

**DEPARTMENT OF BIOTECHNOLOGY
MINISTRY OF SCIENCE AND TECHNOLOGY
GOVERNMENT OF INDIA**

Guidelines for Star College Programme for Strengthening of Science Education and Training at Undergraduate Level (2023)

1. Introduction

Department of Biotechnology (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 Programme 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 Programme is a pan India Programme that envisages a Star College in every district of the country, thus the Department shall engage with the State Government or S&T councils and identify colleges that can be considered for support under this Programme. This will also be pursued via holding mentorship programme in such States & special calls may be advertised to encourage colleges to apply for support under **Star College Programme**.

It is important to know that the Department has supported over 300 undergraduate colleges across the country since inception. 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

- i. To strengthen the academic and physical infrastructure for achieving excellence in teaching and training
- ii. 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.
- iii. To promote networking and strengthen ties with neighboring institutions and other laboratories.
- iv. To conduct specialized training programmes for faculty improvement for optimizing technical capabilities. Creation and operational support for resource and training facilities for training of college faculty.
- v. To increase capabilities of core instrumentation resources by procuring new equipment and upgrading of existing facilities
- vi. To provide access and exposure to students to research laboratories and industries in the country
- vii. To help in devising standard curricula and Standard Operating Procedures (SOP's) / kits for practicals.
- viii. To provide better library facility to students and teachers.

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- ix. To provide mentorship, to colleges via networking, hand holding and outreach activities. In addition, the faculty shall be encouraged to engage with research institutions and write collaborative proposals for extramural research grants.

3. Categories:

The funding shall be provided under following categories:

- A. Urban Colleges
- B. Rural Colleges
- C. **Special calls** based on need of the Programme or as suggested by Task Force (e.g. NER Colleges) or areas where there is limited penetration of the Programme.

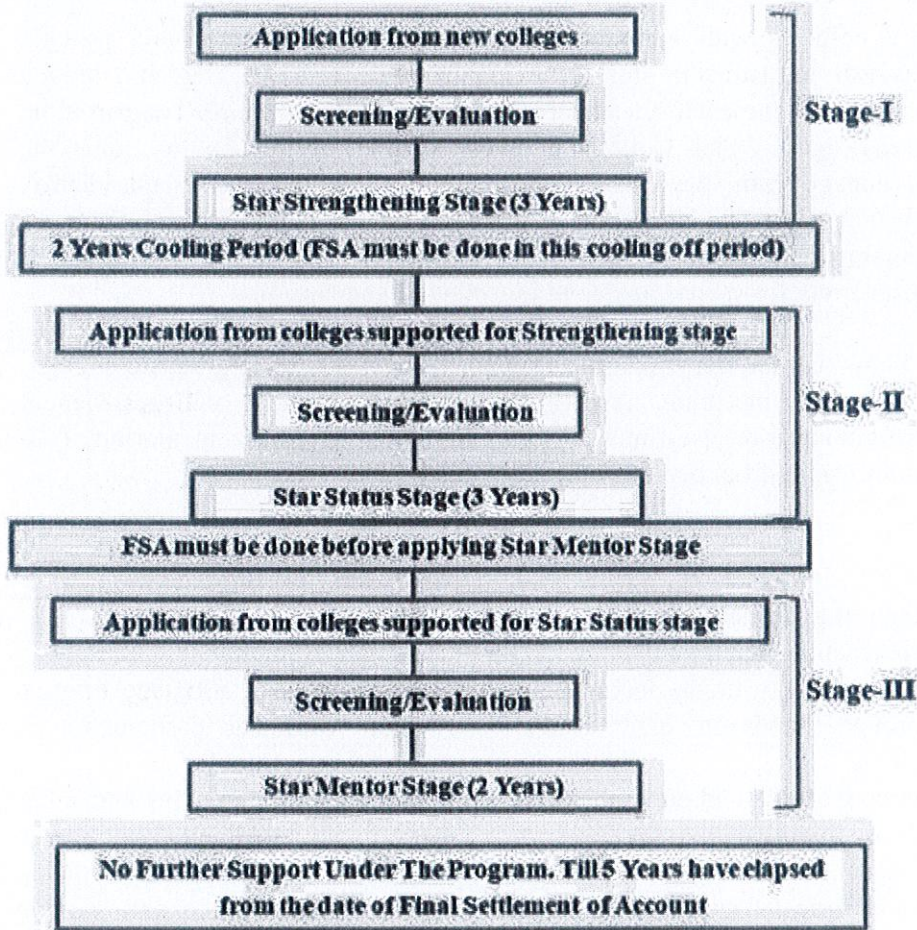
4. Progression of Programme:

The Star College Programme is a 3-stage programme:

Stage-I: Strengthening Component (Entry level)

Stage-II: Star Status (Good performers from Strengthening Component)

Stage-III: Star Mentor College (Good performers from Star Status stage)



After each stage, there will be a cooling period/gap of two years, from date of completion of stage supported, during which the College needs to ensure that Final Settlement of Accounts for previous stage is accomplished.

5. Criterion to Qualify for support under Star College Programme:

A. Stage-I (Strengthening Stage: funding for 3 years):

- i. The College should have at least four B.Sc. courses (3 for rural category) in basic/applied sciences such as Botany, Zoology, Applied Life Sciences, Microbiology, Physiology, Biochemistry, Biotechnology etc. **For application under Star College Programme, the proposal should have at least two departments for maintaining inter-disciplinarity.**

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- ii. Adequate in-house regular faculty with relevant expertise in each participating department.
- iii. There should be at least four teachers (two for rural category) with PhD in all participating departments taken together.
- iv. Independent laboratories for practicals to accommodate sanctioned student strength.
- v. Lecture halls/rooms for theory classes with adequate capacity for sanctioned student strength.
- vi. Basic infrastructure and facilities in laboratories and library, LCD / overhead projection facilities, Computers with internet access.
- vii. College must be Government or Government aided or autonomous college included under Section 2(f) and 12(B) of UGC Act, 1956 under College Category. University departments/Colleges not listed under College Category in UGC list are not eligible.
- viii. Colleges under Not-for-Profit status and GOVT. AIDED Colleges would be considered as Academic Institutions (Private) option during the process of online submission of proposal. They must submit **DARPAN ID**.
- ix. Colleges that have been **not recommended** for support can re-apply for this programme for financial support with appropriate modifications and revisions **after a gap of one year**. However, if a college has been rejected in **two** consecutive rounds of evaluation, whether at the level of Screening or after presentation before the Task Force it would not be allowed to apply again till a cooling period **of two years** has elapsed.
- x. **Addition of new departments:** Colleges requesting support for addition of new departments should first complete one cycle of support i.e. 3 years with the departments that the initial grant was recommended. The colleges can apply for new departments only if they had been graded as **'Good'** or above in their final review.

Note: Department/ the Concerned Committee/Task Force may while considering/examining the proposals of the colleges pertaining to rural areas, grant relaxation from any of the criteria mentioned above.

B. Stage-II (Star Status Stage: funding for 3 years):

In addition to criteria for Stage-I, the college should fulfill the following:

- i. College must have completed 3 years under the Strengthening component of Star College Programme and must have received at least grants for two years.
- ii. Two years cooling period after Stage-I has completed and FSA has been accomplished.
- iii. Colleges must have at least Good (A) rating [Satisfactory (B⁺) for rural category] in the last review under the tenure of Strengthening Component (Stage-I) of the Programme.
- iv. The Grantee College will also be assessed for such status on the basis of overall qualitative improvement during their period of previous year funding, the performance of students and their vision for the future.
- v. Colleges must have held two advisory committee meetings under the Strengthening Component.

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C. Stage-III (Star Mentor College: Stage funding for 2 years):

For Stage-III (Star Mentor College), the colleges which have performed extremely well under the Star College Programme may be identified to serve a higher role through more intensive round of evaluation. In this phase, rather than serving the purpose of improving caliber of high intellectual students, in addition, the colleges will mandatorily be required to extend and expand their efforts into networking; handholding and outreach, which shall be a prior requirement of continuation of this Programme.

In addition to criteria for Stage-II, the college should fulfill the following:

- i. The College should have completed 6 years under the Programme - 3 years under the strengthening component (Stage-I) and 3 years under Star Status (Stage-II).
- ii. FSA has been accomplished.
- iii. Colleges that have completed successfully Star Status support earlier are eligible for applying for Stage-III.
- iv. Colleges must have at least Good (A) rating [Satisfactory (B⁺) for rural category] in the last review under the tenure of Strengthening Component (Stage-II) of the Programme.

6. Activities to be performed as part of Star College:**For Students:**

- Students training via introduction of practicals, prescribed in the curriculum.
- Introduction of conceptual clarity via engaging students in minor projects, either singly or in groups of students not exceeding 4 in number.
- Inclusion of techniques for 'hands - on' training to strengthen concepts taught otherwise via theoretical approach.
- Summer/Winter training preferably via engaging students in research projects; Visits to neighbouring industries, research institutions or places of academic value.
- Use of IT in classroom, laboratory and library activities.
- Organizing lectures by eminent scientists, career counselling lectures specifically for creating awareness among students about their future career options in science.
- Social Service programs in nearby areas.

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.
- Greater emphasis on communicating research and research process to students. Introduce internal review process by students regarding the implementation of various activities under Star College Programme.
- Feedback from students regarding competence of faculty, adequacy of teaching/laboratory environment and additional needs, if any.

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7. Expected Outcome:

The above activities should culminate in the following:

A. Annual Outcomes:

- i. Increase in the number of practicals being conducted individually by the students.
- ii. Introduction of "hands on training" to enhance conceptual clarity for topics taught previously by theoretical approach.
- iii. Engaging students in minor research projects
- iv. Faculty development programs and laboratory staff training programs
- v. Involvement of students in scientific writing and journal club activities

B. Consolidated outcome after the sanctioned tenure (3 years):

- i. Increase in the admission cut off percentage and decrease in the dropout rates of students.
- ii. Increase in the faculty generated resources viz. extramural research grants from other funding agencies to strengthen the Star College Programme efforts.
- iii. Number of colleges or schools mentored from underprivileged areas.
- iv. Number of colleges mentored to write grants for Star Programme support and their outcome.
- v. SOPs developed, lab manuals created and uploaded on website or submitted to DBT.
- vi. Increase in number of adopted Schools/Colleges.
- vii. Students getting admission in Post Graduate Science courses.

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 Screening Committee/Task Force constituted by the Department and on the basis of the proposal and presentation made before the Task Force thereon. Site visit, if required, may also be undertaken to arrive at final decision. Decision of Task Force will be final and binding and no representation of any kind against the decision of the Task Force will be entertained.

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9. Financial Assistance

(Rs in Lakhs)

S. No.	Head	Strengthening Component (for 03years)	Star Status Component (for 03years)	Star Mentor College (for 02years)
1.	Non-recurring (One time per department)	15.00	20.00	0
2.	Recurring for 3 years each department per year	5.00	7.00	7.00
3.	Contingency per year	1.00	1.00	1.00
4.	Travel + Mentoring	2.00 to 5.00 Upto 4 depts.: Rs. 2 lakhs 5 to 8 depts.: Rs. 4 lakhs 9 to 12 depts.: Rs. 5 lakhs	2.00 to 5.00 Upto 4 depts.: Rs. 2 lakhs 5 to 8 depts.: Rs. 4 lakhs 9 to 12 depts.: Rs. 5 lakhs	1.00 (Per dept.)
5.	Maintenance (for equipment sanctioned in Stage II – Star Status)	0	0	2.50 Lakhs (per dept. supported in Star Status)

It is clarified that a list of proposed equipment will be submitted by the applicant college as a part of the proposal. Preference should be given to the equipment which is generally used in the practical classes by the undergraduate students. Once the college is selected for grant, any request for change in equipment or the number of particular equipment should be intimated to the Department of Biotechnology by the college. Only one equipment costing upto Rs 5.00 lakhs (excluding GST) shall be permitted per dept.; all other equipment must be restricted to Rs 1.00 Lakh per equipment (excluding GST) (for a single copy). However, multiple copies of such equipment may be procured as per requirements within the sanctioned budget under NR for the particular department.

10. Review and Monitoring Process

The Task Force will also review/monitor the progress of the colleges supported on an annual basis. The support may be discontinued at any stage if the Task Force is not satisfied with the progress of a particular department or all departments supported in a college. Decision taken by the Task Force about any proposal will be binding on the applicant and no representation of any kind will be entertained. Advisory Committee consisting of DBT representatives including Programme Head, Programme Officer and a member from Finance (optional) will be constituted to conduct on-site evaluation and ascertain the progress of the college under Star College Programme.

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11. Resource and Training Facility:

The Star College Programme envisages creation and operational support for resource and training facilities for training of college faculty. These facilities would act as national/regional resource and training facilities. The proposals would be considered as top down approach based on needs identified by Task Force. The budget would include provision for Non-recurring (Equipment), manpower salary, recurring grant for consumables, trainings and workshops, printing of study/training material, contingency, travel and overhead. The budget would be as per needs of proposal and recommendation of the Task Force under the following heads:

S. No.	Head	Amount (Rs. in Lakhs/ year)	Remarks
1.	Non-Recurring	50.00	(One Time) Maximum
2.	GIA – Recurring	30.00 per year	
3.	Manpower	Restricted to 3 Manpower positions	As per DST Guidelines or as per specific institutional guidelines if not covered in DST guidelines)
4.	Overhead	0.50 per year	

Duration of Support: 5 Years

Note: The facility should be supported by the host institute after completion of 5 years support period. An undertaking on institutional letter head from the Head of the institution needs to be submitted to this effect.

12. Mentoring programme:

As the Star College Programme targets to reach each district of the country, there is need to mentor colleges from remote and Aspirational regions, who are either unaware of the programme or fail to submit an acceptable proposal. The mentoring programme involves colleges under Star status or other institutes/universities who would mentor new colleges for applying under the Star College Programme and implementation of the programme.

13. **Extension of project duration:** Project extension requests will be considered only under exceptional circumstances for a maximum of 12 months only. The extension would be within the overall sanctioned budget and no additional grant would be considered for the extension period.

