GUIDELINES

For

SAP, COSIST

And

USIC

GUIDELINES

FOR

SAP, COSIST

AND

USIC

UNIVERSITY GRANTS COMMISSION

NEW DELHI

1993

Price : Rs. 10.00

Guidelines for SAP, COSIST and USIC

Contents

UNIVERSITY GRANTS COMMISSION
(Applicable for all schemes/programmes of UGC)
UTILISATION CERTIFICATE IN RESPECT OF ITEMS/PROGRAMMES
WHICH ARE IN PROGRESS/COMPLETE

It is certified that the *University Grants Commission* sanctioned Rs. _____ lakhs (Rupees _____) vide letter No. F. _____ dated _____ for _____ (name of programme/item) which is under implementation/has been completed. It is certified that the progress of expenditure on the programme/item is as under:

A. Non-Recurring:

Sl. No.	Item (s)	Cost approved by the UGC	Grant released by UGC so for	UGC Sanction Letter No. & date for each item	Actual expenditure as on _____ (date)	Remarks
1.						
2.						
3.						

B. Recurring:

Sl. No.	Item (s)	Cost approved by the UGC	Grant released by UGC so for	UGC Sanction Letter No. & date for each item	Actual expenditure. as on _____ (date)	Remarks
1.						
2.						
3.						

A. This certificate is based on audited/unaudited statement of expenditure.

B. This item of stock have been in the assets ledger/register of the institution.

Signature:

Name:

Designation:

(Resolution No. .... dated .... of University/Executive Body authorising the above signatory to furnish utilisation certificate.

UNIVERSITY GRANTS COMMISSION
(Applicable for all schemes/programmes of UGC)

PROFORMA FOR SUBMITTING UTILISATION CERTIFICATE IN RESPECT OF BUILDINGS WHICH IS COMPLETED

It is certified that _____ (specify the name of the building) which was approved by the University Grants Commission. vide its Letter No. F. _____ dated _____ and revised (final) estimate was approved vide UGC Letter No. F. _____ dated _____ has been completed. The details of expenditure on the above building are as under .

Original estimated cost as approved by UGC	UGC Letter No. date	Final Revised estimated cost as approved by UGC	UGC Letter No. date	Total share of UGC against the final revised estimate
(Rs. in lakhs)		(Rs. in lakhs)		(Rs. in lakhs)

It is further certified that the above expenditure has been incurred as per details given below :

1   Cost of site development including landscaping. approach road, plantation etc

2. Cost of Civil works

3. Cost of Electrical wiring & fittings.

4. Cost of water supply, sewerage sanitary fittings.

5. Cost of furnishing & furniture.

6. Any other (specify)

7. Supervision charge of construction agency.

                                                                            GANTD TOTAL:

Certificate of Engineer .

    Certified that the building has been completed as per plans & estimates approved by UGC.

1. This certificate is based on audited/unaudited statement of expenditure.

2. Certified that the building & fittings/furnishing have been taken on university/college assets/stock ledger/register.

    Signature of the competent authority:

    Full Name:

    Designation:

    (Resolution No. _____ dated _____
    of University, or Executive Body authorising
    the signatory to furnish utilisation certificate.

Remarks: If the building is constructed by an architect (either individual or a firm) the certificate of a completion cost is to be
                countersigned by an Engineer not below the rank of an Executive Engineer of State/Central P.W.D.

Grant released by UGC in different instal- ments	Sanction Letters No. date	State Govt. Univ Management share against the final approved cost	Total grant actually released by State Govt. Univ. Management	Total expenditure incurred. (Rs. in lakhs) (write also in words)
(Rs. in lakhs)		(Rs. in lakhs)	(Rs. in lakhs)	
1.				
2.				
3.				
Total				
Rs.				
Rs.				
Rs.				
Rs.				
Rs.				
Rs.				
Rs.				
Rs.	(In words)			

Name & Signature of the
Architect (fi relevant)

Designation and signature
of Engineer-in-Charge (not
below the rank of Executive
Engineer in CPWD State Govt.)

UNIVERSITY GRANTS COMMISSION
(Applicable for all schemes/programmes of UGC)
PROFORMA FOR SUBMITTING UTILISATION CERTIFICATE IN RESPECT OF BUILDINS UNDER CONSTRUCTION BUT NOT COMPLETE

It is certified that _____ (specify the name of the building) which was approved by the University Grants Commission. vide UGC letter No. F. _____ dated _____ is under construction and not complete. The progress of expenditure on the above mentioned building and other financial details as on _____ are given below :

Original estimated cost as approved by UGC	UGC Letter No. date	Revised estimated cost as approved by UGC (if any)	UGC Letter No. & date	Share of UGC against the approved cost	Total grant released by UGC so far	Sanction Letters No. date _____	State Govt./ Univ./ management share against approved cost	Grant actually released by the State Govt./ Univ./ management so far	Total expenditure incurred as on _____ is Rs. _____ (Rupees _____ _____)
(Rs. in lakhs)		(Rs. in lakhs)			(Rs. in lakhs)				(Rs. in lakhs)

This certificate is based on audited/unaudited statement of expenditure.

Signature and designation
of competent authority.

Signature and designation of the Engineer
Incharge of the work (not below the rank
of Executive Engineer in CPWD State Govt.)

Full Name:

Designation:

(Resolution No. _____ dated _____ of
University or of Executive Body authorising the signatory to
furnish utilisation certificate).

Schemes of Special Assistance Programme (SAP) and Committee for Strengthening of Infrastructure in Science and Technology (COSIST)

University Grants Commission
New Delhi
1993

Schemes of Special Assistance Programme (SAP) and Committee for Strengthening of Infrastructure in Science and Technology (COSIST)

The Scheme of Special Assistance Programme (SAP) has been continuing for a long period and Departments are assisted at three levels viz. Centres of Advanced Study (CAS), Departments of Special Assistance (DSA) and Department of Research Support (DRS). Assistance under the programme is sanctioned for excellence in research in identified thrust areas. The scheme of **Committee for Strengthening of Infrastructure in Science and Technology (COSIST)** was initiated in 1983 to assist those University Departments on selective basis which have already achieved excellence in research, to acquire costly equipment to enable them to do research and teaching at internationally competitive level. The COSIST programme is obviously only for Science and Technology subjects whereas SAP is both for Science and Social Sciences (including Humanities). Since both the programmes aim at promoting excellence in research, the UGC has decided to integrate the implementation of both these programmes so as to maximise the results from coordinated implementation in the UGC.

Objective:

The objective of both SAP and COSIST is to assist the identified University Departments for achieving excellence in research. Additionally, the objective in COSIST is to assist the identified Departments to acquire such costly equipment which cannot be approved out of SAP grants or normal University grants so that the attainment of excellence in research in the Department is not handicapped due to non-availability of such equipment which their counter-parts in other parts of the world have access to.

Therefore, assistance under COSIST will be considered only for those Departments which are already covered and which have completed atleast one term and have been reviewed after that term for their performances in SAP. Also, for the same reason, assisance under COSIST will not be provided to any Department during the 8th plan which has already been assisted under COSIST.

Implementation Features:

A. SAP

Whenever new Departments are to be inducted under SAP, the UGC will invite claims from all the Universities/colleges so that a Department which feels that it has distinguished itself in terms of research can present its claim for consideration for inclusion under SAP. When such claims are invited, the Concerned Department must give a detailed and self-contained write-up

mentioning the building staff (level and number-wise), laboratory facilites, courses and innovative features of the courses, research papers published in refreed journals (to be given researcher-wise), seminars and conferences organised and awards earned by the faculty members. All claims are scrutinised by the subject Expert Committees in the UGC and then the Departments are short listed by the Joint Standing Committee (both for SAP and COSIST for Sciences and Technology).

Wherecver the Standing Committee feels desirable, the short listed Departments are subjected to on the spot assessment by a Visiting Committee. On the basis of such assessment and in view of the assessment of the UGC about the resource it is in a position to commit, the list of fresh Departments for induction into SAP is finalised. Unless there are exceptional reasons, a fresh Department is inducted at the level of DRS.

The terms for every sanction, at all three levels, under the SAP is 5 years. At the end of 5 years every Department is subjected to an assessment of the work done by the UGC Expert Committee. This assessment is either through the presentation of the work done by the Project Coordinator before the UGC Committee in Delhi or it is in the university through a Visiting Committee. If the research work done during the term is found less than satisfactory, the UGC either gives a further time of two years to the Department to make good in the performance or the sanction under the SAP is cancelled. If on the other hand the work done is found to be good, the Department is granted another extension of 5 years and if the work done is of exceptionally good standard, the Department is considered for upgradation into the next higher level of the SAP.

Financial Support :

The UGC has decided that no post, at any level, would be sanctioned under the SAP. The financial support is provided by the UGC for the following items:

    (a) Equipment for research

    (b) Books and Journals

    (c) Seminars

    (d) Working expenses including consumables and field work

    (e) Maintenance of the equipment procured (only if it is given on rate contract for maintenance).

    (f) Buildings (Only in the nature of additions, alterations and renovations).

In addition the department will be able to use as many JRF as the work

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may need and claim money for the JRF from the UGC under the scheme of JRF.

The limits for financial assistance for the three levels under the SAP are indicated below:

1.	CAS	......	Rs. 60 lakhs
2.	DSA	......	Rs. 50 lakhs
3.	DRS	......	Rs. 35 lakhs

This scale is applicable for Science and Engineering & Technology Departments. For Departments in Humanities and Social Science and for departments of Mathematics and Statistics. the maximum limit would be roughly half of these amounts. The Departments must plan their purchases in such a manner that any escalation which may be there. can be accommodated within this overall ceiling because the UGC does not provide money beyond these limits for escalation.

The money for maintenance is provided only for the duration of the term. For the first 2 years normally the companies provide free maintenance. Afterwards the Commissioon will provide maintenance assistance upto 5% of the equipment cost. After the completion of the terms. the University will have to assume responsibility for maintenance of the equipment purchased under this programme. As for equipment. the Expert Committees are expected to ensure that the equipment which is already there in the Department is not further recommended for purchase under SAP. For claiming grant for buildings the department has to satisfy the requirements specified for buildings under the scheme of Development Assistance under the 8th plan. In addition to the sanctions under the foregoing limits. the UGC provides matching funds upto a maximum of Rs. 7 lakhs during one term if the department is able to obtain funds through research projects or sponsored research from agencies other than the UGC and the State Government concerned. This is for encouraging the departments to take more initiative for doing sponsored research.

In addition assistance is laso provided to SAP departments for three other items. Every SAP department is expected to conduct a Summer Institute for teachers of neighbouring universities and colleges to bring them up-to-date with the developments in the subject in terms of latest progress made in that subject. The Summer Institute should be of about one month duration. The norms of expenditure for the Summer Institutes are the same as applicable to Refresher course in the Academic Staff Colleges. Secondly. every SAP department is expected to provide a six weeks attachment to four meritorious students from the neighbouring universities/colleges to provide them research experience. The students must have appeared in the M.Sc. part-I examination

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so that with this research attachment they can think of a career in research after doing their M.Sc. In such cases the students must be given a project for working during their attachment and each student should be assigned to one faculty member for guidance. Each student should be provided 2nd class rail fare or bus fare and @ Rs. 1000/- p.m. for attachment. In both these cases,the department should write and contact the relevant university and college between January and March so that proper persons are selected for Summer Institute/research attachment. Thirdly, assistance is provided to each SAP department to the extent of Rs. 1.50 lakhs per year for collaboration with an identified university department or research institute in a foreign country. The collaborating university/research institute must be well known for research attainment and should be approved by the University. Upto two teachers in a year can be sent from the department to the foreign university/ institute for a period of 2-6 months. Such attachments must be approved by the vice-chancellor or the appropriate university authority. Such approvals must be accorded only if there is a well defined collaborative research programme. In such cases air fare must be provided by the SAP department and local hospitality/expenses must be provided by the host institution. On the reverse side the SAP department can receive upto two faculty members of the collaborating university/research institute in a year for a similarly well define collaborative reserach programme for a period of 2-6 months. In such cases the collaborating university/institute must provide the air fare and local hospitality/expenses on the scale laid down under the Cultural Exchange Programme by the SAP department. In order to provide greater flexibility to the departments in managing research under the SAP programme, the UGC sanction for books/journals, seminars and working expenses is treated as a lumpsum and the departments can spend more for one of these items if they can find savings from one or the other items. However, the recurring grant for books, seminars, working expenses and maintenance would not be provided for an year if it is not claimed atleast during the succeeding year. The departments are, therefore, advised to render accounts for the earlier recurring grant and claim recurring grant for the year immediately after the year is over so that it does not lapse.

It has been observed that many departments under this programme have felt difficulty in implementation on day-to-day basis because there has not been sufficient delegation of authority to them within the university. Therefore, all sanctions under the SAP henceforth are subject to the condition that each department under the SAP would have to be granted autonomy by the university for all financial and administrative matters relating to SAP within two years of a fresh sanction for new departments and by the end of 1994 for the departments already covered under SAP. In the event of failure of the university to formality grant such autonomy, the sanction under the SAP would be with drawn.

It is also a condition under every sanction under SAP that there must be an Advisory Committee for every SAP Department. The Advisory Committee is headed by the vice-chancellor and its membership includes the head of the department and all other professors in the department as also all the faculty members participating in research in the thrust areas under the programme. The UGC also nominates 3 outside experts in the advisory committee. The advisory committee must meet atleast once in every year and if the department is not able to implement any of the recommendations of the advisory committee, reasons for this must be documented because the Expert Committee which reviews the performance of the department at the end of the term examines the proceedings of the advisory committee and the action taken on their recommendation. While sanctioning new induction under the SAP or fresh term for a department under SAP, the university designates the seniormost professor in the thrust areas as the project coordinator who will be the member secretary of the advisory committee. The project coordinator does all the correspondance with the UGC and after the department is granted autonomy (for SAP), the project coordinator is responsible for handling the UGC grant and to account for it.

B. COSIST

The assistance under COSIST is to help the department which has already excelled in research but is handicapped due to non-availability of costly equipment, to acquire such equipment and conduct research of internationally competitive level. Therefore, assistance under COSIST would be only for the following items:

1. Research equipment (minor equipment will not be sanctioned).

2. Maintenance assistance on rate contract.

3. Working expenses relating to equipment given under COSIST.

4. Buildings in the nature of additions, alterations and renovation.

The assistance for maintenace would be provided only if the work is given on rate contract. The suppliers normally maintain the equipment free of cost for the first 2 years and, therefore, the UGC assistance to the extent of the value of the maintenance contract would be given for next 5 years. This would be subject to a maximum of 5% of the purchase value of the equipment. After this period the university has to assume responsibility for maintenance. As in the case of SAP, the maintenance grant and the working expenses have to be claimed for a year at most during the succeeding year because after that grant for these items for any particular year would lapse. Therefore, the department should submit accounts for the earlier grant and submit claim for grant from the UGC for these two items soon after the expiry of the year. For claiming grant for buildings, the department has to satisfy the requirements

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specified for buildings under the scheme of development assistance under the 8th plan. No sanction for posts or for small items of grant like seminars or books etc. is entertained by the UGC under COSIST.

Arrangements and assistance for Summer Institute. P.G. students attachment and collaboration with universities abroad as applicable and stated for SAP will apply for COSIST departments also.

Assistance under the COSIST is sanctioned within a maximum limit of Rs. 60 lakhs per department. Assistance under COSIST is of a one-time time nature and, therefore, assistance will not be provided afresh to any department under COSIST during the 8th plan if the department has already been assisted under COSIST earlier.

The UGC invites nominations or claims from the departments which feel they require assistance under COSIST. In view of the objectives of the COSIST scheme, only those departments which are already included under the SAP and which have completed atleast one term under the SAP and have been reviewed are eligible for consideration under the COSIST. Out of this category, those departments which feel they need assistance under COSIST should submit a detailed and self-contained proposal describing assistance received under SAP. The proposals are scrutinised by the subject expert committees in the UGC and then the Departments are short listed by a joint standing committee (for COSIST and SAP) in the UGC. In appropriate cases the departments are subjected to on the spot assessment through visiting committee. On the basis of such assessments, the departments for induction under the COSIST are finalised by the UGC. For each department, a project coordinator is identified by the university. He is usually the senior most professor active in research in the identified thrust areas. The department has to have an advisory committee which would meet atleast once in every year. The advisory committee is chaired by the vice-chancellor and includes the head of the department and all professors in the department as also all the faculty members doing research in the thrust areas. It also includes 3 outside experts nominated by the UGC. Generally, the advisory committee of SAP will also work for COSIST scheme. The department and the project coordinator are expected to follow the advice of the advisory committee and in case where it is not accepted, the reasons have to be documented because the review committee which assesses the outcome of the COSIST assistance in the department five years after the assistance is given, will scruitinise the deliberations of the advisoty committee and the action taken on their advice.

Monitoring and Review:

Under both the SAP and COSIST programmes, the departments have to submit annual report to UGC mentioning separately the progress in procuring equipment or in construction of buildings sanctioned under the programme.

The report has also to give a brief write up of the research work done with the UGC assistance under the programme and furnish the list of papers puslished in referred journals.

At the end of the term of SAP and after 5 years for COSIST, the UGC assesses the work done in the department under the programme through expert committees. In the case of COSIST and CAS; the assessment is done through visiting committees and in the case of DSA and DRS, the assessmesnt is done by the expert committees either by inviting the project coordinator to make presentation of the work done to the expert committee in Delhi or by visiting the department by the expert committee.

Earlier Sanctions:

The earlier sanctions given under the SAP and COSIST programmes would continue to be governed for the duration of the current term by the conditions specified in those sanctions.

SUMMARY SHEET OF ACADEMIC ACHIEVEMENTS

(at the stage of making application for being included in the programme)

	Name of the Department	University/Institution	

1. (a) Staff — Professor — Reader — Lecturer

   (b) Sanctioned

   (c) Working

2. Students Intake

   (a) M.Sc./M.A. (Annual)

   (b) M.Phil./M.Tech. (Annual)

   (c) Ph.D. (Average of 5 years)
      i. Ph.D. Enrolment
      ii. Ph.D. Awarded

3. (a) Completed research projects* in the last 5 years.
      i. Number of Projects
      ii. Total Amount

   (b) Ongoing research projects*
      i. Number of Projects
      ii. Total Amount

4. (a) Publications in referred journals (Average of last 5 years) — Indian — Foreign — Conference/Reports

   (b) Books published. if any (Last 5 years)

5. Special Assistance Programme (SAP) (Required for proposal to be considered for COSIST support only) & year of first sanction by the UGC.

      i. Level of asstt. (CAS/DSA/DRS)
      ii. Thrust Area (s)
      iii. Total grant (NR&R) approved
      iv. Total duration approved
      v. Year of completion of the present duration/phase
      vi. If reviewed at the end of the terms, attach copy of review report.

6. (a) Awards (National/International) for the staff (Bhatnagar, Hari Om Ashram Trust, Swami Pranvanand. etc.) — Number of Awards

   (b) Fellows of National/International Academy (FNA, FNSC, FASC, etc.), if any. — Number of Fellows

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* Give the Title of the project. Name of the sponsoring authority and approved outlay in a separate sheet.

7. Collaborative Programme (a) Other Department
   Teaching & Research (b) Other Institution

8. Major equipment available and
   in use (more than Rs. 1,00,000/-)
   within Department/USIC, indicating
   actual cost and source of each item.

9. National/International Seminar/ National Organised Attended
   Conferences attended/ organised International
   during last 5 years.

10. Challenging/Thrust areas in which
    Department has achieved excellence.

11. Library (a) No. of available books
    (b) Journal being procured (Indian/Foreign)

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PROFORMA FOR DEPARTMENTAL INFORMATION

1. Name of the University & Year
    of Establishment

2. Name of the Department and year of
    Establishment with full address & Fax/
    Telex/Tel. Nos.

    Courses offered:

3. Student Intake: U.G. P.G. M.Phil.

    Genl/SC/ST/Total Genl/SC/ST/Total Genl/SC/ST/Total

4. Faculty positions How many are:

	Numbers	DSc	PhD	DLit	MPhil	MSc	MA
(a) Professor							
(b) Readers							
(c) Lecturers							
(d) Others (Technical)							

5. Exmination & Evaluation System
    being followed.

6. Total No. of papers
    published by the Department
    in referred journals.
    (The papers presented in
    confs., seminars, reports
    etc. should not be
    included as published
    papers).
    (preceeding 5 years)

	Indian Journals	Foreign Journals	Confs.	Reports
Year I				
Year II				
Year III				
Year IV				
Year V				

7. (a) Total No. of scholars
         in the Department
         (preceeding 5 years)

	Full Time Ph.D./Post Doc.		Part Time Ph.D/Post Doc.	
	Boys	Girls	Boys	Girls
Year I - Completed				
Working				
II - Completed				
Working				

III   - Completed

Working

IV   - Completed

Working

V   - Completed

Working

8. Has any teacher earned any
distinction/honour from any
National/Internatioal
organisation during the
last 5 years.

Please give details.

9. What are the major challenging   (a)
thrust(s) areas of ongoing research   (b)
in the Department in which   (c)
excellence has been achieved.   (d)

   (e)

10. What is the yearly allocation
of grant to the Department   Research   Postgraduate
for the purpose of running its   Teaching
laboratories
(Preceeding five years)

Year   I
           II
           III
           IV
           V

11. Has the Department received any financial assistance from other sources during the last 5 years?
If so, indicate the details:

Year	Name of the funding agency (Indian' International)	Building	Equipment	Chemi- cals	Staff	Conti- gency	Total
I							
II							
III							
IV							
V							

12. (a) Has the Department taken any
          collaborative research work   Yes/No
          (University/National/International
          organisation/Industry)

     (b) If yes, the agencies which collaborated.

13. (a) What are the major equipment available
          in the laboratory which are in use. List
          equipment which costs more than 1,00,000/-
          indicating actual cost of each item.

     (b) Whether the department has Computer
          facilities of its own or is having terminal
          facilities from the main Computer of the
          University/Institute.

     (c) Please also list teaching aids available such
          as projectors, charts, models, films, video
          equipment, etc.

     (d) How effectively are teaching aids being
          utilised and if not, what are the reasons?
          Please give a note.

14. (a) Is there a departmental library?   -Yes/No

     (b) If yes, total No. of Books   -

     (c) Total No. of journals (Indian/Foreign)
          subscribed annually.   -

15. (a) When the course for various classes
          were last restructured/revised

Course	Year of revision
U. G.	
P. G.	
M. Phil.	

     (b) Whether UGC Curriculum Reports
          were discussed & implemented   -Yes/No (Reason for No)

     (c) What other initiatives has the
          department or its individual members
          taken in the last five years to improve
          teaching and research. Please give a
          short note in 200 words.

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16. Whether University/Institute will accept
    autonomy to the department if selected
    under SAP/COSIST.

17. Name and designation of the faculty
    member alongwith the area(s) in which
    they are pursuing research.

    (Please give separate sheet)

Date: Signature & Seal of

                                     Head of the Department

Date: Signature & Seal of

                                     Vice-Chancellor or Registrar

Please note: *PROPOSAL PREPARED OTHER THAN THE ABOVE FORMAT MAY*
                    NOT BE CONSIDERED.

/

PROGRESS REPORT FOR COSIST/SAP

(To be furnished in duplicate by the Head of the Department)

Progress Report for the Academic Year_____for Department_____
         University/College _____

1.

ITEM	UN-UTILISED UGC ASSISTANCE FROM PREVIOUS YEAR	ASSISTANCE RECEIVED FROM UGC DURING THE YEAR	EXPENDITURE DURING THE YEAR	UTILISATION CERTIFICATE FURNISHED TO UGC
Equipment				
Books and Journals				
Seminars				
Working Expenditure				
Maintenance of Equipment				
Buildings				
Summer Institute				
Student Attachment				
International collaboration				

2.   Nmber of Research papers accepted for publication in refereed journals during the year. (Attach title of research paper, name, volume and year of journal in each case)

3.   Number of teachers who attended summer institute (Give dates of summer institute also).

4.   Number of students giving summer attachment.

5.   Dates of Advisory Committee Meetings.

Place
Date

Signature
Name
Designation
(Coordinator of the COSIST/SAP)

NV: A tabular statement showing recommendations of Advisory Committee Meetings and action taken on them be
          attached

GUIDELINES

FOR

UNIVERSITY SCIENCE

INSTRUMENTATION CENTRE

UNIVERSITY GRANTS COMMISSION

NEW DELHI

1993

UNIVERSITY SCIENCE INSTRUMENTATION CENTRES

(USICs)

1. Need for USICs

Experimentation forms a major component of tranining and research in Science and Technology; hence accurate observations and measurements assume considerable importance in science education and research. For the training of experimental scientists of high calibre and for sustaining the continuous interest of students in an environment of rapid advances in science and technology, the University departments and colleges need to be continuously provided with highly reliable sophisticated instruments for teaching and advanced research. The UGC has recognized such needs and has provided funds whenever possible to procure such instruments from indigenous and foreign sources. It is natural that this would also call for an-activity related to their maintenance since maximum and proper utilisation of instruments depends to a large extent on whether they are kept in working condition and the user is well versed with them. Unfortunately, like many other areas where maintenance has been given low priority, instruments in university and colleges have also often remained underutilised and in some cases even unutilized for want of maintenance facilities and trained technicians to look after them. It has also been observed that instrumentation as a culture has not yet taken roots in our higher educational system which manifests itself in a number of ways. One observes overdependence on imported instruments and general reluctance on the part of teachers and research workers to innovate through design and fabrication or through improvisation of instruments as teaching aids. Efforts on their part to design instruments even for their own research are not much in evidence. Students generally do not get much needed ``hands-on`` experience with instruments in the course of their studies.

Modern instruments are becoming more and more sophisticated and hence expensive. With limited resources available for the higher educational system, liberal purchase of instruments is not possible and hence the need for bringing them in a common pool in the university for their better use. All this requires a well planned structure with appropriate facilities and technicians to help the academic staff of the university and colleges in all aspects of instrumentation, and above all, needs close cooperation among all academic staff members and the staff of the Centre.

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The UGC has, therefore, taken a major step by introducing a scheme of University Science Instrumentation Centres (USICs) in individual universities. Under this scheme the UGC will assist universities to create essential support facilities where all major instruments in the university could be centralised for their maximum utilization. with workshops supported by well qualified personnel for fabrication. repairs and maintenance of all types of instruments. In addition, the Commission has also established Regional Instrumentation Centres in Bombay and Bangalore for supporting the USICs.

2. **Standing Committee on USICs and its functions**

The Commission will be assisted, to achieve these objectives, by a Standing Committee which will frame detailed programmes. and will monitor and evaluate the USICs established under this scheme in the universities. The detailed functions of the Standing Committee are given in Annexure 1.

3. **Objectives of the USIC Programme**

The overall objectives of the USIC programme shall be as follows.

1. To encourage Universities to establish and develop USICs with a view to strengthen their technological infrastructure if required through collaborative efforts of the academic community of the University.

2. To provide adequate infrastructural resources as developmental inputs to the universities.

3. To undertake programmes with a view to nurture and spread the culture of instrumentation in the higher educational system.

4. To maximise use of expensive equipments in universities through training and suitable pooling mechanism.

5. To generate manpower at differnet levels to enable the country to face the challenges of modern instrumentation.

PART I : UNIVERSITY SCIENCE AND INSTRUMENTATION CENTRES

A university, having departments which make extensive use of scientific instruments and equipment, can propose to the University Grants Commission for assistance to establish a University Science Instrumentation Centre. These centres will be governed by the guidelines given below:

1. **Levels of USICs and their objectives**

   In view of the different needs of the Universities, USICs are envisaged in the following three levels.

   USIC LEVEL I

   USICs designated USIC Level I, would normally be created in those universities wishing to start a first level activity in instrumentation. Level I USICs shall fulfill the immediate objectives as stated below. A minimum but adequate support, consisting of a mechanical shop, a glass-blowing shop, and an electronic shop with adequate personnel to man them at the levels of scientists and technicians with specialization in instrumentation science and technology, are provided.

   The functins of USIC Level I will be as follows:

   1. To provide service to university departments and affiliated colleges in repairs and maintence of their instruments..

   2. To provide and assist to provide analytical services on specialised instruments available in the university.

   3. Maintenance of equipment in language laboratories, media centres, and audio-visual aids and xeroxing machines.

   4. To design and fabricate teaching aids and kits for the use of departments and colleges.

   USIC LEVEL II

   The second category of USICs, called USIC Level II, may be started in those universities which have already shown appreciable activity in instrumentation. More facilities are provided so as to equip such Centres for undertaking developmental activity in Instrumentation particularly suitable for teaching and fabrication.

   The USIC Level II will have the folowing objectives:

   1. To provide services to departments, language laboratories, media centres etc. of the university and its affiliated colleges in repairs and maintenance of their instruments.

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2. To provide and operational assistance on analytical and specialised instruments available in the university.

3. To design and fabricate teaching aids and kits, and instruments required for research.

4. To provide training programmes in instrumentation for students, teachers and technicians of university departments as well as of affiliated colleges.

USIC LEVEL III

USICs level II which have shown sustained and vigourous activity in instrumentation with active support from the departments, colleges and the user community of the university in general, would be considered, among other, USICs in the State for upgradation to USIC Level III. Such Centres after ensuring a high level of activity in rendering services normally rendered by USIC level II, will undertake organized training programmes to generate suitably trained manpower and to inculcate the culture of instrumentation in the universities of the State.

In addition to the objectives specified for USICs level II, the other objectives for USIC Level III will be as follows:

1. To organize training programmes in instrumentation for the teachers, students and technical staff of the universities in the State. Such programmes could be either short duration certificate courses or long duration courses leading to a post B.Sc. Diploma or equivalent.

2. To promote and conduct R & D programmes in instrumentation in USICs and other departments.

2. Status of USICs

The USICs shall be non-vacation academic departments and shall have the requisite functional autonomy for their day-to-day functioning towards achievement of their objectives. The guidelines of the UGC for autonomous departments shall be suitably adopted for the purpose by the USICs.

3. Functions of USICs

In order to achieve the above objectives, the USICs of various levels will have the following functions:

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USIC LEVEL I

1. The USIC shall act as an agency of the University in the matters of repairs and maintenance of instruments and fabrication of instruments and teaching aids, done either in-house or with the help of other agencies.

2. It shall execute work orders/jobs submitted by the university departments and/or colleges, with the help of facilities available.

3. It shall prepare and maintain an up-to-date inventory of major instruments costing Rs. 2 lakhs or more, available in the departments of the university, giving essential details. (Annexure II).

4. It shall provide necessary analytical services on the specialised instruments assigned to USIC.

5. The USIC shall maintain or assist the different departments to maintain suitable log-books of use of instruments showing
   · details such as the period for which it was used for research, training and maintenance, down time, etc. (Annexure III).

USIC LEVEL II

In addition to the functions given above for USIC level I, the other functions of USIC level II shall be as follows:

1. To conduct short-term courses in repairs and maintenance and in use of instruments for researchers, laboratory technicians, attendants, etc., with a view to upgrade their skills and knowledge in instrumentation.

2. To undertake design and development of teaching aids and instruments.

3. To design and fabricate instruments and/or accessories suitable for research, if necessary, in collaboration with the academic staff of the departments.

USIC LEVEL III

In addition to the functions of USIC Level I & II, the other functions of USIC Level III shall be as follows:

1. To conduct special courses in instrumentation designed specially to up-grade the knowledge of technical and scientific staff of the USICs, and of other institutions in maintenance of instruments.

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2. To conduct short-term courses on various aspects of instrumentation and training programmes on proper use of instruments for students, teachers of university departments as well as colleges in the State.

3. To conduct courses leading to post-B.Sc. Diploma in instrumentation if necessary in collaboration with the other departments of the university.

4. To prepare annual report on the performance of all USICs in the State/region where it is located, as per the format provided by the Commission and submit it to the Standing Committee for its assessment.

4. **Upgradation of USICs**

The upgradation of the USICs shall be done on the basis of the annual reports and performance assessments by the Commission.

5. **Infrastructural Facilities of the USICs**

The minimum infrastructural facilities of all USICs shall consist of a mechanical workshop, electronic shop and a glass blowing shop. These are given level-wise in Annexure IV.

Every USIC is expected to have a core collection of laboratory manuals, data sheets, reference books on Instrumentation. Level III USICs may also have a few journals.

6. **Organization of USICs**

The USICs shall be organized as follows:

(A) **Advisory Committee**

There shall be an Advisory Committee for every USIC which will consist of not more than one representative each from user departments with the Head of the USIC as its Convenor and the Vice-Chancellor as its Chairman. (Where the number of departments is more than ten, the Vice Chancellor may nominate members to represent the various areas). The Committee shall meet atleast twice a year.

The Advisory Committee of USIC Level III will have a representative of the UGC in addition to the members mentioned above.

The Advisory Committee shall have the following functions:

1. The Committee will help frame policies for providing services by the USICs in general and advise the Head of the USIC on all matters related to the services to be rendered to the departments, colleges and other educational institutions.

2. The Committee on request may advise the university authorities on purchase of sophisticated instruments costing Rs. 2 lakhs or more and their installation in the university.

3. The Committee will monitor and evaluate the performance of the USIC and suggest follow-up measures.

4. It will review the annual report prepared by Head, USIC on the implementation of the USIC programme and sunbmit to the University and to the University Grants Commission through the University.

(B) **Head of USIC**

Each USIC shall have a full time ''Head'' of the Centre. He will be responsible directly to the Vice Chancellor and shall report to him. He shall be treated on par with the other Heads of the departments.

Duties of the Head of USIC

The Head of the USIC shall have the following duties:

1. to prepare an annual plan of work of the Centre and report it to the Advisory Committee.

2. to assign work as per the plan to his colleagues and assess the performance.

3. to prepare collaborative programmes for development of instruments and aids with the user departments.

4. to organize training and awareness programmes if necessary in collaboration with the staff of the other departments.

5. to maintain proper records as required by these guidelines and submit annual reports of work done by the USIC to the Vice-Chancellor (Annexure V).

6. to initiate and organize suitable measures to spread the culture of instrumentation.

7. to prepare the annual budget of the USIC and to operate on the approved budget.

(C) **USIC Staff**

The staff of the USICs shall consist of teaching, technical and administrative personnel, with qualifications as given below.

(a) **Teaching Staff and their status:**

The USICs may have a teaching staff consisting of Professors.

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Readers and Lecturers. They shall be treated on par with the other teaching staff of the university in every respect. However, they will not be entitled to vacations, normally available to the teaching staff of the university, in view of their different time table of work.

(b) Technical staff and their status:

The technical staff of the USIC will consist of Technical Officers (TOs) and technicians in the grades as specified in these guidelines. They will have the status of non-vaction academic/non-teaching staff of the university.

The pay scales and the corresponding allowances for the technical staff appointed in the USIC shall be as per the scales given here under:

(i) Technical officers

The Technical Officers in the Centre will be in the following categories:

Technical Officer (III), Technical Officer (II), Technical Officer (I-Selection grade), Technical Officer (1-Senior scale), and Technical Officer (1).

(ii) Technicians

The technicians of the Centre be categorised in five levels with distinct essential qualifications and experience in view of the technological nature of the Centre.

While fixing the grades of the existing technicians in the USICs in the prevailing university scales, care should be taken to match experience and to protect his/her present emoluments.

The university may appoint the technicians sanctioned by the UGC in suitable university scales after taking due care to match qualifications and experience with respect to the grades given in these guidelines.

(c) Administrative staff and their status:

The administrative staff of the Centre will be in the cadre similar to that existing in the University and shall have the status of the non-teaching staff of the university.

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7.   **Selection Procedures for Teaching and Non-Teaching Staff**

(i)   **Procedure for Selection of Teaching Staff**

The procedure for selection of personnel in the category of teaching staff shall be similar to that adopted by the university for selection of teachers.

(ii)   **Procedure for selection of Technical Officers**

The procedure for selection of personnel in the category of Technicial Officers shall be identical to that for teaching staff and not for non-teaching staff.

The selection procedure should be completed in a period less than four months from the date of advertisement.

(iii) **Procedure for selection of technicians**

The university may adopt the method prevailing in the university for selection of the technical staff in the Centre. However, it is necessary that all selections must be made through proper trade tests.

(iv)   **Procedure for selection of Administrative staff**

The sanctioned administrative staff shall be as per the qualifications and scales prevailing in the university and shall be recruited as per the university rules.

8.   *Duties and workload of USIC staff*

All staff members of the USIC shall be available during the working hours and suitable procedurs for recording their attendance shall be maintained. Their workload shall not be less than 40 hours a week and the distribution of work will be decided by the Head of the USIC.

a)   **Academic Staff**

The academic staff will broadly have the following duties:

1.   To undertake and complete the work assigned by the Head of the Centre.

2.   To supervise the work assigned to their junior colleagues and report on their work output to the Head of the Centre.

3.   To maintain records of the work done and make reports to the Head of the Centre.

4.   To participate in formal courses and training programmes arranged by the USIC.

b)   **Technicians and Administrative staff**

The technicians and administrative staff of the USIC will do all the work assigned to them. The work done shall be recorded in weekly diaries to be submitted to the Head of the Centre for monthly review. The weekly workload shall be as per the university rules.

9-11. .Staffing pattern

The initial staffing pattern for various levels of USICs shall be as under:

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A. USIC Level I

I.	**Teaching staff/Technical officers**			
	1.	Reader/Technical Officer (II)	:	One
	2.	Technical Officer (I)	:	Two
II.	**Technicians**			
	1.	Grade V	:	Nil
	2.	Grade IV	:	Two
	3.	Grade III	:	Nil
	4.	Grade II	:	Two
	5.	Grade I	:	Three

The positions in various grades be allocated to different trades as per the requirements of USICs. It is suggested that positions requiring high specialisation such as Electronics may be placed in higher grades.

III. Administrative staff

1	Lower Division Clerk	:	One

B. USIC Level II

The staffing pattern of USIC level II after upgradation from USIC level I or on being established shall be as follows:

Cadre		Additional on upgradation	Newly established
I.	**Teaching staff/ Technical officers**		
	1. Professor/Technical Officer (III)	One	One
	2. Reader/Technical Officer (II)	Nil	One
	3. Lecturer/Technical Officer (I)	One	Three
II.	**Technicians**		
	1. Grade V	One	One
	2. Grade IV	One	Three
	3. Grade III	One	One
	4. Grade II	Nil	Two
	5. Grade I	Nil	Three

III.	Administrative staff		
1.	Upper Division Clerk	One	One
2.	Lower Division Clerk	Nil	One

C. USIC Level III

The staffing pattern of USIC level III on upgradation from USIC level II shall be as follows :

	Cadre	Additional	Total
I.	**Teaching staff/Technical Officers**		
	1. Professor/Technical Officer (III)	Nil	One
	2. Reader/Technical Officer (II)	Two	Three
	3. Lecturer/Technical Officer	One	Four
II.	**Technicians**		
	1. Grade IV	One	Two
	2. Grade IV	Nil	Three
	3. Grade III	Nil	One
	4. Grade II	Nil	Two
	5. Grade I	Nil	Three
III.	**Administrative staff**		
	1. Upper Division Clerk	Nil	One
	2. Lower Division Clerk	Nil	One

Note: *The university may sanction, if required additional technical and administrative staff from its own resources, depending upon the actual requirements of the USIC.*

12. Orientation and Training

The staff of the USICs should be encouraged to improve their performance by training through refresher courses. summer schools and advanced courses in instrumentation. made available at places like USICs level III. RICs and facilities operated by other agencies.

The teaching staff and the technical officers may be sent for conferences or meetings in the country or abroad on recommendations of the Vice-Chancellor under the various schemes of the UGC for this purpose. They should be treated on par with teachers for these purposes under the unassigned grants of the UGC.

13.   **Funding Pattern**

The USIC will receive financial assistance for their development and maintenance from the following sources:

1.   UGC Assistance for establishment and development of USIC

Financial assistance from the UGC for establishment of a USIC in a university will be for staff salaries, equipment, contingencies and buildings on 100% basis for a duration of first five years. after which the State Government will take over the responsibility of its funding for posts and recurring expenses.

The level-wise maximum financial assistance for establishing and for development of USICs shall be as given below (amounts in Rs. lakhs). The actual amount to be sanctioned will be on the merit of each case.

		Level I	Level II (upgraded)	Level II (new)	Level III (Additional Funds)
A.	**Non-Recurring**				
i.	Building (Carpet area in sq. meters)	250	250	500	250
ii.	Equipment				
1.	Mechanical Workshop	3.00	2.00	5.00	1.00
2.	Electronic Shop	2.00	2.00	4.00	2.00
3.	Glass Blowing Shop	1.00	0.00	1.00	1.50
4.	Teaching Laboratory	0.00	2.00	2.00	5.00

	Level I	Level II (upgraded	Level II (new)	Level III (Additional Fund)
B. Recurring per annum				
1. Consumables & Contingencies	0.25	0.25	0.50	0.50
			(these amounts include travel)	
2. Data sheets, reference manuals	0.10	0.10	0.10	0.20
3. Seminars training/ meetings	0.25	0.25	0.50	1.00

2. UGC Assistance to further Development

The USIC will be normally included in the Five year plan of the university for further development like other departments after the initial assistance from the UGC for a period of five years ceases.

3. State Government assistance for maintenance

a. The financial assistance for further development of the USICs shall be considered as part of the University Five year plan and will be as per the norms applicable to similar assistance to other departments of the university.

b. The university should obtain clearance of the State government, well in time, for taking over the USIC at the end of the UGC assistance for establishment of the Centre.

c. Universities which already have USICs established before 1st April 1985, will ensure that the USICs are taken over by the State government for the financial year 1990-91.

4. Charges for services

a. All charges for services should be on the actual cost basis to cover the cost of materials and components, labour electricity, water charges, depreciation and other incidental expenses. These charges will be shown in a separate ledger for every job/work order executed by the USIC and shall be reported to the Advisory Committee at its meetings.

b. University departments, colleges and educational institutions may be given a subsidy on recommendations of the Advisory Committee. Such a subsidy, however, should not exceed 50%.

c. At least 50% of the money collected from charging should be used for augumenting the resources and facilities of the USICs.

d. Universities having instruments under COSIST, CAS and DSA programmes may have them serviced by their USICs against the stipulated service charges.

5. Consultancy

a. The academic staff of the Centre may undertake consultancy from outside parties for which charges may be made as per the university rules.

b. At least 50% of the share of the university out of the receipts so collected from consultancy should be made available for augumenting the resources and facilities of the Centre.

14. R & D Proposals

The USIC of the University may submit research and development programmes for financial support from the UGC in the prescribed format shown in Annexure VI. Such proposals should, however be related to instrumentation for teaching, research or industrial applications.

The USICs may also submit proposals for development of instruments to various other funding agencies in the country.

15. Monitoring, Evaluation and Follow-up

·1. U.G.C. Level

The USIC programme will be monitored and evaluated periodically by the Standing Committee which may make recommendations to the Commission on individual USICs and the USIC programme as a whole. It shall submit reports on the progrmme to the Commission.

The Standing Committee shall recommend measures from time to time to ensure proper implementation of the USIC porgramme.

2. USIC Level

Annual Report

The Head of the USIC shall submit an annual report on the working of the USIC to the Vice-Chancellor. While preparing such a report, the views of the users should be assessed and included. The report shall be submitted to the UGC by the Vice-Chancellor before the beginning of the next academic year.

16. Submission of Proposals

Proposals for establishing USICs in the universities with the assistance of the UGC may be submitted in a standard format given in Annexure-VII.

PART II : REGIONAL INSTRUMENTATION CENTRES

1. Need for RICs

With a view to establish firmly the USICs in the university system, the UGC has decided to establish Regional Instrumentation Centres (RICs) in the country which will function as resource centres for training of staff and coordinated development of all USICs in the region. Two RICs, one in Bombay and another in the Indian Institute of Science, Bangalore, have already been established.

2. Objectives of RICs

The Regional Instrumentation Centres shall have the following objectives:

1. To monitor the functioning of the USICs and assist them in the discharge of their functions.

2. To train resource personnel with a view to generate technical cadres in the USICs.

3. To provide service and maintenance facilities to instruments, as far as possible.

4. To transform the latest development in instrumentation in research laboratories and other institutions in the country, so as to make them suitable for use in the higher educational system.

5. To provide updated technical information to produce source material for training and disseminate information on the latest developments in instrumentation to the universities and colleges.

6. To provide assistance in providing analytical services on sophisticated equipments to the universities.

7. To conduct R & D programmes in Instrumentation of interest to the higher educational system and to the other sectors such as industry, research laboratories, etc.

8. To interact with industry, research laboratories and other sections of the society in the interest of development and growth of science and technology of instrumentation.

3. Functions of RICs

The RICs will have the following functions

1. It will send teams of experts to visit the USICs to assess their problems and assistance to be given for efficient performance.

2. It will conduct short term and long term training programmes for personnel from USICs, colleges of the region, and educational institutions in the areas of technology related to instrumentation.

3. Provide services of its trained staff for repairs of sophisticated instruments to the extent possible.

4. It will undertake research and development on problems related to instrumentation.

5. Assist the Commission in its endeavour to project the requirements of instruments in the universities and their standardization.

6. It will also function as a depository and will provide information related to instruments in the universities or departments.

4. Status of RICs

The RICs shall be independent units of the university having status of a department. It shall have the requisite functional autonomy for its day-to-day functioning towards achievement of its regional objectives.

5. Organization of RICs

The RICs shall have the following organization :

A. Advisory Committee

The RIC shall have functional autonomy in respect of policies related to its administration, programmes and their implementation. An Advisory Committee composed of the following will monitor/assess the performance of RIC and will advise suitably for further improvement:

(a) Vice Chancellor — Chairman

(b) Director/Head RIC — Member-Secretary

(c) Two Experts in Instrumentation — UGC nominees

(d) UGC representative

(e) A representative of instrument industry — Chairman's nominee

(f) Two heads of USICs — Chairman's nominee

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B. **Inter-University Committee**

The RIC shall arrange periodic meetings for heads of USICs and shall recommend regional activities to UGC for implementation.

C. **Director of RIC**

The Director of the RIC shall be in the grade of Professor of University and shall not hold charge of any other department. Head of any department shall not simultaneously be the Head of the RIC or vice-versa.

D. **RIC Staff**

The composition of the RIC staff shall consist of various cadres similar to those of USICs given in 6. (C) of Part I of these guidelines.

6. **Funding of the RICs**

In view of their regional role, the Regional Instrumentation Centres will be funded by the University Grants Commission for their establishment and maintenance on 100% basis and will also be provided with necessary finance for their further development.

7. **Other Guidelines**

For matters related to staff selection, pay scales, etc., the guidelines 6.(C), 7. 8. 9. 10 & 12 of Part I will be applicable to the RICs.

8. **Annual Report**

The Head of RIC shall submit an annual report to UGC through the Vice-Chancellor.

USIC STANDING COMMITTEE

The UGC Standing Committee for USICs/RICs will be periodically constituted by the Commission with members from the Universities, RICs, USICs, RSICs, IITs and other national bodies concerned with various aspects of instrumentation. It shall have a convenor and one of the officers of the Commission will act as the Secretary.

The Committee will meet twice a year to review the working of the USICs and RICs and to discuss the associated matters in the Universities. It shall recommend to the Commission various measures to promote the culture of instrumentation in the University System.

The Committee, in discharging its assignment, will play academic, administrative and advisory roles like the other Standing Committees of the Commission.

LIST OF MAJOR INSTRUMENTS AVAILABLE IN
THE UNIVERSITY

Department	Type of Instrument	Model & Make	Accessories	Year of purchase	Approx.	Price

RECORD BOOKS TO BE MAINTAINED BY USICs

A. Record of Utilisation of Instruments
(to be used for instruments costing more than Rs. 2.00 lakhs)

Instrument: _____

Date	Job No.	User's Details		Hrs. of services given			User's Sign.
		Name	Department	Measure-ment	Data Analysis	Any other	

B. Record of Consumables Used

Date	Job No.	User's Details		Consumables used			Charges in Rs.	User's sign.
		Name	Deptt.	Chart Paper	Chemi-cals	Any other		

C. Record of Maintenance of Instrument

Instrument _____

Date of failure	Reported on	Repaired by (Date)		Down Time	Signature of Head, USIC
		USIC Staff	Service Engineer		

INFRASTRUCTURE FOR

UNIVERSITY SCIENCE INSTRUMENTATION CENTRE

The list of equipment given below for each of the shops is indicative of what should form an infrastructure for the corresponding level.

USIC LEVEL I

Mechanical Shop

1.	Lathe (4' bed, 8-9" Jaw size)	2.	Drilling Machine Vertical-3/4"
3.	Tool Grinder	4.	Shearing Machine 24 in.
5.	Bending Machine	6.	Arc welding set 200 Amps.
7.	Gas Welding Set	8.	Gas Cyclinders (4)
9.	Air Compressor with Spray Gun for painting	10.	Welding Torches

Electronic Shop

1.	General Purpose Oscilloscopes (2)	2.	Analog/Digital Multimeters (4)
3.	Signal Generators (2)	4.	Regulated Power Supplies (4)
5.	LCR Bridge with Q Meter	6.	Analog/ Digital IC Tester

Glass Blowing Shop

1.	Gas Cylinders (3)	2.	Oxygen cyclinders (3)
3.	Torches	4.	Compressor (Small) (1)
5.	Annealing Oven (1)	6.	Glass working Tools

USIC LEVEL II

Equipment mentioned below is in addition to that required for USIC Level I and is indicative of what is considered as an adequate facility for this level.

I   Mechanical Shop

1. Geared shaping machine

2. Heavy duty lathe

3. Circular saw (carpentary)

4. Thickness planer

II   Electronic Shop

1. Oscilloscopes (2)

2. Analog/Digital Multimeters (4)

3. IBM Compatible PC (1) with printer

4. Any other electronic test and measuring equipment suitable for USIC service activities.

II.   USIC LEVEL III

A.   Equipment

The USIC level III will be provided an additional maximum amount of Rs. 5 lakhs on the advise of the Visiting Committee for equipping teaching laboratories for post-graduate diploma courses.

PERFORMA FOR SENDING DETAILED INFORMATION ABOUT UNIVERSITY SCIENCE INSTRUMENTATION CENTRE (USIC)

1. Name of University

2. Date of establishment of USIC

3. Name of the Head of USIC

4. If he is not appointed on a full-time basis the designation and department in which he is working.

5. Reason for appointing a part-time Head for USIC

6. How long will it take to appoint full time Head of USIC?

7. Has the USIC Advisory Committee been constituted as per guidelines given by UGC?

8. If so, give the composition of the Committee. Give details of staff sanctioned by University/UGC and staff appointed so far.

Sanctioning Authority University/UGC any other	Sanction post	Name of Person appointed against this part	Qualification in brief
1	2	4	5

9. If all the staff is not appointed, reason or delay (if there is a lack of qualified candidates, please indicate).

10. Give details of USIC building (Plans if available may be sent) including plinth area available.

11. If the building is under construction, approximately how long will it take to be completed (Plan may be enclosed).

12. Please indicate break up or carpet area for each of the following sections.

(a) Workshop

(b) Electronic Shop

(c) Glass Blowing

(d) Any other

13. Equipment (List of machines. test equipment may be enclosed)

Laboratory	Amount approved by UGC	Amount
1. Workshop		
2. Electronics		
3. Glass Blowing		
4. Any other		

14. List of the major instruments which have been or will be brought under USIC.

(a) Those which will be located in USIC building

(b) Those which will be located in the various departments but will be under administrative control of USIC.

15. What are the activities undertaken or proposed to be undertaken by USIC?

(a) Repairs of University instruments   Yes/No

(b) Repairs of College instruments   Yes/No

(c) Research and development of instruments   Yes/No

(d) Training of technical staff   Yes/No

(e) Fabricating apparatus   Yes/No

     (i) Glass apparatus   Yes/No

     (ii) Mechanical Gadgets   Yes/No

     (iii) Electric instruments   Yes/No

16. Give a list of instruments designed/received/fabricated by USIC.

17. Has any department in the university designed and fabricated any instrument? If so. give the details of each such as specification. approximate cost. requirement in the country. etc.

18. Is the department willing to undertake fabrication and supply of such instruments to other university departments?

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19 Is any department of the university willing to undertake design and
    department of instruments not available in the country? If so. list of
    instruments and the Scientist/Engineer who is willing to undertake the
    same giving approximate idea of cost and time required.

Name of Department	Name of Scientist/ Engineer	Name of instru- ments	Approximate need in the country	Approximate cost	Time for design development and fabrication in a commerical form
1	2	3	4	5	6

20. Any other relevent information in this regard.

(Signature)   (Signature)
Registrar   Head of the USIC

SUPPORT FOR   R & D   IN INSTRUMENTATION
PROPOSAL FOR MAJOR RESEARCH PROJECT

---

1. Title of the research project (in BLOCK letters)

2. (a) Principal Investigator and other members of research group. if any.

    (b) Date of birth of Principal Investigator (Financial Assistance is available upto the age of 65 years only).

    (c) USIC and Department of _____

    (d) Institution and address:

3. Academic Experience

    (a) Research

    (b) Teaching

    (c) Papers published: Give title of papers. names of authors, journals in which published and year of publication.

    (Separate sheet may be attached)

4. Please indicate whether the research work is

    (i)   Basic

    (ii) Teaching

    (iii) Development/Fabrication of equipment

5. Actual plan of work indicating briefly the objectives and importance of the work proposed (Separate sheets may be attached).

6. Duration of the project:

7. Detailed estimates of the expenditure to be incurred on the project (for 3 years only)

(a) Non-recurring	Amount required
i. Scientific equipment (give a list with necessary justifications and also any foreign exchange required)	
ii. Scientific journals and books	
iii. Strengthening of workshop facilities	
Total	

(Please indicate only those items which could not be met from the normal development grants).

(b) Recurring (per annum)			Amount required
i.	Personnel	:	Research fellows
			Supporting
			Technical Presonnel
ii.	Contingency		
iii.	Consumables		
iv.	Computation work		
v.	Travel		
	Total Rs. (per annum)		

Total Recurring for the duration of the project _____

Total Non-Recurring and Recurring _____

8. Please indicate research schemes already undertaken and in force with funds from Commission or any other agencies

Name of the funding agency with ref. no.	Amount sanctioned (give detail)	Amount utilised	Progress made under the scheme

9. Please give names and address of three persons in other universities/ research institutes actively engaged in your area of research interest, to whom a reference may be made. if necessary. regarding the research project:

10. Rules governing the scheme are acceptable to me and that the information given in the application form is correct to the best of my knowledge and belief.

(Signature of Applicant)

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CERTIFICATE FROM THE INSTITUTION

Certified that:

(a) General facilities required such as laboratories. equipment. etc. are available in the department.

(b) The equipment/apparatus/chemicals/books. etc. for which assistance is requested are not available for his/her research project.

(c) This research proposal is not being supported by any other agency.

(d) The Institution is fit to receive UGC assistance.

Facilities for research work will be provided to Shri/Km./Smt.

in the University

(Signature of the Registrar of
the University)

(Signature of the Head
of the Department)

PROPOSAL FOR SETTING UP UNIVERSITY SCIENCE INSTRUMENTATION CENTRE (USIC)

Name of the University:

(I)   (a)   Faculty profile of science departments

Name of Deptt.	Professors	Readers	Lecturers

(b)   Research personnel profile

Name of Deptt.	Res. Assets.	Res. Asstt.	Fellows
			.

(II)   Technical Facility Profile

Please give the following details of all equipment already with the university and is to be procured in the 7th plan.

(a)   Mechanical Workshop: Is it centralised   - Yes/No

Name of Machine	Make & Year	Location, if not centralised	Whether would be brought under USIC

(b)   Electronic Shop: Is it centralised   -   Yes/No

Name of Machine	Make & Year	Location, if not centralised	Whether would be brought under USIC

- - - - - - - - - - - - - - - - - - -

(c)   Glass Blowing Shop: Is it centralised   Yes/No

Name of Machine	Make & Year	Location, if not centralised	Whether would be brought under USIC

- - - - - - - - - - - - - - - - - - -

(d)   Analytical Instruments: Are they centralised   Yes/No

Name of Machine	Make & Year	Location, if not centralised	Whether would be brought under USIC

- - - - - - - - - - - - - - - - - - -

(e)   Space Profile

Type of facility	If housed in a separate bldg. state the area	If housed in a department, state the area
1. Central W/s.		
2. Central Instrmn. Centre		
3. Central Instrument-cum-workshop		

1.   Senior staff (at the level of lecturer & above)

2.   Staff below Lecturer's level

     (Please use the following format)

Design.	No. of post	Grade	Qualifi-cations	In postition & approved in 7th plan	Placed in Deptt.

III.   State briefly, how the instruments are serviced and repaired.

IV.   State which tasks of USIC are essential for the university, to start with. Give your requirements in tabular form for each of the activities in the following Heads:

     (a)   Equipment, its make and approximate cost

     (b)   Personnel, trade-wise

     (c)   Plan of building already sanctioned under 7th plan

     (d)   Any additional building required and its plan showing locations of equipment.

V.   Any additional information the university may wish to furnish.