**Star College Scheme for Strengthening of Science Education and Training at Undergraduate Level**

**Scheme and Guidelines**

1. **Introduction:**

DBT is committed to the values of i) Pursuit of excellence ii) Academic and intellectual freedom iii) Creativity and innovation iv) Diversity v) Cooperation and Communication & vi) accountability. DBT has therefore, launched a scheme for improving critical thinking and 'hands on' experimental work at undergraduate (college) level in sciences. It is expected to encourage, more students to take up higher education in science.

DBT will identify colleges with ambition and potential for excellence and provide academic and physical infrastructure for achieving excellence in teaching and unique exposure of students to experimental science. The Star College Scheme is a pan India Scheme that envisages a Star College in every district of the country, thus the Department shall exert dialogues with the State Government and identify colleges that can be considered for support under this Scheme.

It is important to know that the Department has supported over 200 undergraduate colleges across the country in the past 9 years. Apart from financial support, colleges benefit tremendously from guidance received in Advisory Committee Meetings, mentoring, Task Force Meetings and learning from peers in other colleges.

2. **Objectives:**

- 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 promote networking and strengthen ties with neighboring 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 of existing facilities

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Programme Officer, Star College Scheme of DBT
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.
To provide better library facility to students and teachers

3. Desirable criterion to Qualify for support under the Strengthening component of Star College Scheme:

- Minimum 4-5 UG courses in basic science such as botany, zoology, applied life science, microbiology, physiology / biochemistry, biotechnology etc. and 1-2 applied course/PG diploma courses.
- Adequate in-house faculty expertise in each science departments.
- Independent laboratories for practicals to accommodate sanctioned student strength.
- Lecture halls/rooms for theory classes with minimum capacity for sanctioned student strength.
- Basic infrastructure and facilities in laboratories and library, LCD / overhead projection facilities, Computers with internet access.
- To apply, the college must be Government or Government aided, autonomous included under Section 2(f)/12(B) of UGC Act 1956.
- Colleges that have been not recommended for support can re-apply to DBT for financial support with appropriate modifications and revisions while those that get discontinued after a round of support are eligible for re-applying only after a cooling period of two years.
- The colleges who have already been supported under this scheme, can apply for addition dept. after completion of one cycle i.e. 3 years of ongoing support.

4. Activities to be performed as part of Star College:

For Faculty

- Faculty improvement programme
- Participation in summer courses for skill upgradation to be able to train students.
- Curriculum change to ensure more, 'hands - on' laboratory work

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- Greater emphasis on communicating research and research process to students
- Introduce internal review process by students
- Feedback from students regarding competence of faculty, adequacy of teaching / laboratory environment and additional needs, if any
- Any other relevant additional information

**For Students**

- Students training through summer training, industry visits.
- Use of IT in classroom, laboratory and library activities
- Inclusion of techniques for 'hands-on' training
- Any other relevant additional information

5. **Nature of Financial Assistance:**

One time non-recurring grant of ₹ 10.00 lakhs per science department, recurring grant of ₹ 3.00 lakhs per science department per year for a period of three years, subject to satisfactory annual review, and ₹ 1.00 lakh, ₹ 2.00 lakhs and ₹ 3.00 lakhs subject to their departments for mentoring and monitoring per college and ₹ 1.00 lakh per year under contingency head will be provided. Scheme encourages purchase of multiple copies of routine equipment required for science practicals in UG courses within ceiling of ₹ 1 lakhs. For purchase of equipments costing more than one lakh and up to three lakhs, prior approval of BDT is required.

7. **How to Apply:**

4 copies of duly filled proforma forwarded through head of institute should be sent to the DBT along with soft copy via email to garima.g@nic.in.

8. **Mode of Selection:**

Applications will be invited through advertisement on DBT website, direct correspondence with potential colleges, nominations by vice chancellors etc. in a specified format. Consideration will be given to regional requirements, women's colleges, autonomous colleges etc. Applications will be screened by task Force and site visit, if required, will be undertaken to arrive at final decision. Decision of Task Force will be final.

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9. Parameters to Measure Success:

DBT will measure progress of star colleges by following parameters:

- Substantial increase in proportion of 'hands on' experimental work by students.
- Increased access of undergraduate students to laboratory and bioinformatics infrastructure
- Improvement in access to sciences related journals
- Summer schools
- Percentage of students pursuing PG science education
- Measure effectiveness on the basis of feedback from students, faculty and employers of students

PART- C: Budget requirement

**Strengthening Component:**

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<tr>
<th>S.No.</th>
<th>Head</th>
<th>Amount in lakhs/year (₹ in lakhs)</th>
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<td>4.</td>
<td>Travel + Mentoring</td>
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<td>Upto 4 depts. 1 lakh 4 to 8 depts. 2 lakhs 8 to 12 depts. 3 lakhs</td>
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**Star Status Component:**

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