclosed Brochures in each subject. The special features of our program are (a) 30% time for lectures and 70% time for laboratory experiments to learn theory and (b) training is on what the lecturers do not know and what they should know within the syllabus. New experiments are designed here in our Center to learn theory subjects. Those who have undergone UGC Refresher courses can also apply. Contract/Guest faculty can also apply. Kindly circulate the Brochures (Physics, Chemistry, Biology and Mathematics) enclosed with this letter to your Faculty Members. Details on how to apply are given in the brochures. They can send e-mails.

Sir,

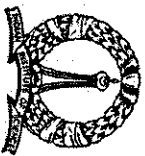
I request you to persuade the lecturers to make use of this opportunity and attend our new training program which will definitely enrich their knowledge.

With best regards,

M. S. Hegde, Convener, TDC, IISc Kudapura E-mail: mshegde@sscu.iisc.ernet.in
For the more information you can see our website: tdc.iisc.ernet.in

Degree College Teachers Training Program in PHYSICS

23rd November to 13th December 2016

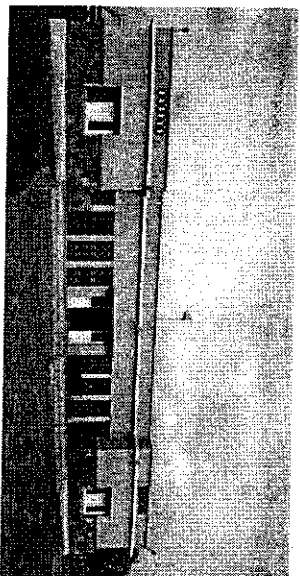


Center of Excellence in Science and
Mathematics Education

Indian Institute of Science

at its
Challakere Campus, Chitradurga
under

Pandit Madan Mohan Malaviya National
Mission on Teachers and Training
(PMMMNMTT, MHRD, Govt. of India)



The IISc at Challakere Campus offers a great opportunity for the degree college Physics teachers. This is a three weeks (21 days)

residential training program equivalent to UGC refresher courses approved and supported by the MHRD, Govt. of India. A unique feature of this training is learning of Physics by doing experiment.

Contact hours of the program will be more than 180 hrs.

- 80 hrs of lectures (8.0 am - 12.0pm).
- 100 hrs of experiments (~1pm-6.30 pm).
- 3-5 Experiments per day

Lecturers will be delivered by IISc Faculty members. Theory lectures will be based on UGC model curriculum, which includes:

Mathematical Physics; *Classical and Quantum Mechanics*; Electricity and magnetism; Electrodynamics; Nuclear Physics; Thermodynamics; Statistical Mechanics; Solid state Physics; Modern Physics; Electronics and Astrophysics.

Apart from the regular graduate experiments we have designed more than 40 experiments based on graduate Physics syllabus. In addition to standard B.Sc. experiments, teachers will do experiments including:

Low temperature physics- determination of absolute zero, temperature variation electrical and magnetic properties; Vapor pressure measurement; Determination of critical point; Determination viscosity of liquids using diffraction; Determination surface tension using diffraction; Diffraction due to Helical structure and double helical structure; Method of mirror charges; Capacitance of different shape capacitors, Quantum computing- charge density, atomic orbital structure, Atomic

spectra, Terms and energy level of atoms and molecules; Complementary colors; Charge transfer spectra; X-ray diffraction- determination of lattice parameters, Structure of metals and semiconductors, Determination of atomic and ionic radii, Gas chromatography, IR, UV and NMR spectroscopy of solids.

Attempt here is to learn theory that is taught in the class room is verified by experiments.

Applications are invited from any Indian who teaches B.Sc. physics. Promising contract lecturers also can apply.

Send your application mentioning:

1. Name, Address, E-mail & Phone No.
2. Date of Birth
3. Qualification (with affiliating institution)
4. Place of work; Experience and specialization
5. Endorsement by Principal/Head of Institute.

Last date to receive application: Oct 31, 2016

Send your application to
Dr. K. Jugeshwar Singh
Coordinator of Physics
TDC, IISc Kudapura - 577536
Phone No: 9591187128.
E-mail: jshwar@gmail.com

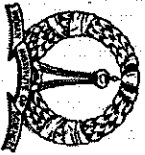
For more details visit
tdc.iisc.ernet.in

Degree College Teachers Training Program

in

Biology / Life science

23rd November to 13th December, 2016

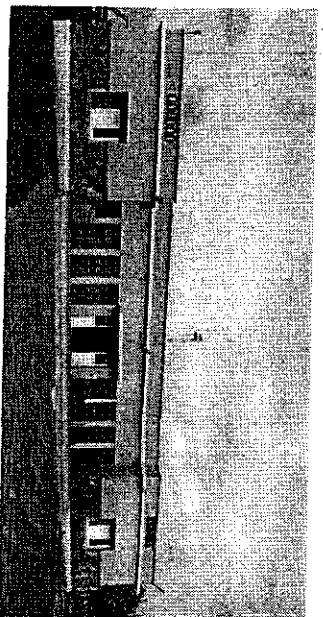


Center of Excellence in Science and
Mathematics Education
Indian Institute of Science
at its

Challakere Campus, Chitradurga-577536

Under

Pandit Madan Mohan Malaviya National
Mission on Teachers and Training
(PMMMNMTT), MHRD, Govt. of India.



The I.I.Sc. at Challakere Campus offers a great opportunity for the degree college teachers. This is a three weeks (21 days) residential training program equivalent to

UGC refresher courses approved by the MHRD, Govt. of India. The unique features of this training program is learning subject by doing experiments. This will allow the teachers to understand the concepts and the theories behind the phenomena, test hypotheses, and also apply their understanding to do new innovative experiments.

Contact hours of the program will be more than 180 hrs.

- 80 hrs. Lectures (8.00 am - 12.00pm).
- 100 hrs. Experiments (in the afternoon 1.00 pm- 6.30pm).
- 3-5 Experiments per day.
- Lecture will be delivered by I.I.Sc. Faculty members.

Theory lectures will be based on UGC model curriculum, which includes Biochemistry, Biotechnology, Botany, Ecology, Genetics, Immunology, Microbiology, Molecular biology, Physiology, Structural biology and Zoology.

Well defined experiments covering various aspects are developed to be performed individually by teachers themselves. More than 50 experiments dealing with isolation of microorganisms, microscopy, micrometry, bio-fertilizers, bio-control agents, biomolecules, analysis of proteins/carbohydrates, enzymes assays, biochemical estimations, isolation of DNA/RNA from different sources, Electrophoresis, DNA restriction digestion, ligation, transformation, PCR, PAGE/SDS

PAGE, differential blood counts, blood constituents, urine analysis, disease diagnosis, *Drosophila* genetics, chlorophyll biosynthesis, plant embryology, plant morphology and development, cell/tissue culture technology, bioinformatics tools, protein/nucleotide sequence analysis, databases, computational biology, spectroscopy, and other techniques are carried out.

Applications are invited from Indian citizen who is involved in teaching B.Sc. students in any biological discipline and enthusiastic contract teachers can also apply.

Send your application mentioning

1. Name, Address, E-mail & Phone No.
2. Date of Birth
3. Qualification (with affiliating institution)
4. Place of work; Experience and specialization
5. Endorsement by Principal/Head of Institute.

**Last date to receive application:
October 31, 2016**

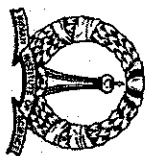
Send your application to

**Dr. S. Aravinda, Coordinator Biology
TDC, IISc Kudapura – 577536
Phone No: 9487637218
E-mail: saravinda@gmail.com
For more details please visit-
tdc.iisc.ernet.in**

Degree College Teachers Training Programme

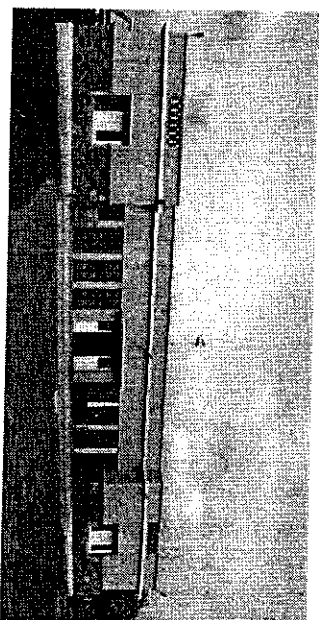
in Chemistry

23rd November to 13th December, 2016



Center of Excellence in Science and
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Indian Institute of Science

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The IISc at Challakere Campus offers a great opportunity for degree college chemistry teachers. This is a three week (21 days) residential training program equivalent to UGC refresher courses approved by MHRD, Govt. of India. There will be 80 hours of lecture and 100 hours of experiments

on the following topics covering entire BSc Chemistry subjects per the UGC guidelines:

- Electronic structure of atoms, molecules, chemical bonding, valence, oxidation state, photoelectron spectroscopy.
- Gases, liquids and thermodynamics.
- Solutions-chemical equilibrium.
- Electrochemistry.
- Inorganic Chemistry – s, p, d and f block elements and the periodic table, coordination chemistry, organo-metallic and nuclear chemistry.
- Solids – Solid state chemistry, adsorption, kinetics of reactions, catalysis and photochemistry.
- Spectroscopy – organic and inorganic molecules.

Lectures are given by IISc Professors. Learning theory by doing experiments is the specialty of this new program. New experiments to understand theory have been designed and teachers will be doing these experiments individually.

First three days will be devoted to essential mathematics and Electronics for Chemistry teachers. Teachers will learn to plot various functions including s, p, d, f orbitals employing a PC and show how the shapes emerge.

We have designed over 80 experiments on the above topics to learn theory. Each day, teachers will be doing 3 to 5 experiments. Experiments include: Resistance vs Temperature for metals and semiconductors (SC), measurement of band gap; Digital thermometers and temperature measurements from 77 to 1000 K; black body radiation-Planck's equation verification, atomic spectra of H, He, Na, Li, and tern symbols determination, Rydberg constant, electromagnetic spectrum; atomic and molecular orbitals from Quantum Mechanical (DFT) calculations, plots of s, p, d and f orbitals, Boyles' law, Charles' law, absolute zero, Cp/Cv, determination universal gas constant- R, specific heat of metals; elevation of boiling point, depression of freezing point, vapor pressure of liquids and Clausius -Clapeyron equation, heat of vaporization,

Raoult's law, osmotic pressure, reverse osmosis; pKa, pKb, buffers, determination of electrode potentials, cyclic voltammetry, Avogadro number determination, photoelectric effect, molecular spectra, charge transfer spectra, determination of 10 Dq, complementary colours, X-ray diffraction, determination of lattice parameters and Miller Indices, Langmuir adsorption, vacuum techniques, gas-solid reaction kinetics, CO oxidation, NO reduction, temperature programmed reduction, gas chromatography and separation of inorganic and organic molecules, synthesis of organic compounds along with IR, UV and NMR spectroscopy. Applications are invited from Indian Citizen who teach Chemistry for BSC students from any part of India. Those who have attended two UGC refresher courses can also apply. Promising Contract Lecturers can also apply.

Send your application mentioning

1. Name, Address, E-mail & Phone No.
2. Date of Birth
3. Qualification with affiliating Institution/college
4. Place of work & Experience and specialization
5. Endorsement by Principal/Head of Institute.

**Last date to receive application:
October 31, 2016**

Send your application to

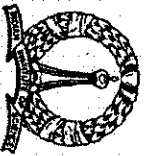
**Professor M S Hegde, Convener
TDC, IISc Kudapura – 577536
Phone No: 9448191880.
E-mail: mshegde@sscu.iisc.ernet.in**

**For more details please visit-
tdc.iisc.ernet.in**

Degree College Teachers Training programme

in Mathematics

23rd November to 13th December, 2016



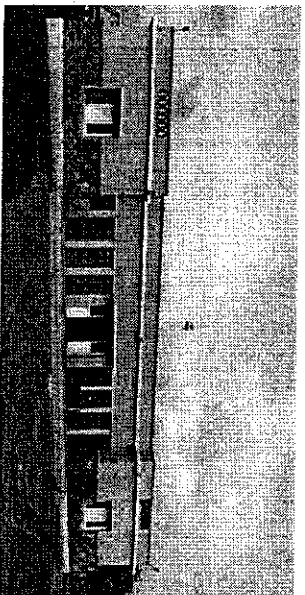
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(PMMMNMTT), MHRD, Govt. of India.



The IISc at Challakere Campus offers a great opportunity for degree college teachers. This is a three week (21 days) residential training program equivalent to UGC refresher courses approved by

MHRD, Govt. of India. The learning of mathematical skills by an undergraduate student is motivated by a good mathematics teacher in the class room. The student is largely dependent on the teacher for acquiring these skills. The TDC, IISc Kudapura, Challakere Centre offers a great opportunity for the degree college teachers to hone up their basic skills in the three-week instructional course conducted by the Centre. The course content includes a 2-3 day general mathematics training followed by lectures on

- Classical Algebra
- Modern Algebra
- Linear Algebra
- Real Analysis
- Differential Equations
- Vector Calculus and Numerical Analysis

Lectures in these areas are given by experts who are faculty in IISc, ISI, TIFR.

Special topics such as

- The Theory of Numbers
 - Probability Theory
 - Combinations and Graph Theory
 - Complex Analysis
- are also covered. Any other topic of interest to the teachers will also be considered. Problem-solving activity

during the tutorial sessions is a highlight of this programme. Sessions extend from 8AM to 6:30 PM on each day. (Sunday afternoons are off) Hospitality is taken care of by the Centre.

The programme is open for Degree College teachers at all levels, and for contract Lecturers who have an M. Sc. Degree. Those who have attended even 2 UGC refresher courses can apply.

Send your application mentioning

1. Name, Address, E-mail & Phone No.
2. Date of Birth
3. Qualification (with affiliating institution)
4. Place of work
5. Experience and specialization
6. Endorsement by Principal/Head of Institute.

Last date to receive application:
October 31, 2016

Send your application to

Professor C. R. Pranesachar
Coordinator, Mathematics
TDC, IISc Kudapura – 577536
Phone No: 9740134731.
E-mail: pran@math.iisc.ac.in
For more details please visit-
tdc.iisc.ernet.in