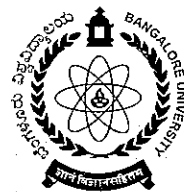


Vision Document

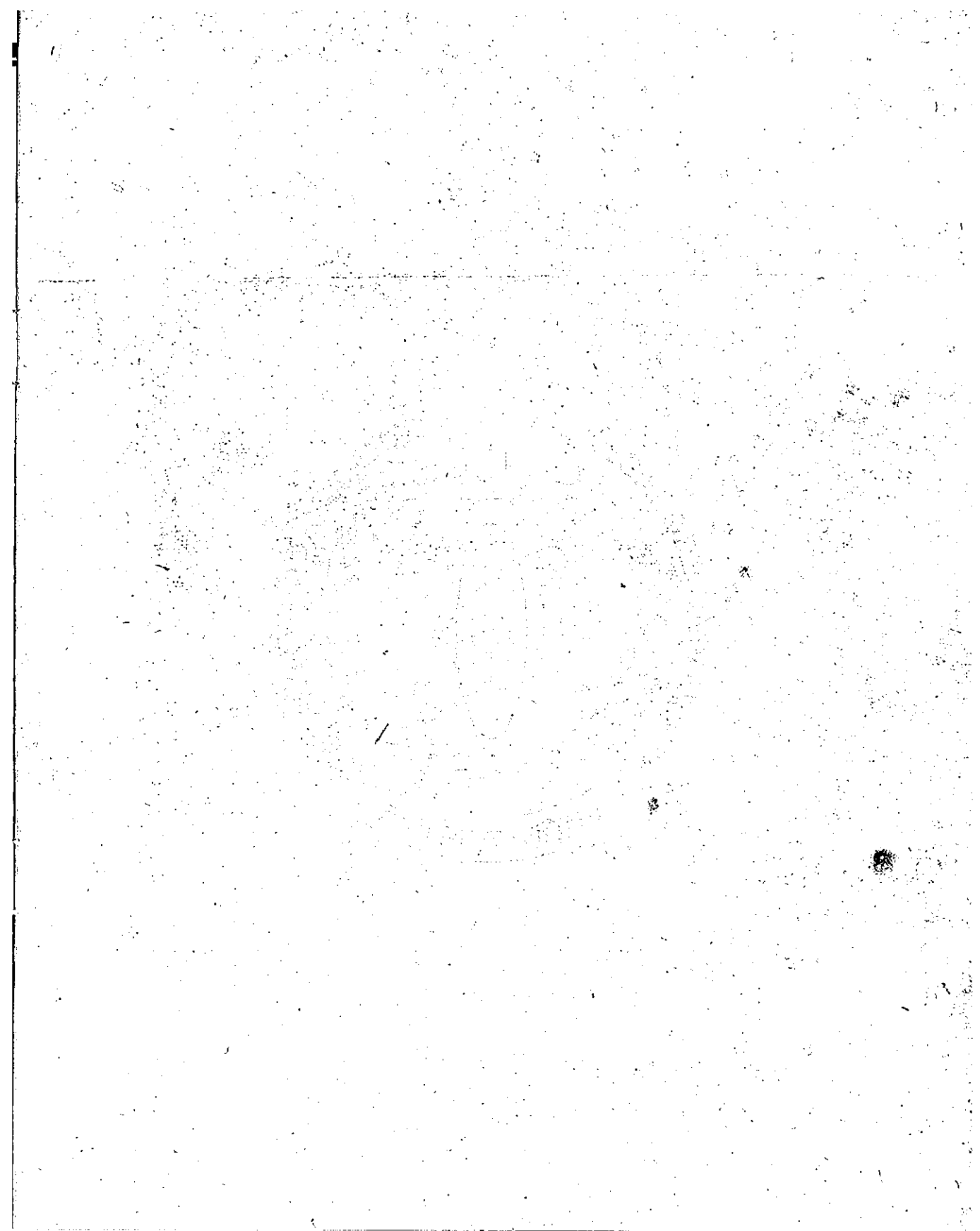
University Visvesvaraya College of Engineering (UVCE)

Prepared by

Bangalore University



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Vision: UVCE

Preamble

UVCE was the pride of Karnataka and enjoyed a glorious period by remaining an icon of Engineering Education for a long time since its establishment in 1917. However, in the recent past it is passing through a sulking period. Therefore it is time now to re-ignite and re-vitalize UVCE with new strategies, commensurate with the demands of the changing Technological & Engineering scenario, to affirm that UVCE rises to greater altitude, and would remain as a Lead Engineering Institute in the country and would be a role-model for all other Engineering institutions. The diffusion of aroma of success of UVCE across entire India and radiation beyond India should be re-found with a greater impact. To facilitate stepping towards the realization of the dream of elevating the status of UVCE, a document VISION: UVCE is presented herewith. This document tries to discover certain ongoing non-proactive practices in UVCE and explore the new strategies and approaches which would alleviate the short comings to bring back UVCE into lime light.

1. Legacy of the College

The University Visvesvaraya College of Engineering, popularly known as UVCE, is one of the most prestigious colleges imparting Technical Education in the state of Karnataka. The college was established in the year 1917 by the greatest Engineer of the Country and Statesman of modern times Bharata Rathna Sir. M. Visvesvaraya. Since its inception, the Institution has grown by leaps and bounds producing highly competent graduates, postgraduates and doctorates who have occupied prestigious positions both in India and abroad. Some of the distinguished alumni are Dr. M. R. Srinivasan, Former Chairman, Atomic Energy Commission and Secretary, Department of Atomic Energy, Government of India, Dr. V. K. Aatre, Former Director General DRDO and Scientific Advisor to Ministry of Defence, Government of India, Prof. R. Narasimha (FRS) and Dr. T. S. Prahalad, Former Directors, NAL, Dr. S. Ramegowda and Dr. R. Natarajan, Former Chairmen, AICTE, New Delhi. Mr. B. V. Jagadish celebrated technocrat, USA and a host of celebrities in India and abroad. The UVCE was recognized as an ICON for a long period by virtue of its distinguished faculty, good infrastructure, congenial academic environment and high quality of education.

2. The Present Scenario

The institution currently offers Seven Undergraduate (B.E./B.Arch) and Twenty Four Postgraduate (M.E./M.Arch.) Programmes. The Institute has awarded 153 Ph.D degrees. At present there are 135 candidates pursuing their Ph.D degrees. The Department of Civil Engineering being a recognized QIP center from MHRD, has completed more than 50 consultancy projects. The teaching faculty has completed/engaged in number of R&D projects sponsored by UGC, AICTE, MHRD, AR&DB, ADA, Naval

Research Board, National Highways, etc. including an Indo-European project. Forty three Books have been published by the faculty members of UVCE.

Presently, 115 full time faculty members are serving the Institute, of which 66 faculty members possess Ph.D degrees. Thirty four faculty members are pursuing their Doctoral Programme. There are 35 Professors, 37 Assistant Professors and 43 Lecturers (Selection Grade, Senior Scale and Lecturer) and one faculty member from department of Physical Education, Bangalore University. In addition sixty reputed and experienced teachers as Guest and Contract faculty are rendering their services. The present administrative structure of the college is given in Fig 1.

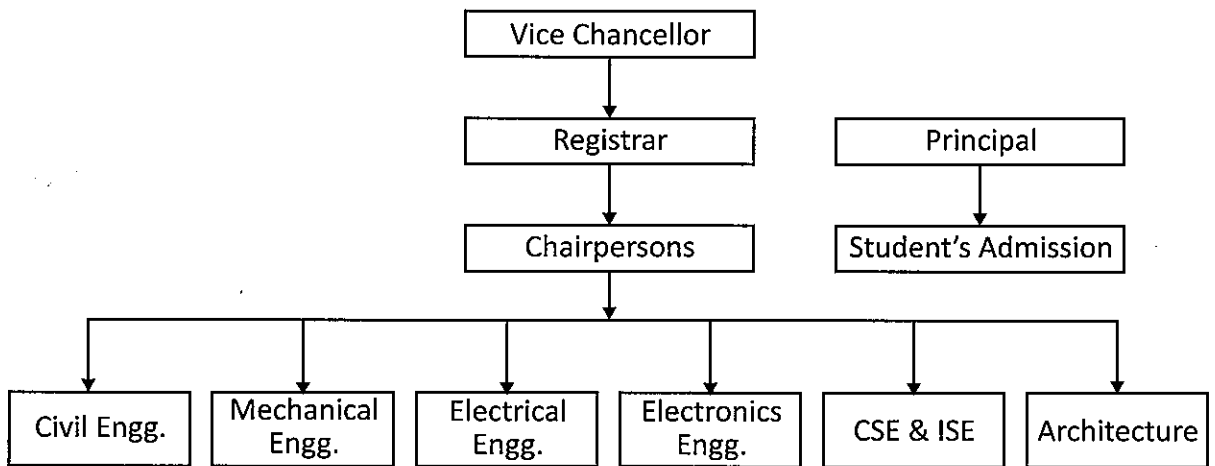


Fig 1. The Present Administrative Structure of UVCE

3. Issues and Challenges

The college is facing a number of academic and administrative issues and challenges. Some of the important problems are highlighted below.

3.1 Autonomy without Accountability

The present practice of total autonomy granted to all the departments of Engineering without accountability, has built walls of separation between the departments; and trans-departmental academic growth has received a setback. The disadvantage of autonomy has gone to the extent that it is becoming extremely difficult to share even the academic infrastructure and resources across the departments. With different departments having autonomy administratively, the scope to provide an overall perspective and vision to UVCE as a whole and to provide a comprehensive leadership for the entire fraternity of Engineering is practically annulled. This trend is fatal for the integrated development and growth of the Institution. In this context, it may be worthwhile to recall that

although academic autonomy is granted to different Engineering departments, all the departments are unified under one directorship in IIT's, IISc, Birla Institute's and NIT's, and the Director's position in each of these institute is pivotal in both academic and administrative management.

3.2 Lack of Leadership

The academic activities and administrative management of the college are suffering for want of a good leader in the form of Principal/Director. The present Principal is empowered only to make admission of students and has absolutely no administrative and management role of various departments. This has resulted in lack of direction for the college and collective effort of various departments to achieve overall development. Team work is totally missing. This is a severe set back to the college.

3.3 Inadequate Infrastructure

The class room and other infrastructural facilities of the College have not received the attention they should. The accommodation is inadequate with even the seating arrangement requiring some changes. Many of the laboratory infrastructural facility in most of the departments is rather outdated. The laboratory facility for conducting research is poor. The same is true for conducting seminars, conferences and other co-curricular activities. In the existing campus of the City there is no space to provide for the sports grounds and other infrastructure for the holistic development of the personality of the students. The Students Hostels are not only inadequate, but require upgrading.

3.4 Absence of congenial academic environment

Since the college is located in one of the most busy circles close to commercial and administrative centres, the academic activities, particularly teaching and learning, are suffering in a big way because of noise and other pollutants due to heavy traffic. There is suffocating atmosphere for the students and teachers to carry out their work.

4. Vision and Mission

It is therefore absolutely necessary that the above issues are addressed on priority for redressal and further deterioration must be addressed at all costs. It is equally important that the past glory of the college must be brought back as early as possible. Further more, the college should be developed in all respects to meet the challenges of 'Teaching and Research' that are essential in the emerging global scenario. In order to accomplish all these in a time bound period, the vision and mission for UVCE are defined as under:

Vision:

To develop UVCE as a centre of excellence in engineering and technology to impart quality education in relevant fields to the youth and to conduct frontline research to meet the developmental needs of the State and indeed the country.

Mission:

- To offer quality training to the youth and equip them with skill, competency and values;
- To encourage faculty to become inspiring teachers and top class researchers;
- To establish a resource centre for the industrial development of the state;
- To enhance the contribution of manufacturing, construction and service sectors for the development of the State and the Country.

5. Measures

In order to realize the vision and mission, a number of appropriate measures are to be taken by the Government and the University taking also into confidence the alumni, industry, corporate sector and the public. Some of the important ones are presented in the following sections.

5.1 Administrative Measures

The present administrative setup of the college needs revamping on priority. Administratively six positions are to be created for UVCE for an effective functioning of the college. These positions may be designated as **Director** (in place of Principal), **Dean** (Administration), **Dean** (Evaluation) and **Dean** (Financial Management). In addition, three more supporting positions – **Dean** (Student's Welfare), **Dean** (Placement and Training) and **Dean** (Research, Development and Consultancy) are also to be created.

All the departments should come under the Director. The Director of the institute shall enjoy fully independent and autonomous status. He shall report to the Vice Chancellor of the University directly.

The statutes defining the powers and responsibilities of these officers, mode of selection/appointment and qualifications for these positions would have to be developed and got approved. The senior most Dean amongst them will also hold the office of the Deputy Director (Administration).

5.2 Academic Structure

The academic structure should be revamped in toto. The concept of Departments as independent entities should be done away with. In order to accomplish holistic practice in engineering academy, trans-departmental mobility should be provided to students and researchers. This can be achieved with the institution of Schools at higher level. Each School will be a cluster of several cognate Disciplines/Departments/Centers. This would enable students and research scholars to spread their learning horizons.

Each School will be headed by a School-Dean. The school permits breadth wise rapport across related disciplines and depth wise focus is achieved within Departments/Centers. Each Centre/Department will be headed by a Chairman.

Board of Studies will be at the Department/Centre level. At School level there will be a School Council which can also take care of inter departmental academic and research issues within a school. At higher level there will be an Engineering Academic Council.

All the academic decisions are taken at School Council level and they are formally ratified by Engineering Academic Council. In addition, Engineering Academic Council takes decisions on special issues related to Inter School issues.

The academic decisions arrived at by the Engineering Academic Council are final. A separate statute will be prepared for the academic governance.

The proposed academic structure is shown in figure 2.

The Chairman of Department/Centre will be the Chairman of corresponding Board of Studies also. The School Council will be headed by the Dean of the respective School.

The Engineering Academic Council will be headed by the Director. The senior most Dean from amongst the Engineering Academic Deans who will also be called as Deputy Director (Academy) will be the ex-officio Member Secretary of the Engineering Academic Council.

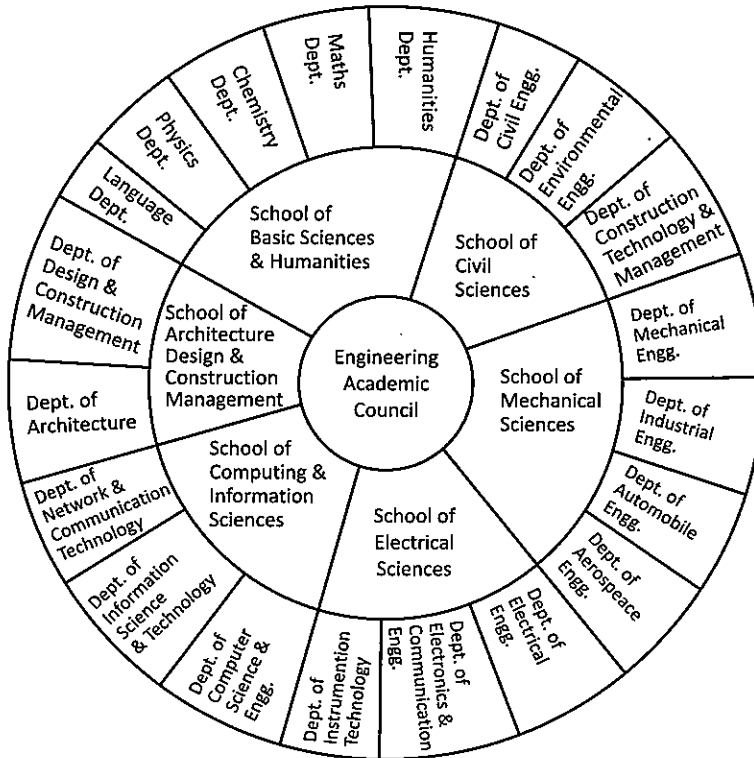


Fig 2. Academic Structure

The integrated structure comprising of academic part and administrative part is illustrated in figure 3.

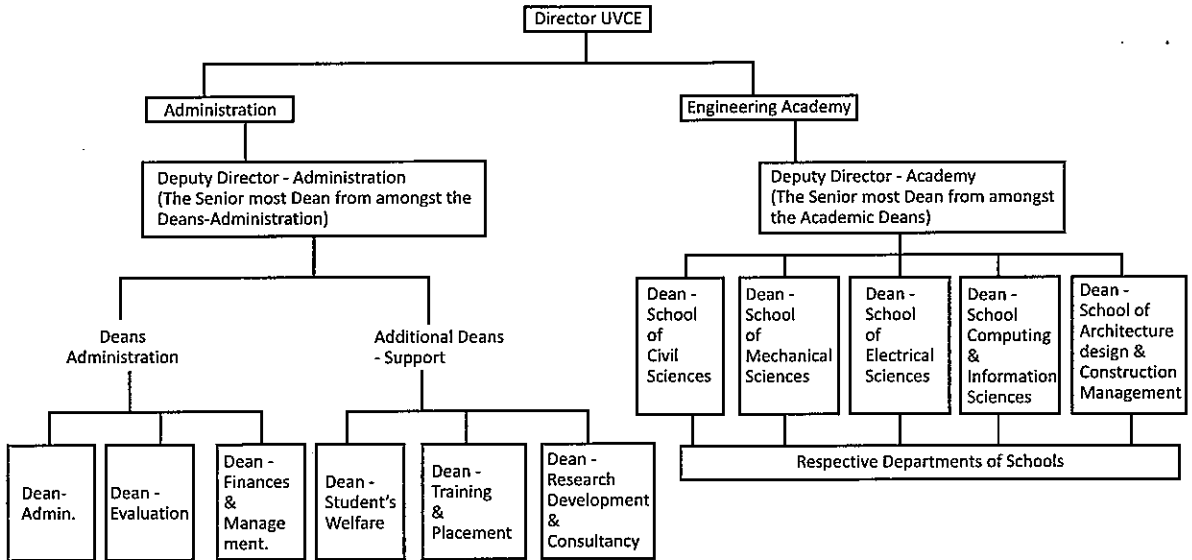


Fig 3. Academic and Administrative Structure

5.3 The Director

The Director shall be the pivotal officer of UVCE. A leading and an experienced expert in engineering academia should occupy the office of the Director of UVCE.

The Director of UVCE shall be an ex-officio permanent member of the Syndicate of the University. The Director shall head the highest academic body of the UVCE namely, Engineering Academic Council of UVCE.

A Search Committee comprising of three Engineering academic/research/industrial experts shall be constituted by the Vice Chancellor to suggest a panel of 3 names for Director's position of UVCE. The Vice Chancellor of the University will finally choose one name from the panel, and Vice Chancellor will get the nomination approved by the Syndicate.

The term of the office of the Director shall be five years or till the age of the Director is 65, whichever occurs earlier. The same person will not be entitled for second term as Director.

5.4 Governing Council

The governance of UVCE will be independently and autonomously monitored by Governing Council constituted for the purpose. The Vice Chancellor shall be the ex-officio Chairman of the Governing Council and the Director of UVCE will be the ex-officio Member Secretary of the Governing Council. Other members shall be chosen as per the statutes prepared for this very purpose and shall consist of experts from academia (external to UVCE and the University), R&D organisations and industry.

5.5 Conducive Teaching and Research Environment

It is not the number of Engineering Graduates brought out by UVCE that is important, not even the number of Engineers employed, but only the quality and competence of the graduates brought out by UVCE that is important. This can happen if and only if real researchers and practitioners offer courses rather than getting the formality of teaching completed by employing mere teachers.

In order to realize the above, it is necessary to build a conducive teaching and research environment in UVCE. It is necessary that teaching-learning mechanism be re-designed and restructured. The focus shall be to ensure that the budding technocrat has been really learning to become a technocrat. The present pattern of internal assessment having a lower weight-age and semester-end examination with a higher weight-age cannot enhance the learner's understanding, comprehending and problem solving capabilities.

It is also very much necessary to motivate every faculty member to be associated with research and development or with any other form of practicing the subject at an advanced level such as consultancy. Every senior faculty member will build up a team containing one or two young faculty members, a couple of research scholars working towards PhD, three or four Master's degree scholars and two or three batches of BE students for project works.

To encourage young post graduate Engineers to get into PhD studies, a large number of Teaching cum Research Assistantships (TRA) will be created. The services of post graduate scholars will be utilized for conducting tutorial and practical sessions for BE courses.

In addition to getting research projects from funding agencies, UVCE should utilize the advantage of its location being in Bangalore to take up consultancy, research and development assignments from the industries in and around. Industries and UVCE should enjoy win-win participation in this process; in the sense the Engineers from industries and such other institutions should be provided with opportunities to register for M Tech by research and PhD on problems sponsored by those organizations. This will also help UVCE to strengthen industry-institute-interactions. UVCE shall also earmark its own funds for research and development activities.

5.6 Self-contained Unitary Campus

It is absolutely necessary that the campus of UVCE presently located at K.R.Circle be shifted to JB Campus in an 100 Acres area so that all the academic departments and Schools are in the same campus. The total cost of development of campus with various schools, Hostels, site development etc will be around Rs 200/- crores. To accomplish this

a) Government can consider granting one time grant of Rs.300/- Crores to establish this center for Excellence. The main building in the present KR Circle, which could well be considered as heritage

building, campus could be utilized for setting up either setting up a UVCE technology museum or a Campus for having Industrial interaction with facility for a good auditorium etc.,.

OR

b) The total area of UVCE at KR Circle is 12 Acres 23.21 guntas. Considering the value at Market rate, cost of land and building is Rs.793.66/- crores. Government can take over part of the land and grant just Rs.300/- crores to Bangalore University to establish Self-contained Unitary Campus of UVCE at J.B. Campus.

6.0 Role of Alumni

The Alumni of UVCE are spread far and wide and to-date have occupied senior positions in Governments, academia and industry. A College is generally known by its alumni and UVCE can indeed be proud of its Alumni. Alumni of an Institution are its brand ambassadors and their role varies from institution to institutions. They cover fund raising, advising the administration and faculty on situations and scenario of science & technology, advising students on employment opportunities and emerging fields of S&T etc. UVCE should use its Alumni in all these and to this end Dean (Placement and training) should also handle the alumni affairs.

7.0 Implementation

It is obvious that there have to be many changes if UVCE has to regain its status. It is also obvious that the implementation may take place in Phases. The implementation should be complete so that by the time UVCE celebrates its Centenary it would have achieved this Vision adequately.

7. Conclusion

Today our Bengaluru is well known not only in the country, but also in the whole world. It is called the Science Capital of the Country and the hub of Information Technology. In the past, our UVCE was well known in the Country when the then Bangalore was not at all known in the country. Therefore, it is all the more necessary for the Bangalore University, the Government of Karnataka, the industrial and corporate sector, alumni and the general public to take appropriate measures to develop UVCE as a befitting institution commensurate with the popularity of Bengaluru. This requires the realization of this vision document which in turn requires the willingness and commitment on the part of the Government, the University and all parties concerned.

