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**About Star College Scheme**

The Star College Scheme was initiated by DBT in 2008 to support colleges and universities offering undergraduate education to improve science teaching across the country. This Scheme was launched for improving critical thinking and encouraging ‘hands on’ experimental science at undergraduate level in basic science subjects. On a larger perspective, the scheme was initiated envisioning that it shall encourage more students to take up higher education in science. Through this scheme the Department identifies colleges with potential for excellence and provides support for developing infrastructure for academics and laboratory activities. This support is in turn expected to invigorate teaching and provide unique exposure of students to experimental science. Starting with a meagre 30 colleges in 2008, this pan India scheme has supported science departments in more than 300 colleges all over the country till date and Guru Nanak College, Sri Muktsar Sahib is one among them.

This is the only scheme implemented by the Department to support science education at the undergraduate level, the Star College Scheme acts as a gateway and provides exposure to students about other schemes of the Department (and the GOI) to support higher education (post graduate level), graduate research (Ph.D), post doctoral research, international exchange programmes, short term industry oriented training courses in science. The scheme also acts as a catalyst in igniting young minds (faculty and students) to engage in networking, exposure visits to research institutes and industries and apply for research grants in order to prepare them for future challenges after the successful completion of their undergraduate courses.

Guru Nanak College, Sri Muktsar Sahib was selected under the strengthening component of the DBT Star College Scheme and the Grant has been sanctioned for the period of three years (2021-2024)

**Objectives of Star College Scheme**

The objectives of the DBT Star College scheme are as follows:

* To strengthen the academic and physical infrastructure for achieving excellence in teaching and training
* To enhance the quality of the learning and teaching process to stimulate original thinking through ‘***hands–on***’ exposure to experimental work and participation in summer schools
* To provide better library facility to students and teachers
* To promote networking and strengthen ties with neighbouring institutions and other laboratories
* To conduct specialized training programmes for faculty improvement for optimizing technical capabilities
* To increase capabilities of core instrumentation resources by procuring new equipment and upgrading existing facilities
* To provide access and exposure to students to research laboratories and industries in the country.
* To help in devising standard curricula and Standard Operating Procedures (SOP’s) / kits for practicals.

**Advisory Committee**

**Purchase Committee**

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| **DBT Purchase Committee** |
| 1. | Dr. Rana Baljinder  | Vice-Principal cum Bursar |
| 2. | Dr. Jagdish Kumar | Incharge, UGC |
| 3. | Dr. Anita Rani | DBT Co-ordinator and Head, PG Department Of Physics |
| 4. | Ms. Satinderpal Kaur | Head, PG Department of Mathematics |
| 5. | Ms. Kirandish Kaur | Incharge, PG Department of Chemistry |
| 6. | Mr. Babu Ram | Superintendent  |

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| **DBT Office** |
| 1. | Mr. Babu Ram | Superintendent (checker PFMS) |
| 2. | Mrs. SarbjitKaur | Accountant (Maker PFMS) |
| 3. | Mrs. JasdeepKaur  | Clerk |
| 4. | Mr. Deepak Kumar | Assistant Clerk |

**Departments covered under this category**

1. PG Department of Physics

2. PG Department of Chemistry

3. PG Department of Mathematics

**About the Department (Mathematics)**

The Department of Mathematics offers Post Graduation & Graduation Courses in Mathematics ( as an elective subject), The subjects taught highlight the interdisciplinary and multidisciplinary nature of the course.

The department has a close relationship with Affiliating University, Colleges in Punjab and the faculty of, for the development of mathematical skills in the students. A master’s degree in mathematics equips you with high level analytical skills that open the door to wide range of careers in the field of teaching, research, banking and industry etc.

Mathematics is a methodical application of matter. A man becomes systematic by doing Mathematics. It is the beauty of subject. Certain qualities that are nurtured by studying and applying mathematics are power of reasoning and logics, creativity, abstract or spatial thinking, critical thinking, problem-solving ability and even effective communication skills. In today’s world Mathematics is considered as most growing subject as STEM jobs as increasing in these days.

In today’s world, applied mathematics is useful in almost every field like beauty industry, Medicines, Music, Banking, Weather forecasting etc.

**About the Department (Physics)**

PG Department of Physics offers Post Graduation(M.Sc. Physics) and Graduation (B.Sc. Non Medical) Courses in Physics. Courses in Physics reveal the mathematical beauty of the universe at scales ranging from subatomic to cosmological. Studying Physics strengthens quantitative reasoning and problem solving skills that are valuable in areas beyond physics.

Students who study physics are prepared to work on forefront ideas in science and technology, in academia, the government, or the private sector.  Careers might focus on basic research in astrophysics, cosmology, particle physics, atomic physics, photonics or condensed matter physics, or in more applied research in areas such as renewable energy, quantum information science, materials development, biophysics, or medical physics. Careers could also include teaching, medicine, science writing, philosophy of science, science policy, energy policy, government, or management in technical fields.

 The physics majors are great preparation for almost any career, because they teach students how to analyze complex problems and they give students a strong quantitative background that can be applied in any technical field.

The department has close relationship with Colleges situated in Punjab, its affiliating university, other universities and IIT’s so that students can gain bunch of knowledge by enrolling in internship programmes/trainings/workshops/seminars etc.

**About the Department (Chemistry)**

PG Department of Chemistry offers Graduation courses (B.Sc. Non Medical and B.Sc. Medical) and one year Post Graduate Diploma in Chemical Analysis of Food. The chemistry discipline has an encompassing effect on the physical and biological sciences and therefore, it is considered a central science. The knowledge and skills in chemistry play an important role in finding the solutions to most of the challenges faced by the mankind. The department is composed of dynamic faculty members who are actively engaged in knowledge creation and dissemination at the frontiers of the Chemical Sciences. The department believes in interdisciplinary approach of learning and fosters a culture of excellence. Undergraduate students of chemistry have been nurtured and mentored well to compete at the national and international level workshops/examinations/training programmes. The department has started Postgraduate Diploma in Chemical Analysis of Food in 2020 under the NSQF scheme of UGC in 2020. Food analysis is the discipline dealing with the development, application and study of analytical procedures to characterize the properties of foods including composition, structure, physicochemical properties etc. The chemistry laboratory is well-established and equipped with number of instruments like Conductivity meters, Colorimeters, Calorimeters, Spectrophotometer, pH meters, Refractometers, Atomic model, Beckmann Apparatus, Electronic Balances, Mechanical Stirrers, Electrical Melting Point Apparatus, Hot plates, Fuming Hood, Oven, Distillation plant, Centrifuge Machine, Vacuum pump, Shaker with six plates, Analytical Balances, etc., chemicals and glass apparatus. The students perform their practical work with their keen interest. For the exposure of students to more practical aspects, the department organizes various workshops, training programmes and educational visits to higher institutes and industries etc.

**List of Events Organized under DBT Star College Scheme**

* **List of projects undertaken by students, industrial visits by students, summer training**

**in last one year**

* **List of exhibitions/seminars/training courses conducted by the college**
* **Name, designation, host institute of  guest faculty invited**