



Indian Academy of Sciences
Bengaluru



Indian National Science Academy
New Delhi



The National Academy of
Sciences, India, Allahabad

Science Academies' Education Programmes

Guidelines for Two-week Refresher Courses

Preamble

Two-week Refresher Courses form an important segment of the activities of the Science Academies' Programmes organized by the Joint Science Education Panel of the three Science Academies. The primary focus is to enhance the quality of science education at undergraduate and graduate levels. Refresher Courses are thus primarily aimed at helping teachers to add value to their teaching. The Course content thus needs to be designed to meet the above need. While discussion of modern areas of topical interest is important, the Course should be so designed as to have direct relevance to the materials covered in the graduate and undergraduate curricula in universities and institutions in the country and are not necessarily meant to be at an advanced research level.

Planning a Course

1. Duration of the Refresher Course will be fourteen working days **not counting intervening Sundays and holidays**
2. Topics should be chosen so as to be directly useful in teaching at BSc and MSc levels.
3. Course Director **must** be a Fellow. Several of the resource persons should also be Fellows.
4. The Course Director may nominate **one** faculty from the host institution as Coordinator, to help in the conduct of the Course including organization, local logistical arrangements, and handling of finances.
5. **Ideally, the number of Resource persons should not exceed 6 or 8 in the normal course so as to provide maximum interaction between teacher-participants and resource persons. Each Resource Person should be persuaded/requested to give several (five, six or more) lectures and/or conduct several tutorial sessions, of duration 75 to 90 minutes.**
6. All resource persons — as far as possible — should be from **institutions in the vicinity of the venue, so that travel expenses can be minimized and air travel, if possible, avoided.**
7. Participants should be selected from all over the country, though there may always be several local participants. Ideally, outstation teachers should be informed of their

selection at least 60–75 days before the start of the Course so that they have two clear months to book their train tickets.

8. A formal proposal should be submitted by email to the Science Panel about 6 months in advance by the Course Director containing (a) a tentative list of topics to be covered in the Course; (b) the tentative list of Resource Persons; (c) a budget prepared strictly following the norms mentioned below; and (d) the dates of the Refresher Course. It should be addressed to: The Chairman, Joint Science Education Panel, Indian Academy of Sciences, CV Raman Avenue, Post Box No. 8005, Sadashivanagar Post, Bengaluru 560 080. The Panel will then consider the proposal and, if found acceptable, convey its approval.
9. The organization of the Course should be kept as simple as possible, avoiding many committees, sub-committees etc. Elaborate inaugural sessions, valedictory sessions, inviting chief guest etc, **should** be avoided, so that maximum time is devoted to lectures and discussions.
10. The host institution should provide campus accommodation for all participants, and if possible also for all Resource Persons. Lecture hall with audio visual facilities, uninterrupted power supply, areas for serving tea/coffee etc should also be provided **free of charge**. Items of a capital nature (black board, generator, projector etc.) bought by the host institution should not be charged to the Panel.
11. Travel expenses for all participants (three-tier AC train fare) will be met by the Panel. If a participant has travelled by a higher class or by air, he/she should meet the difference. In the case of resource persons, travel expenses by two-tier AC fare will be met by the Panel.
12. Local hospitality — transport, accommodation, food — for all participants and resource persons will be met by the Panel.
13. Course Co-ordinator has to open a separate bank account in the name “Refresher Course on ...” and inform IASc regarding the details (name of account holder, name of bank, name of branch and the account number. For non-SBI accounts, IFS code also needs to be provided). This will enable electronic transfer of funds.
14. In all publicity material such as programme sheet, invitation cards, etc. the names of the three Academies should be given prominence comparable to that given to the host institution. **The Course should be called “Science Academies’ Refresher Course on**”. Only the names of the Course Director and Course Coordinator should be included in such material. Names of members of management, organizing committees, patrons etc should be strictly avoided.

During the Course

15. For Refresher Courses, books relevant to the subject worth up to Rs. 1250/- per registered participant will be allowed. The books to be suggested by the Course Director will be bought and distributed by the Coordinator.
16. Cost of a one-day excursion (preferably on the intervening Sunday) about Rs. 15000/- (for travel expenses only) for 45 persons.

17. A form (format to be provided by IASc) to obtain feedback on the Course to be distributed to teachers and got back before the end of the Course.
18. Participants to be given a certificate by the Course Director (format to be provided by IASc).

After the Course

19. Honorarium to Resource Persons: Rs 2000/- for each lecture/tutorial/problem-solving session of 75--90 minute duration.
20. Honorarium for Course Director (Rs 4000/-) and Course Coordinator (Rs 3000/-) should also be settled before the end of the Course. Honorarium (not exceeding Rs 1750/- per person) may be paid by the Course Director to not more than 4 supporting staff who helped during the entire conduct of the Course.
21. A copy of the full programme (with time table), the list of participants and resource persons (with full postal and email address) and copies of photographs/group photograph if any taken to be sent by Course Coordinator to IASc. The photograph should contain brief caption (with names of persons).
22. A report (in 2 pages) in MS Word format may be sent by Course Director or Course Co-ordinator to IASc containing such information as number of applicants, number selected, number finally participated including local participants, subjects covered, a summary by the Course Director/Course Coordinator about the importance/impact of the Refresher Course and any other useful information. The report along with a consolidated statement of expenditure should be sent to IASc within **15 days** of the completion of the Course.
23. The consolidated statement of expenditure (under different budget heads) should be supported by a statement listing each item of expenditure in the required format (copy of which will be sent by IASc) and original bills/vouchers duly countersigned by the Coordinator.

ADDRESS FOR CORRESPONDENCE:

THE COORDINATOR
JOINT SCIENCE EDUCATION PANEL
INDIAN ACADEMY OF SCIENCES
C V RAMAN AVENUE
BENGALURU 560 080 (Ph: 080-22661201/22661210, Email: sep@ias.ac.in)

APPROVED RATES FOR TWO-WEEK REFRESHER COURSES (Non-Experimental)

(for 25 outstation teachers, 10 local teachers, 5 resource persons and 5 supporting staff)

<p>1.</p>	<p>Travel expenses a. TA to 25 registered outstation participants b. TA to 10 registered local participants c. TA to resource persons d. Excursion</p>	<p>Actual 3-tier AC train fare + Rs 400/- for the round trip towards incidental expenses Rs 100/- per person per day Two-tier AC Rs 15,000/-</p>
<p>2.</p>	<p>Boarding and lodging: a. Lodging for registered participants b. Lodging for resource persons including breakfast and dinner (at Guest House provided by host institution). c. Breakfast/dinner for outstation participants d. Working lunch, two servings coffee/tea (for 45 persons)</p>	<p>Up to Rs 400/- per day (excess to be met by host institution) Up to Rs 2000/- per person per day; rates beyond Rs 2000/- (for example, hotel charges) to be met by host institution, or the Coordinator to write to Academy for instructions. Rs 250/- per person per day Rs 200/- per person per day</p>
<p>3.</p>	<p>Honorarium: a. Resource Persons: b. Course Director: c. Coordinator: d. Supporting staff (not more than 4 persons):</p>	<p>Rs 2,000/- per lecture/tutorial/problem-solving session Rs 4,000/- Rs 3,000/- Rs 7,000/- (total) (Rs 1,750/- each)</p>
<p>4.</p>	<p>Other items: a. Publicity: b. Registration material : (Bag, note book, <i>pen</i>, <i>CD of study material</i>, <i>instruction manual</i>) c. Books for registered participants d. Contingency (<i>stationery</i>, <i>photocopying</i>, <i>postage</i>, <i>photography</i>) e. Local transportation</p>	<p>Rs 6,000/- Rs 12,000/- Rs 1,250/- per person Rs 15,000/- Rs 10,000/-</p>

Note: 1) The actual expenditure should strictly conform to the above budget. Any inadmissible items or excess expenditure should be met by the host institution.

2) IASc will release funds for the course in instalments as follows: 25% before 6-8 weeks, 50% before 2 weeks; 25% after receiving the final statement of accounts.

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