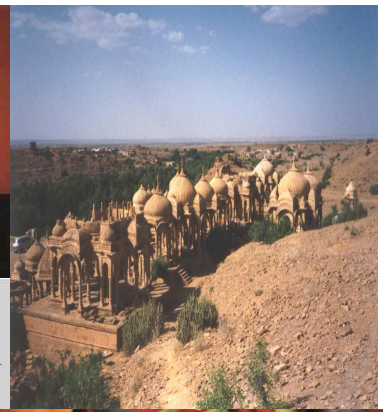


A Concept Paper On Strategic Development of Central University of Rajasthan



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Declaration:

In preparing this concept paper I have gone to great lengths to incorporate inputs from variety of relevant sources and perspectives. I have given due acknowledgement by referring the source of information at the respective place.

1. Introduction

The Government of India has accorded a high priority to the higher education and a ten fold increase has been provided in the budgetary outlays for the higher education during the XIth Plan as compared to Xth Plan. As a part of new institution building, a Central University is all set to commence its functioning in the vibrant state of Rajasthan from the academic year 2009-10. The present concept paper aims at igniting the brainstorming amongst the stake holders of the Central University of Rajasthan for an early strategic planning for carving as one of the reputed Institutions of Higher Learning.

Never before in the history of mankind, has 'KNOWLEDGE' played such a dominant and all pervading role as it is now playing in all nations across the globe. We are today living in a knowledge-based society. Knowledge is now a new resource. In many developed countries, more than half of the GDP is knowledge-based. We, therefore, now talk about a 'knowledge-economy'. The report of the committee on 'India Vision 2020' (Planning Commission, 2002) recognizes the fact that the determinants of national development have changed from 'manufacturing' to 'services' and from 'capital resources' to 'knowledge resources'. The role of education is crucial in this regard for it is the starting point for the other knowledge resources. Knowledge has in fact been an integral part of the Indian tradition since time immemorial. The history of Indian education, learning and concentration on the truth of life and universe is as old as the history of Indian civilization and

culture. However, knowledge in the earlier times was the sole prerogative of some particular classes of people. We have moved drastically from that scenario. Today any individual with knowledge-power can reach any height irrespective of his class, caste and past.

Although knowledge and organized teaching were in existence during the Vedic period in the Ashrams, an organized system came into existence only from the Buddhist period when Universities like Nalanda, Takshashila, Vikramshila and Kanchipuram became famous as centres of great learning in different areas and attracted people from different countries visiting and learning in those 'Viharas' as they were then known. These universities had the essentials of the concept of a modern university, including a testing system and a systematic admission procedure.

The modern university system in India dates back to 1857 when three universities were established - one each in Calcutta (Calcutta), Bombay (Mumbai) and Madras (Chennai) covering their respective presidencies, along the lines of the University of London at that time, having only the affiliating and examining powers.

Today the world is of science, new inventions and competitions to excel over the other. We can be proud to be a part of our great country but the world has shrunk today to a common platform on the basis of higher education and learning [23]. Everybody has to be ready to receive and contribute towards new ideas, thoughts and systems. To gain the benefits of modern society and compete with the outside

world, it is necessary that youth of our country get a quality higher education and for this more and more avenues of higher education are provided to them at affordable prices and in all locations so that all round development in personality of the complete society takes place. Rather now it is the duty of each individual to ask for higher studies and be broadminded.

2. Growth of Higher Education in India

It is worthwhile to go through the figures revealing Higher Education scenario in India to formulate the strategic framework of the Central University of Rajasthan:

Salient Features of Higher Education in India [1]

- India has the third largest higher education system in the world, next only to China and the United States.
- Number of Universities: 544 (18 fold increase since independence)
- Number of Colleges: More than 22,000 (35 times increase since independence)
- Gross Enrollment Ratio: 8. % (SES), 10% (NSS), 14% (PC)
- The Working Group for Higher Education for the 11th Plan has projected a growth of GER based on SES from current 10.5 to 15.5 by the end of the Plan period as well as based on census data from 15.6 (current) to 20.6 by the end of the Plan.

- Net enrolment ratio (NER): More than 10 times (Annual Report, MHRD 2006-07)
- One third to 40% of enrolments coming from lower socio-economic strata, and women comprising of some 35% of the total enrolments (Tilak 2004).

3. India's Strength: Large number of Knowledge Workers

India today is considered as the most favored country among the various nations and the multi-national companies for investments in equity, direct investments, BPOs, KPOs Call Centers, Research Centres and Consultancy work. This is primarily due to the large number of knowledge workers that are produced by the universities and colleges. This is despite the fact that less than 9 to 10% students of the higher education age-group are enrolled for tertiary education. The business-friendly environment that the Government has offered and the pool of skilled manpower of the country have become a major attraction across the globe and have added to the overall business potential of the country. To add to this is the additional advantage that the knowledge of English gives to the people of India through possibilities of better communication with the English-speaking countries in the world.

Despite the fact that there is much to be desired with respect to the 'quality' of students produced, with the kind of focused, on-the-job training provided by the employers, a large number of these students – the real 'products' of education - are being used gainfully and are therefore considerably in demand. There are, in addition, a handful of premier institutions like the IITs and IIMs whose quality of

education is acclaimed all over the world and the students they turn out compare well with the best in the world. These institutions have made a name for themselves by their innovations and contributions and they can therefore be classified among the world leaders in their respective spheres of operation.

4. India's Major Weaknesses

Despite India's competitive advantages, it also faces a unique problem viz. providing access to higher education to its teeming millions at relatively low cost and high quality. Ensuring access to a much larger proportion of the relevant age group from the present abysmally 10% to about 20% and providing an enlarged pool of knowledge workers so as to keep up its present competitive position and maintain its attractiveness to other nations and multi-nationals requires massive amount of institutional infrastructure. A strong competitor for India in this respect is China which is rapidly expanding its outreach and providing for its population, heightened access to higher education coupled with increased quality inputs, through a number of packages and schemes on a priority basis. Another major challenge before our country is to ensure quality through high-end research and innovation so as to raise our own competitive edge in the global market. This is undoubtedly a gigantic task and one that requires sizable investments and planning.

On the question of quality which is a pre-requisite for creative and innovative activities, a new situation has recently developed in India due to the international market created by top software companies like Infosys, Wipro, Tisco etc. needing

quality people to accomplish specific time-bound assignments. The demand for knowledge workers in India has risen exponentially. According to a recent report, 10,000 American expatriates are presently working in India for high-tech companies.

According to another report, Infosys and Tata Consultancy Services will together hire and train more than 50,000 college graduates from abroad, including more than 1,000 from the US in the coming year. Apart from monetary considerations, the main reason for this preference for foreign students is the poor quality of the large number of graduates we produce year in and year out. For instance, there were 7,00,000 degree holders in science and engineering alone in our country in 2004. This is indeed a sad reflection on the current state of affairs. On the one hand, we have unemployment and underemployment problems and on the other, many MNC employers have to recruit from outside the country for even the not-so-high profile jobs simply because we are unable to provide the knowledge workers in our country with the minimum employability skills required in the international market.

Despite all our hype of a knowledge superpower, we lag behind all global majors in practically every key area of scientific and technical education. We rank 56th in the world in terms of patents granted per million capita, 91st in the world in terms of gross tertiary enrolment, 27th in the world in terms of research spending, 55th in the world in terms of quality of math and science education, there is no Indian university in the global top 25 (while Beijing University is 15th) and so on.

The above mentioned critical issues need to be addressed urgently if the Indian S&T education system is to meet the aspirations of millions of young Indians for a better quality of life, with greater economic opportunities [2].

The "India Vision 2020 Report" too focuses on this aspect, placing utmost importance on the issues of employment and education. Employment and education are inextricably linked to each other, since the kind of education imparted determines the employability of the human resources of the nation. In fact, the unemployability of the products of the current education system is for us a matter of serious concern and a contributory factor to the unemployment of the educated. Recent research conducted by McKinsey Consulting Company found that less than 25% of the graduates and postgraduates of the Indian education system are found to be employable by multinational corporations. Most certainly, this kind of situation calls for fresh, innovative and introspective thinking on the part of senior educationists, planners and policy-makers.

5. Reasons for Poor Quality

There is a growing trend in the elite circle to blame the Government for under-funding despite the growing enrolment. However the underlying story is more than that of funding. A through analysis reveals that funding is not the only issue as far as the quality inculcation in higher education is concerned.

5.1 Privatization:

Privatization of higher education is rapidly progressing in India. The Planning Commission reports that in the period 2002-2007, the share of private institutions in higher education increased from a third to over half of all enrolment. And this trend, by all accounts, will continue into the future. Most private self-financing institutions offer education in only a few disciplines - engineering, medicine, biotechnology and management being the favorites. They account for around 80 per cent of engineering and over 50 per cent of medical 'seats' available to students. The preference of private promoters for 'job oriented' disciplines is understandable; The students will pay high fees only if their prospects of employment following the courses are high [3]. This has led to an imbalance in terms of disciplines and fields of study and promotes the unhealthy education for profit psyche.

5.2 Regional imbalance

The report by Kannan Kasturi [3] also reveals the regional imbalance in Higher Education sector. Maharashtra, Andhra Pradesh, Tamilnadu and Karnataka provide, it appears, a more conducive environment to establish private institutions, than the rest of the country. Sixty per cent of the private medical colleges in the country are located here. A similar situation holds for engineering and nursing. A majority of the self-financing 'Deemed Universities' are also in these states. The rapid growth of private institutions in these four states has resulted in a strong regional imbalance in the spread of professional education in the country. These states, with 25 per cent of the population of India account for over half of engineering and medical colleges

in the country. Just Karnataka & Maharashtra have half of all the Hospitality and Tourism studies institutes while Andhra Pradesh and Karnataka account for nearly half of all nursing colleges.

5.3 Other Reasons for poor Quality:

More reasons for the poor quality of Higher Education can be traced in a case study on Challenges in Indian Higher Education- An Insider's View by K. K. George and Regi Raman [4]. The main points in reference to the present concept paper are as follows:

- Lack of training given to the teachers at the entry point
- Inadequacy of faculty development programmes.
- Academic Staff College- a mere linkage for satisfying promotion norms.
- Lack of flexible salary structure e.g. The Indian academic system does not provide for paying differential salaries to different disciplines taking into account the market demand for professionals in sectors such as IT, Engineering etc.
- Lack of student motivation
- Outmoded pedagogical practices
- Lack of Examination Reforms in tune with the global needs.
- Divesting research from teaching at University level

5.4 The quality of manpower:

The facts, figures and the causes behind the poor quality of human resource are discussed largely in many reports including the NASSCOM-McKinsey, National Knowledge Commission as well as few references [3]. Students are beginning to shun some colleges they perceive as being of poor quality. 'Seats' are actually remaining vacant in certain colleges/subjects in Tamilnadu and Karnataka in spite of the increasing number of overall applicants. (Mint, 7 July 2008). Industry has not been happy with the quality of engineering graduates, more than 80 per cent of whom are from private colleges. The NASSCOM-McKinsey Report (2005) has found that that only 25 per cent of Indian engineers were employable in the offshore IT industry. But the boom in the industry has been such that even those with the poorest education have been finding jobs.

The view of respected academics on the quality of private institutions can be obtained from the work done by the National Knowledge Commission (NKC), an advisory body set up by the Government in 2005 to examine issues related to education. The NKC working group on medical education chaired by Dr. Sneha Bhargava, former Director, AIIMS, clearly finds that the rapid expansion of private medical and nursing colleges has led to falling standards and reduced quality of graduates. Student admission is not transparent in the private colleges. Many of the colleges have started functioning without adequate infrastructure, and hence provide only substandard education.

The group voices the strong opinion that "those colleges not having the scientific and ethical infrastructure and expertise do not deserve to exist. Poor quality commercial training shops producing poor quality manpower cannot be left loose on a hapless trusting public."

The NKC recommendations on engineering education find the standards of a very large proportion of institutions "at the bottom of the pyramid" to be abysmal. The working group on engineering education chaired by Prof. Ananth, Director, IIT Chennai, finds private self-financing colleges typically lacking in vision or mission, staffed mostly with inexperienced and temporary faculty and with no R&D capability. It raises concerns about the consequences of rapid expansion of engineering education without investment in faculty development and R&D.

6. Challenges before India

In the context of globalization, and the need to produce not only more but better quality students who would be able to compete with the world of tomorrow, India faces the following two major challenges:

1. To raise the enrolment of higher education from the present below 10% of the total higher education age population, to at least 20%. This means doubling the present capacity of the universities and colleges, possibly by creating new ones. The funds that are required for this and the managerial inputs involved in operating them as quality institutions are enormous. It is

obvious that due to paucity of funds, the Governments cannot provide the requisite funds for higher education. Therefore, viable options need to be in place to tackle this problem.

2. Tackling the problem of quantity through providing facilities for career-building among the young people is most certainly a responsibility of a Welfare State for without knowledge, there is no future in a knowledge-based society. Along with this, however, is the pressing need to raise the quality not only of the existing institutions but also of the new ones. This is indeed a real challenge, especially for the Government and calls for careful policy formulation and efficient handling.

In 1994 GATT was replaced by WTO and in 1996 came the GATS. India is one of the signatories of the GATS. Education is one of the major service sectors making higher education as a sub-sector of the service sector. As a result, India and for that matter all the signatory nations of the world are facing another challenge viz. the invasion of the foreign universities from UK, USA and Australia in particular. These universities are aggressively marketing their provisions and enrolling thousands of students from India with their assurance of 'quality education' which not all of them provide. This happens primarily for two reasons: One is the attraction of a foreign university degree which is expected to fetch a lucrative job – a matter that is not always true, and the other is the absence of the requisite number of quality institutions in the country.

7. A Way Out: Public –Private Partnership

Globally in the Higher Education scenario, the Public-Private partnership model is regarded as one of the best for mutual benefits of the duo. Through the public-private partnership, when implemented on merit, the challenge of Access, Equity and Quality can be considerably addressed over a period of five years, with suitable planning, of course. It is in this regard that industrial houses can play a vital role, for by so doing; they would not only be fulfilling a social obligation, but also contributing to an important national need. This would also help reduce the ‘brain drain’ occurring as a result of thousands of students going out of the country to foreign universities for higher education and consequent better prospects.

In spite of the regional imbalances notwithstanding, the Central government has welcomed the growth of private self financing institutions. It helps the State too - to show growth in enrolment in higher education without corresponding investment from public coffers. This growth has also taken some of the pressure off governments to ensure availability of skilled technical manpower in line with the needs of the economy [5].

Another paper [6] examining the issues of privatization throw light on its advantages. The void created by the paralysis and drift of the conventional university system is being filled by private entrepreneurial initiatives. Thus, significant educational innovations and experiments are currently taking place in institutions outside the university orbit and in the private sector. In view of the rapid

expansion of and increasing variety in knowledge and skills, there is enormous scope for educational innovations and initiatives. The private institutions have been more responsive to the demands of the economy and industry and the changing employment scenario. They have also shown their ability to match relevance with flexibility both in costs and regulation. This does not, however, mean that all private institutions are necessarily good. Some of them are brazenly commercial establishments out to swindle gullible people looking for better-quality education at affordable prices. As in any commercial operation in a market economy, such establishments get exposed.

Here again the Central University can play a major role by providing the selected courses to the student community largely offered by the private player at affordable cost.

7.1 Equity at the cost of Quality?

However few more issues in the forefront of the discussion are social cost, equity and quality. Literature [5] reveals that privatization of higher education, however, is not without social costs. In a polity such as India's, where structured inequalities have been entrenched, privatization is sure to reinforce existing inequalities and to foster in egalitarian tendencies. This requires the social supervision of the private sector and effective measures for offsetting imbalances resulting from unequal economic capacities of the population. Thus, we again confront a dilemma: Theoretically, how do we advance equality without sacrificing quality? Practically,

how do we control the private sector without curbing its creativity and initiative?
This is said to be a huge challenge in higher education of this millennium.

8. Need of Reforms:

8.1 Curricular Reforms:

The UGC Annual report 2004-05 reveals the Distribution of Central and State Universities into types of Discipline as shown in table 1.:

Table 1: Distribution of Central and State Universities into types of Discipline

Type	Number	%
General	126	54
Agricultural	35	15
Technological	14	6
Language	11	5
Medical	9	4
Law	6	2.6
Woman	5	1
Animal & Fishery	4	1.7
Open	11	5
Others	16	5.7
Total	237	100

Source: UGC Annual Report, 2004-05

- The above statistics indicate that still there is good scope for starting the Engineering and Medical schools, Agricultural Sciences in the Universities that would also ensure their integration with the other faculties.
- Very few Universities have oriented towards the course curriculum in the newly emerging areas such as Actuarial Science, Foreign Trade, Enterprise Management and Policy formulations, food Science, Master of Valuation etc.
- It also reveals that there is a gap between what is acquired in the classroom and what is required by the industry.
- Absence of contemporary curriculum and involvement of stakeholders in curriculum development.

Another view [6] is towards balancing the professional courses with respect to the basic science courses. Next to China, India is the most populated country in the world. Naturally there is too much rush and competition in every field. So, rush to technical and higher education has increased as scope for arts and science has become lesser and lesser due to lack of reforms and up gradation in the course structure and materials according to the developments of the world. Also, qualification in higher education gives added advantage to face successfully competition in the job market.

8.2 Scope for the Central Universities:

A working paper [7] entitled “INDIAN HIGHER EDUCATION REFORM: FROM HALF-BAKED SOCIALISM TO HALF-BAKED CAPITALISM”, by Devesh Kapur and Pratap Bhanu Mehta examines the political economy of Indian higher (tertiary) education. The key argument of this paper is that higher education in India is being de facto privatized on a massive scale. But this privatization is not a result of changing ideological commitments of the key actors—the state, the judiciary or India’s propertied classes. Rather, this privatization has resulted from a breakdown of the state system. As a result, it is a form of privatization whose ideological and institutional underpinnings remain very weak. Instead of being part of a comprehensive program of education reform, much of the private initiative remains hostage to the discretionary actions of the state. As a result, the education system remains suspended between over-regulation by the state on the one hand, and a discretionary privatization that is unable to mobilize private capital in productive ways. The result is a sub-optimal structuring of higher education. The most potent consequence of this is a secession of the middle class—ironically the very class whose interests these institutions were supposed to serve—from a stake in public institutions. The new central Universities such as Rajasthan Central University have a wide scope in this scenario.

8.3. Attracting Foreign Students Vis-à-vis our own Students Going Abroad:

There are reports [8] indicating the rising number of students going abroad and spending almost \$3 billion annually for higher education. America continues to grow in stature as the most-favored destination for Indian students with the last seven months showing a 38% increase in the number of candidates going there. Chennai seems to be one of the largest exporters in the country. A sample of this is: “38,274 student visas were issued from across the country in fiscal year 2006-07 (October 2006 to September 2007), of which the Chennai consulate gave out 19,973”. Correspondingly, between October 2007 and April 2008, 50,316 student visas were issued from across the country, of which the Chennai consulate alone accounted for 24,975. With a rising middle class in India able to afford American university programmes and schools actively recruiting them, Indians have become the largest group of international students in the US [9]. According to a recent survey that monitors student flow, the population of Indian students in the US went up by 10% from 76,503 in 2005-'06 to 83,833 in 2006-'07; the number has doubled in the last decade.

The US, the UK, Australia, Canada and New Zealand are the main beneficiaries, being large exporters of higher education. Low competition among providers mainly stems from the structure of financing of higher education.

The recent US Council of Graduate Schools report shows a 5% decline in international graduate student applications from 2004 to 2005. Significantly, declines are particularly notable for students from China (-13%) and India (-9%) and students in the fields of engineering (-7%) and business (-8%) [10]. However the figures are attributed more to the economic recession and stringent visa procedures rather than the quality enhancement in Indian scenario.

On one hand, the US and European governments are tightening visa and travel restrictions, on the other hand, demand for western education has seen a marked surge from around the globe.

To cater to this demand, our universities and educational institutions should initiate distance education, part-time educational courses and, e-learning and online degrees to attract our own students going abroad and which would also save the large chunk of foreign currency.

9. New Central Universities: India's Roadmap towards 21st Century:

The creation of new central Universities is a welcome affair and has been appreciated by many academicians [11]. Indian government has created 12 new central universities, adding to the 18 that currently exist. This is a mammoth undertaking and the equivalent of US\$73 million has been allocated from the central government budget to it. Earlier this year India announced it would create 30 'world class' universities, eight new Indian institutes of technology and seven Indian institutes of management in the coming five years. On the recommendation of the National Knowledge Commission, the central government is planning massive

investment to upgrade and expand higher education. Other plans include enhancing the salaries of college and university academics - boosting salaries by as much as 70%.

This prospect represents welcome news since India currently lacks world class universities according to the international rankings, and Indian academics, when compared internationally, are rather poorly paid. Students also suffer an immense shortage of places in India's top academic institutions and throughout the higher education system. India today educates only half as many young people from the university age group as China and ranks well behind most Latin American and other middle income countries.

10. Rajasthan: An ideal locale for the Central University

10.1 Demographic Advantage:

Rājasthān is the largest state of the Republic of India in terms of area. It encompasses most of the area of the large Great Indian Desert (Thar Desert), which has an edge paralleling the Sutlej-Indus river valley along its border with Pakistan. The region borders Pakistan to the west, Gujarat to the southwest, Madhya Pradesh to the southeast, Uttar Pradesh and Haryana to the northeast and Punjab to the north. Rajasthan covers an area of 132,150 sq mi or 342,269 km² (about the size of Germany) [12].

However, the total intake of the universities in Rajasthan can't be justified looking at the GER required in this region. Therefore, the move to create a Central University in this region is justified.

10.2 Educational Scenario:

Literature[13] reveals the educational scenario in the state. Rajasthan “Royal land of India” famous among tourists from across the globe has taken several initiatives to improve the educational scenario in the state. As per the recent census done in 2001, the state has recorded literacy rate of 61.03 pc, which is higher 22.48 pc higher than previous census in 1991. State has listed herself at seventh position among states and Union Territories of the country. Literacy among females has also increased from 20.44 to 44.34 during the decade. 'Decade Literacy Award' and Decade Female Literacy Award' were given to the state on National Literacy Day. “Sarva Siksha Abhiyan” is used as a tool to universalize the elementary education in the state. Apart from school education various initiatives have also been taken to enhance the status of higher education. Currently Rajasthan has 12 Universities, 4 Deemed to be Universities, 117 Government Colleges, 751 Private Colleges & 9 Self Financing Colleges [13].

10.3 Table 2: Educational Statistics of Rajasthan [13]: Year 2007-08

Category	Total Number	Total Enrolment
Primary Schools	53,219	97,13,000
Elementary Schools	48,615	31,83,000
Secondary Schools	8,288	14,91,745
Senior Secondary Schools	5,319	6,66,365
Degree Colleges and Post Degree Colleges	1,042	9,40,000
Engineering Colleges	78	25,487
Medical Colleges (M.B.B.S.)	8	Intake 850
Universities – 14 State / 13 Private Universities	27	62,000
Deemed Universities	8	-
Teacher Training Colleges	489	89,000
Teacher Training Schools	163	10,942
Polytechnic Institutes	58	11,610
Technical / Industrial / Arts & Craft Schools MCA / MBA / ITI / Paramedical	778	71,563

10.4 Universities in Rajasthan

With a rich tradition of folk music and dance, architecture, crafts and royal cuisine, Rajasthan is a popular destination for all. Famous for its camel fairs, sand dunes, bird-watching and safaris, this state is not only a favorite choice of the tourists but also of the students and scholars. The education system of the state has been largely influenced by efforts of both the state government and private players. This state spread largely across Great Indian Desert has several institutes of higher education. You will find a number of academic centers and universities in Rajasthan [14].

10.5 Types of Universities*:

The range of programmes offered by the Universities are from Certificate to research degree. There are also specialized universities such as Rajasthan Agricultural University in Bikaner offering courses in specific fields of study. There are also institutes of national importance in the state such as Birla Institute of Technology & Science (BITS), Pilani. This state also has Banasthali University, which is unitary in nature and meant for women. There is also an Open University in Rajasthan named Vardhaman Mahaveer Open University (formerly Kota Open University).

* Source: <http://www.indiaedu.com/rajasthan/university/>

10.6 Mode of Learning and Functioning in Academic Institutes in Rajasthan*:

Rajasthan has academic centers of excellence such as Janardan Rai Nagar Rajasthan Vidyapeeth University, which offer exchange programs with renowned institutes

from other parts of the globe. Some Rajasthan universities offer programs only at the campuses where as others such as University of Rajasthan and Maharishi Dayanand Saraswati University Ajmer conducts programs at its campuses as well as through affiliated colleges. Universities such as Jain Vishva Bharati University also offer distance learning programs apart from regular courses. Some universities and institutes in Rajasthan also have placement cells to assist the students in recruitment. There are other universities which offer extension programs including training to transfer technologies.

* Source: <http://www.indiaedu.com/rajasthan/university/>

The new Central University of Rajasthan will be planned to complement the present universities in the state and moreover it will also try to form the academic network of them to derive unique benefits.

11. Strategic Framework of Central University of Rajasthan



11.1 Vision Statement:

"Central University of Rajasthan aspires to be the India's most energetic and responsive university, offering unparalleled educational opportunities for learner community especially to the lower social economic strata of the society seeking the highest quality undergraduate, graduate, and continuing personal or professional enrichment in higher education and selected professions that will lead to formation of scholarly community serving the nation by advancing, sharing and applying knowledge, and by facilitating the development of thoughtful, creative, adaptable, contributing and humane citizens."



11.2 Mission Statement:

"The mission of the Central University of Rajasthan leveraging its location in the state's largest and most vibrant city is to contribute to the educational, cultural, economic, and social advancement of India by providing excellent undergraduate general education and first-rate programs leading to bachelors, masters, professional, and doctorate degrees; to offer a particular commitment

in addressing the cultural, economic, educational, environmental, health, and social needs of the region and the nation at large."



11.3 Goals:

- 1. To facilitate accessible and affordable quality education that leverages the students with scholarly and professional skills, moral principles, and global perspective.**
- 2. To augment both faculty and student research addressing basic and regional problems.**
- 3. To Integrate a national and international perspective into our fundamental fourfold missions of teaching, research, extension and consultancy.**
- 4. To explore for knowledge and wisdom in order to build a wealth of academic resources indispensable for a sustainable development to accomplish the status of a leading research-intensive university; and to engage in transferring of knowledge and technology to community in**

order to strengthen and elevate the community potential, and to increase the competitiveness of India at the global level.

5. To employ the strategy of proactive management of university administration, and to operate the system within the sensible framework of high-quality governance with prominence on efficiency, transparency and accountability.
6. To formulate the University as one of the best places in the world to attain the intellectual skills and affirmative mindset to thrive in an increasingly internationalized job market and to act as responsible citizens of the global community by inculcation of value education.



11.4 Objectives:

1. Building character while simultaneously building the careers of the students by developing analytical thinking, individual initiative and responsibility.
2. Providing flexible, innovative academic and research programmes and support services that are responsive to a broad range of learners and regional needs.

3. **Facilitating a broad range of learning opportunities for learners engrossed in graduate, postgraduate and research programmes.**
4. **Encouraging considerate and accountable faculty and learners participation in local, state, national and international affairs.**
5. **Recognizing a special obligation to educate the students coming from minorities and lower socio-economic strata of the society.**
6. **Undertaking research and consultancy on the challenges the region is facing and to contribute to its expertise with the community.**
7. **Providing means for the building of capacities for leadership and service through academic programs, campus activities, and opportunities for community involvement.**



11.5 Quality Statement:

In order to meet the challenges of the knowledge era and to keep with the pace of knowledge explosion in Higher Education, the Central University of Rajasthan is committed to inculcate and sustain the quality in all the dimensions of higher Education viz. teaching, learning, research, extension and governance catering to the regional and global needs.

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Key parameters for Quality Inculcation and Sustenance:

- **Operating with governance and policy structure that allows programs to be developed quickly in response to the job market and societal needs;**
- **Ensuring the participation of all the stakeholders to define, monitor and curriculum formulation in order to satisfy what knowledge, skills and attitudes employees are looking for in graduates;**
- **Using innovative educational technologies to support adult learning principles and to provide flexible learning options;**
- **Maintaining the standards in academics by inculcating Semester pattern, Academic Autonomy to the Constituent Departments, Credit System for ensuring horizontal mobility, continuous internal evaluation and cafeteria approach;**
- **Adhering to the quality framework set by national bodies such as NAAC, NAB.**

11.6 Teaching - Learning Strategy:

The Teaching - Learning strategy will be formulated based on some of the international Universities of repute. [15] It will characterize the student learning experience for which the University shall become known locally, nationally and internationally. The new institution will be a unique organization with a clear mission to deliver lifelong learning opportunities in higher education and to widen

access and educational participation across the Rajasthan and other states of India at large. This will be achieved particularly through expansion of part-time and locally delivered higher education as well as through established full-time delivery on the University campus. To meet the needs of our distinctive student body, fundamental principles underlying the learning and teaching strategy include:

- flexibility to cater for the varied needs of all learners
- a range of different delivery routes leading to HE qualifications;
- a range of pedagogies suited to the diverse needs of a student body;
- provision to meet the support needs of the diverse community of learners;

The proposed strategy is congruent with the University's Strategic Plan and will be aligned with other key strategies such as the Research Strategy, the HR strategy, the Estates Strategy, and the IT Strategy. The Strategy for the Enhancement of Learning, Teaching and Assessment will continue as a cornerstone of the University's strategic development. The strategy is designed to promote an environment in which: learning and teaching are key priorities; a culture of pedagogical innovation can take root; supporting student success is a central concern for all staff in all aspects of curriculum and service design and delivery; all students feel supported and motivated to achieve their learning goals.

11.7 Teaching and Supporting Staff:

Following the commencement of the Central University of Rajasthan, the University will work to establish a single, unified University community. It will be an ultimate aim to establish a unique culture of learning and teaching for staff and students. This

will require the active engagement of academic and academic support staff on the campus.

In the first place one senior professor for each school will be appointed. After appointment they will be given the task of formulation of the strategy and roadmap of their respective schools which will be regularly supervised by the Vice-Chancellor and Higher Bodies such as Academic Council and Executive Council. The administrative staff will be appointed simultaneously based on the requirements. IT literacy will be given priority in forming the eligibility criteria and recruitment rules for the administrative staff.

Table 3: Administrative Staff to be appointed in First Phase.

S.No.	Designation	No. of posts
1.	OSD (for Administrative matters)	1 (One)
2.	OSD (for Financial matters)	1 (One)
3.	Deputy Registrar	1 (One)
4.	Assistant Registrar	1 (One)
5.	Section Officer	1 (One)
6.	Private Secretary to Vice-Chancellor	1 (One)
7.	Office Assistant	2 (Two)
8.	Data Entry Operator	2 (Two)
9.	Driver	2 (Two)
10.	Peon	2 (Two)

11.8 Other Cells in the Central University of Rajasthan:

Following Cells will be established in the Central University of Rajasthan as per the UGC XI plan guidelines.

1. Research Development and Resource Mobilization (RDRM):

Objectives*:

- ❖ To encourage universities to mobilize resources by participation/contribution of society in their development;
- ❖ To evolve a process for the participation of society in university development;
- ❖ To encourage and enhance the flow of resources coming from the society for university development;
- ❖ To encourage university to provide consultancy ON PAYMENT BASIS not only to the industries but to the government, and other bodies and society at large on vital issues of national importance;
- ❖ To provide incentives to the universities which involve society in their development activities.

Nature of Assistance to be sought*:

The University may create a corpus with mobilized funds under the scheme of may utilize on the following items, identified for participation of society:

1. Construction of buildings (class rooms, laboratories, student's hostels, clinics, etc.).
2. Renovation of existing old building;
3. Purchase of equipment;

4. Student/staff amenities (Canteen, Playgrounds, Gymnasium etc.).
5. Purchase of books and journals.
6. Development of corpus for institution's activities;
7. Development of corpus for student scholarships;
8. Development of extension activities, seminars/workshops, research through direct funding of projects or the development of a corpus;
9. Establishment of Chairs;
10. Innovative and academic programmes including research and extension work.
11. On any other item/project which may be intimated to UGC before hand.

The contribution of the UGC will be upto the extent of 25 per cent of the contribution received by the University, subject to a maximum of Rs. 50.00 lakhs per annum.

***: Source: UGC XI Plan Document**

**2. Other Cells to be formulated as per the 16 Merged Schemes under
GENERAL DEVELOPMENT ASSISTANCE TO CENTRAL UNIVERSITIES
DURING XI PLAN PERIOD (2007-2012)**

- a. Travel Grant
- b. Conferences/Seminars/Workshops/Symposia/Short-term training programme
- c. Publication Grant
- d. Appointment of Visiting Professors/Fellows
- e. Day Care Centre

- f. Adventure Sports and Development of Sports Infrastructure and Equipments.
- g. Special Development Grant for Young Universities and Rejuvenation Grant for Old Universities
- h. Instrumentation Maintenance Facility (IMF)
- i. Special Scheme for Construction of Women's Hostels
- j. Basic Facilities for Women
- k. Facility Improvement Programme (FIP)
- l. Equal Opportunity Cell
- m. Coaching Schemes for Scheduled Castes/ Scheduled Tribes/OBC (Non-Creamy Layer) / Minorities
- n. Establishment of Career and Counseling Cell in Universities
- o. Facilities for Differently-Abled Persons

The schemes covered under a,b,c,d,g,h,k will be looked after by the RDRM cell.

11.9 Setting up ICT Infrastructure:

It is clear that ICT is critical to the continued success of the University. It is important to almost every member of the University. Faculty Members and students rely heavily on the PCs on their desks, the laptops connected to the network, email and web services, the software that drives the appliances which are used and the back-up; they must all work and do so consistently and effectively. Reliable and efficient ICT systems are also crucial to the operation of the University itself. Given the frequency with which students, academics and administrators exchange

information between colleges, departments and the central University, ICT systems that can ‘talk to’ each other are needed and to which individuals can gain access, whether they are working in a college, a department or Faculty, or working outside of the University. Further, in an environment where there is more and more interdisciplinary work being carried out, ICT systems are needed that facilitate the sharing and exchange of ideas, information and knowledge [16].

The University will provide a feature rich, integrated, supportable and secure technological environment that provides staff and students with seamless, any time, any place, access to the Information Technology resources that support and enhance their activities. For this the fiber optics backbone and other modalities will be worked out as soon as the place is finalized. The commencement of the University website development will be done at the earliest.

11.10 Curriculum Strategies and Learning Outcome:

The learning, teaching and assessment strategy needs to be responsive to the changing demography of our student body. Semester pattern, Continuous Internal Evaluation, Choice Based Credit System and Academic Autonomy to the individual departments will be the core philosophy of the curricular strategies. Development of new programmes within this structure will provide an opportunity to review learning, teaching and assessment approaches. It will be planned to take this opportunity to innovate and to develop a student learning experience which will characterize the University. It will be planned to develop approaches which are based upon a partnership between students committed to self-development and

learning and academic staff dedicated to the continuous improvement of the learning and teaching experience at the University.

Specific objectives [15]:

- Strengthening the provision of study skills support through the curriculum, particularly for students entering higher education for the first time, and whenever possible contextualize those skills to the subject/programme.
- Devise and develop learning, teaching and assessment strategies within programmes which enable students to undertake progressively more independent learning as they progress to the higher levels of programmes.
- Link research and teaching and learning in the design of programmes.
- Fostering inquiry-based learning and active learning which will develop students' skills in analysis, critical thinking, information processing and problem solving.
- Design curricula to ensure the coherence of the student's learning experience and clarity of learning objectives, regardless of mode or pace of study.
- Continuously review the currency and appropriateness of curricula and delivery to ensure the needs of a diverse student body are met
- Involving stakeholders in the curriculum development and review, particularly students, teachers, employers and society . Responsiveness to equality and diversity issues in the development and delivery of the curriculum

12. Academic Framework:

The proposed structure for the Central University of Rajasthan can be developed in a phase wise manner as follows:

1. Schools of Study
2. Specialized Centers'
3. Research Institutes
4. Academic Outreach
5. Innovative Courses

13. Proposed Schools:

It is proposed that Rajasthan Central University may have the following Schools:

1. School of Humanities and Social Sciences
2. School of Chemical Sciences and Pharmacy
3. School of Physical Sciences
4. School of Mathematics, Statistics and Computational Sciences
5. School of Life Sciences
6. Interdisciplinary School of Health Sciences
7. School of Commerce, Management and Banking
8. School of Information and Communication Technology
9. School of Education
10. School of Legal Studies
11. School of Agriculture
12. School of Energy Studies
13. School of Earth Sciences
14. School of Engineering Sciences and Technology
15. School of Performing Arts

In addition, is also proposed to establish a Centre for Distance Education supported by the various schools of the University. Such a Centre may help greatly in handling the problem of 'Access', in particular.

The proposed academic programmes under each of the Schools mentioned above are as follows:

13.1 School of Humanities and Social Sciences:

Apart from the routine academic programmes, some possible innovative programs in this school are:

- ❖ Ph.D. in Conflict Analysis & Resolution
- ❖ M.S. in Conflict Analysis & Resolution
- ❖ M.A. in Cross-Disciplinary Studies
- ❖ M.S. in College Student Affairs
- ❖ Graduate Certificate in Conflict Analysis & Resolution
- ❖ Graduate Certificate in Peace Studies
- ❖ Graduate Certificate in Family Systems Healthcare
- ❖ Graduate Certificate in Health Care Conflict Resolution
- ❖ Graduate Certificate in College Student Personnel Administration
- ❖ Graduate Certificate in Family Ministry

13.2 School of Chemical Sciences and Pharmacy:

The school will float the following programmes:

- ❖ Analytical Chemistry
- ❖ Sensor Technology
- ❖ Advanced Spectroscopic Methods
- ❖ Biological Chemistry

- ❖ Inorganic Chemistry and Catalysis
- ❖ Organic Chemistry with thrust on bio-organic research
- ❖ Physical and Theoretical Chemistry
- ❖ Drug Delivery and Materials Characterisation
- ❖ Cell Biology
- ❖ Medicinal Chemistry
- ❖ Pharmacy Practice

13.3 School of Physical Sciences:

Apart from regular courses, the proposed school will be specialized in:

- ❖ QUANTUM FIELD THEORY & STRING THEORY
- ❖ STATISTICAL PHYSICS & CONDENSED MATTER THEORY
- ❖ ASTROPHYSICS
- ❖ PARTICLE PHYSICS

13.4 4.School of Mathematics, Statistics and Computational Sciences:

The thrust areas proposed are:

- ❖ Computational Sciences and Informatics
- ❖ Bioinformatics
- ❖ Earth Systems Science
- ❖ Certificate in Computational Techniques and Applications

Other Proposed Programmes:

Bachelor of Technology (Information Tech.)	B.Tech.(IT)
Bachelor of Technology (Communication Tech.)	B.Tech.(CT)
Master of Technology (Information Tech.)	M.Tech.(IT)
Master of Technology (Communication Tech.)	M.Tech. (CT)
Master of Technology (Networking and Management)	M.Tech. (Net)
Doctor of Philosophy	Ph.D.

13.5 School of Life Sciences:

Proposed Programmes:

❖ Bachelor of Science in Bio-technology	B. Tech. (Bio-tech.)
❖ Bachelor of Science in Bio-information	B. Tech. (Bio-infor.)
❖ Bachelor of Science in Nano-science	B. Tech. (Nano-Sci.)
❖ Master of Science in Bio-technology	M. Tech. (Bio-tech.)
❖ Master of Science in Bio-informatics	M. Tech. (Bio-infor.)
❖ Master of Science in Nano-sciences	M. Tech. (Nano-Sci.)
❖ Doctor of Science	D Sc

13.6 Interdisciplinary School of Health Sciences

The primary objective of the proposed school will be augmenting educational avenues and for providing in-service training for medical, nursing, paramedical and allied personnel through the distance education mode.

Proposed Programmes:

- ❖ Addictions Counseling,
- ❖ Public Health and Nursing
- ❖ Occupational Health Science
- ❖ Radiological Health Science
- ❖ Environmental Health Science
- ❖ Clinical Laboratory Science
- ❖ General Health Science

13.7 School of Commerce, Management and Banking:

Routine Courses:

- ❖ Bachelor of Business Administration B.B.A.
- ❖ Master of Business Administration M.B.A.
- ❖ (with specializations in International Trade,
 - Risk Management, Hospitality Management,
- ❖ Environmental Management, Insurance, Rural Development
- ❖ Doctor of Philosophy Ph.D.

Unique Courses:

- ❖ Energy Technology
- ❖ Industrial Economics and Management
- ❖ Production Engineering
- ❖ Machine Design

- ❖ Materials Science and Engineering
- ❖ Applied Mechanical Engineering
- ❖ Industrial Ecology

Unique Courses in Banking:

- ❖ Forex Management
- ❖ Treasury & Funds Management
- ❖ Capital/ Financial Markets
- ❖ Investment & Funds Management
- ❖ Rural Development

13.8 School of Information and Communication Technology:

Proposed Courses:

- ❖ Computer and Systems Sciences
- ❖ Electronics, Computer, and Software Systems
- ❖ Communication Systems
- ❖ Microelectronics and Information Technology

13.9 School of Education :

- ❖ Diploma in Education (Dip.Edu.)
- ❖ Bachelor of Education (B.Ed.)
- ❖ Master of Education (M.Ed.)

❖ Doctor of Philosophy (Ph.D.)

13.10 School of Legal Studies:

❖ Bachelor of Law L.L.B.

❖ Master of Law L.L.M.

❖ Master of Science :International Financial Legislation M.S.

❖ Doctor of Philosophy Ph.D

13.11 School of Agricultural Sciences:

Proposed Programmes:

❖ Agribusiness Management

❖ Agricultural and Natural Resources Engineering

❖ Agricultural Communication

❖ Agricultural Economics

❖ Agricultural Education

❖ Agricultural Finance

❖ Agronomic Business and Marketing

❖ Animal Agribusiness

❖ Animal Production

❖ Animal Products

❖ Animal Science

- ❖ Applied Meteorology
- ❖ Environmental Plant Studies
- ❖ Environmental Soil Science
- ❖ Farm Management
- ❖ Fisheries and Aqua Management

13.12: School of Energy Studies:

It is proposed to be functionally classified into four sections:

1. Fundamental Energy Science:

Areas proposed to be covered:

basic science, and research, in order to contribute to energy problem solution.

It is performed considering "physics", such as "chemistry", such as quantum chemistry, physical chemistry, and substance science, quantum mechanics and electricity and magnetism, statistical mechanics, condensed matter physics study, and nuclear physics, as a basis.

2. Socio Environmental Energy Science:

Areas proposed to be covered:

Establishment of ideal energy systems harmonizing with natural and human environments in order to sustain the continuous development of human

civilization. For this purpose, various energy problems will be systematically analyzed from sociological, political, economical, biological and environmental perspectives.

3. Energy Conversion Science:

In order to contribute to the development of a human society that coexists with the natural environment, and to establish efficient clean energy systems, this course will offer education and conduct research on generation, conversion, control and the utilization of various kinds of energy from the perspective of science and engineering.

4. Energy Science and Technology:

This section will offer education and research opportunities for the development of more efficient utilization of direct and indirect energy supplies based on disciplines such as resources, metallurgical, mechanical and electrical engineering.

In addition to the programmes mentioned above, other need- based programmes may be started by each school from time to time.

According to the views expressed by experts, rapid growth is slated for a wide range of services in India, including professional computer-related research and development, real estate, leasing, advertising, printing and packaging, marketing, telecommunications, postal and courier services, audiovisual, engineering and construction, wholesale and retail distribution, all levels and types of education, environment, banking, insurance, health, travel, sports and recreation, and all

categories of transport services. It is estimated that by the year 2020 more than 120 million jobs will come from the services sector alone. The IT-enabled service businesses in India – call centres, medical transcription, technical support and back office processing, engineering and design, geographic information services, payroll and other human resource services, insurance claim processing, legal databases, etc have also shown remarkable growth in recent times. All these will require the development of several curricular modules, some of which may be handled in an interdisciplinary manner by the different academic schools.

14. Proposed New Programs in the first phase based on minimal infrastructural requirements.

14.1 Study India Program – A Holistic Approach towards Commencement of the Central University of Rajasthan:

In general, peace and harmony studies programme is one of the elective courses offered in many universities throughout the world. India being the role model for peace and harmony many overseas institutes of higher learning are keen to send their students in the credit transfer based cultural extension programs. The program can be formulated as follows:

Courses to be offered:

Basic orientation in English(for non English speaking students); Indian Culture Through Language & Literature; India's History & Philosophy; Indian Politics,

Economic Development & International Management; Indian Society; Educational field Trips.

Elective Courses to be offered:

Comparative Literature; Indian Spiritual Writing in Translation; Food, Society and Culture; Indian Classical Music; Introduction to Hindi (National Language of India); Indigenous Knowledge Systems of India; Introduction to Yoga and Meditation. (Students have to pay additional fees if they select additional courses from the above elective subjects).

Eligibility: The Programme is aimed at overseas students from all countries provided they meet the general prerequisite of proficiency in English. Even the state Universities in Rajasthan and other states can participate in this program based on the credit transfer mode.

14.2. Postgraduate diploma in Rajasthani Music (Under the new Rajasthan Kala Academy):

Classical and vocal music and dance are two very important aspects of the folklore of any region. In Rajasthan, songs play a dominant role in the life of the people. The lyrics are read in a prosaic style. They are not strictly songs and are referred to as duha, soratha etc. Songs, which are more poetic than musical or melodious are called folk poetry. The real folk-song is not something to be read. The words of folk-song become meaningful when they are saturated with the rhythm of music to which they have been spontaneously set through continuous use by the people. This

makes folk songs timeless and limitless. Folk songs, deal with domestic or family affairs, seasons, festivals, rituals and customs.

Gorbund is a famous folk song which describes the process of preparing a decorative string for a camel, Rajasthan's traditional mount. The song express the beauty in innocent labour. The composition is particularly moving when sung to the rhythm of Kaharwa. The enjoyment of this song is hundred percent when sung to this raga. The other folk songs are 'Indhani', 'Lawarji', 'Jallo', 'Hichaki', 'Olyun', 'Sapno', 'Kurjan' etc. The tunes of these song are melodious and fast that even the rendering of their first times over a stringed instrument makes the audience ecstatic (Source: <http://rajasthanisongs.wordpress.com/tag/rajasthani-bhajans/> .

Rajasthan has a number of communities whose hereditary profession is to sing for the entertainment of others. Among them are the Dholis (both Hindus and Muslims), Dhadhis, Mirasis, Mangamars, Fedalis, Kalawats and Qawwals, Tangas, Patars and Kanchari (Hindu and Muslim prostitutes), Nats, Rawals and Bhawais. These communities have contributed to the preservation and popularisation of Rajasthani folk songs.

The proposed program will systematically impart knowledge in these areas.

14.3 Postgraduate Diploma in Rajasthani Dance Music (Under the new Rajasthan Kala Academy):

Dance is an expression of human emotion as mush as music and it is found in almost limitless variations in Rajasthan. Simple unsophisticated, dancing is seen in their fairs and festivals in the kudakna of the Meena boys, the dancing which goes

with the Rasiya songs of Braj, and the dancing by women and men where the women carry a pot or a lighted lamp on their head. In the Charkala dance of Braj, an elaborate lampstand replaces the single lamp. The famous Ghoomar, Rajasthan's popular dance gets its name from ghoomna, the pirouetting which displays spectacular colors of the flowing ghagra, the long skirt of the Rajasthani women. Men have a range of their own more vigorous dances. The Gair of Mewar have inner and outer circles of dancers who move diagonally or loop in and out. It is intricate and fascinating. The Gair of Jodhpur is performed in a single file and martial costumes are worn for effect. The Geendad of Shekhawati is similar. Sticks or swords are often used in male dances, and the Shekhawati dance has the daf accompanying it. Free dancing full of zest, with rows of dancers waving colorful pennants, makes the Bam rasiya of the Braj region spectacular. It is performed at holi. The Kucchhi Ghodhi or Dummy Horse dance is performed on festive occasions. The terahtali is a tantalising dance performed by women while sitting. The women have manjeeras(little brass discs) tied with long strings to their wrists, elbows, waists, arms and a pair in their hands as well. Their male accompanists sing and play the tandoora while the women, with sextrous and fine movements, create a strong rhythm with the manjeeras. For added effect they may hold a sword between their teeth or balance pots or lighted lamps on their heads. The dance of the Kalbelia women is vigorous and graceful. An authentic fire dance is performed by the Jasnathis of Bikaner and Churu districts. The accompanying music rises in tempo as the dance progresses, ending with the performer dancing on brightly glowing

embers-a breathtaking and deeply impressive sight (Source: http://www.travelmasti.com/domestic/rajasthan/folk_dance.htm .)

The proposed P.G. Diploma will impart systematic knowledge on all the above said aspects of Rajasthani Dance.

14.9 Master of Valuation (Real Estate):

Introduction :

In the post globalization period, there is heavy boom in the real estate business in India. Thus the role of professional valuer has increased a lot. A valuer is highly skilled professional, who with matured technical expertise and skill prepares a valuation of land, buildings or possessions for specific purpose. The work of valuation extends from residential property to large estates, factories, offices & shops. In view of growing importance of professional valuer in real estate business, the Masters Course in Valuation of Real Estate is proposed.

Objectives of the Course:

After undertaking the Masters of Valuation (Real Estate) Course the student will be able to :

1. Appreciate the contribution of subjects like law, economics, town planning, Insurance engineering, statistics and environmental science for proper understanding of Valuation.
2. Understand the issues like utility, marketability, transferability, scarcity, physical, social, legal and economic considerations in Valuation of land, building, plant, machinery etc.

3. Understand the essentials of valuation for various fiscal and non-fiscal purposes.
4. Undertake certified services to
 - (i) Municipal Corporation or local authorities for
 - (a) property taxes to estimate rental values.
 - (b) land acquisition for road and reservations to estimate market value of property acquired.
 - (ii) State governments for
 - (a) estimating fair market value of property transferred to levy stamp duty.
 - (b) for estimating market values of property acquired for land acquisition.
 - (iii) Central government
 - (a) for estimating market value of property or cost of construction of for wealth tax, Income tax, capital gains tax
 - (b) to estimate market value of property acquired for land acquisition.
 - (iv) Bank and financial Institutions to estimate values of properties for loan advances, Mortgage.

Employment Potential:

1. Municipal Corporation - for property tax, town planning, land acquisition.
2. State Government - for land acquisition, stamp duty, fixation of rent, urban

development.

3. Central Government - for land acquisition, income tax, capital gains tax, Company's
4. Act, Public Sector Undertaking, dis investment/privatisation.
5. Other agencies - audit, banks and financial institutions, Insurance, as private valuer.

14.10 Masters in Financial Inclusion:

The Financial inclusion (FI) quotient of a country is recognized as a key determinant to gauge that country's overall economic and social development. Even in developed financial markets there are concerns about those excluded from the banking system, especially, migrant workers. The barriers to access formal banking system have been identified as relating to culture, education (financial literacy), gender, proof of identity, remoteness of residence, income and assets, etc.

Currently in India, 134 million households are financially excluded, which is 60 percent of country's population. Moreover, Financial Exclusion in Urban India is about 44 percent where as exclusion in Rural India is about 76 percent.[17] The proposed Masters Program will address the above said issues related to the Financial Inclusion and also on Financial Education.

14.11 Masters in Actuarial Science:

The proposed programme will focus on the mathematical and statistical analysis of risk, and their applications to insurance and other business management problems. Includes instruction in forecasting theory, quantitative and non-quantitative risk

measurement methodologies, development of risk tables, secondary data analysis, and computer-assisted research methods.

14.12 M.Sc. Tech. in Mathematics:

This Program will comprise of courses in different areas of Mathematics as well as in Computer Science and Operations Research. The rigorous exposure to Mathematics, Operations Research and Computer Applications are aimed at equipping the students of this program with theories and analytical techniques as well as thorough knowledge and expertise in the use of latest Computer packages so that they can work competently in diverse areas. Subsequently, the students on successful completion of this course should be able to work in the field of Actuarial Science, Banking, Information Technology, Financial and Market Research Analysis, other public and private sector organizations and in Industrial Research and Development. The main aim of this program is to prepare the students to work competently as a Mathematician in industry.

15. Proposed Specialized Centers

15.1 International Center for Desert Studies:

Ben-Gurion University of the Negev's Jacob Blaustein Institute for Desert Research is an acknowledged leader in desert studies, widely respected in the international scientific community for the quality and creativity of its research and training programs. In light of this global reputation and the worldwide need for expertise in the field, BGU and the Blaustein Institute have established the Albert Katz International School for Desert Studies which offers a two-year program leading to

a M.Sc. degree in desert studies. The proposed program is based on the Albert Katz International School for Desert Studies. [18]

The loss of fertile land has aroused global concern, spurring increased interest in desert studies. The 1992 Earth Summit in Rio de Janeiro brought attention to the danger of desertification, which is defined as land degradation in arid, semi-arid and dry-subhumid areas; it affects some 40% of global lands and nearly one billion people. Desertification is caused primarily by human activities; the earth's rapidly growing population is exhausting the fragile resources of dryland ecosystems. In the wake of the Earth Summit, the UN drew up the Convention to Combat Desertification - a multinational agreement which calls for an increase in research and education and the establishment of centers for information and training as major tools in combating desertification. Desert studies as a discipline is likely to follow the same growth pattern as oceanography, which began as a subdiscipline of geography but rapidly grew into a separate scientific field.

Curriculum

The multi-disciplinary program integrates basic and applied research, lectures and field studies and includes:

Introductory Courses: These two-semester courses are designed to familiarize students with areas of desert studies that lie outside their fields of specialization. Students will be required to participate in three introductory courses.

Specialized Courses: Each student will take 6-8 courses in his or her major field of studies.

Research Projects: The core of the program will be independent research. Each student will be guided by a faculty member and will submit a written thesis at the completion of the research project.

Introductory Courses

Students are required to take three introductory courses selected from the list below. The first course (A.1) is mandatory; the other two must be in fields outside the student's specialization. The two-semester introductory courses include two lectures weekly (4 credits per course for a total of 12 credits).

- ❖ A.1 Water, Energy and Life in the Dryland Environment (Required for all students),
- ❖ A.2 Crop Production Under Dryland Conditions,
- ❖ A.3 Introduction to Dryland Ecology,
- ❖ A.4 Environmental Physics in Drylands,
- ❖ A.5 Water Resources and Management in Drylands,
- ❖ A.6 The Human Dimension: Living in Drylands.

Specialization

The program will offer five specializations:

1. Agriculture and Biotechnology for Sustainable Dryland Development
Ecology of Drylands
2. Solar Energy and the Physical Environment
3. Water Resources and Management
4. Man in Drylands

Elective Courses

Students will choose six to eight courses (12 to 16 credits) in their selected majors. One-semester courses have two weekly lectures unless otherwise noted. Students will also attend weekly seminars and complete at least one program of guided reading (2 credits for both activities).

15.2. Centre for Sustainable Infrastructure (CSI):

Infrastructure is critical to the economic wellbeing of India with huge funds invested annually. Infrastructure underpins the delivery of essential services, drives economic growth, supports social needs and is closely linked to the high quality of life enjoyed by the developed world [18]. All individuals, corporations and governments gain the benefits of good infrastructure or suffer the losses from poorly performing infrastructure.

Contemporary challenges facing the community include extending the life of ageing infrastructure and the provision of new infrastructure for a growing population in a cost effective and environmentally sustainable manner. The life cycle of any infrastructure system involves planning and procurement, design and construction, performance monitoring and renewal and in each of these phases different research challenges exist including the impact of new technologies, incorporation of sustainable materials, modeling and retrofitting for deterioration effects, asset management and the impact of extreme loads, climate change and the carbon economy.

CSI will provide a focus for multi-disciplinary research in the field of sustainable civil infrastructure, which is a topic of national importance in the 21st century, and will expand research links through collaboration both nationally and internationally in a manner consistent with the new research model of 'hubs and spokes'.

CSI will have three major research programs consisting of a series of projects involving industry partners, centre staff, research fellows and graduate students. The research is carried out using analytical and experimental techniques to suit the project requirements and all will consider emerging technologies. The three research program areas are as follows:

Program 1: Advanced Structural and Geotechnical Systems (ASGS)

Program 2: Transportation Systems (TS)

Program 3: Water Resources Modelling (WRM)

15.3 Center for Rajasthan History:

Rajasthan was inhabited long before 2500 BC and the Indus Valley Civilisation had its foundation here in north Rajasthan itself. The Bhil and the Mina tribes were the earliest dwellers of this area. Later Harsha ruled this region followed by Mughals. The proposed center will investigate the rich history of Rajasthan.

15.4 Center for Applied Social Studies:

The research and teaching interests of the proposed center will range widely across the fields of social policy, social care and health and professional practice. Attempt will be made to maintain close links with the other main disciplines in the Social Sciences and have well established links with social care and health agencies

15.5 Rajasthan Kala Academy: A Center for Performing Arts

16. Centre for Distance Education & e-Learning:

During the last four decades or so, the higher education setting in our country has seen major pedagogic shifts, especially with respect to the instructional mode used for adult learners. Slowly but steadily the distance education mode has made its presence felt in a number of locations in the country as a highly cost-effective and efficient mode for carrying high quality education simultaneously to thousands of geographically separated and remotely located learners. Although in the initial years, distance education was viewed with skepticism and enjoyed at best, a 'poor cousin' status as compared to the formal education system, the situation has now changed radically. More and more institutions are realizing the inherent potential of the distance education mode especially on account of its flexible, learner-centered approach, low infrastructural requirements and quick adoption of the latest technological advances in the development and delivery of its academic offerings. In fact, today is the age when many of the mono-mode conventional education institutions are turning toward the dual mode system that includes also the distance education provision. The proposed University also intends to make the best of both the modes through the establishment of a separate Centre for Distance Education

apart from the various academic schools planned. Apart from developing need-based academic programmes that can be packaged in a web-based, multi-media format, this Centre will be expected to collaborate with the academic schools in the programme development activity. As has been documented in the India Vision 2020 Report, “Given the huge number of young students that will quest for all levels of higher education in the coming decades and the severe shortage of qualified instructors, and in the light of India’s outstanding expertise in the IT industry, the country needs to embark on a massive programme to convert the entire higher educational curriculum into a multi-media, web-based format, and to establish accreditation standards for the recognition of the distance education so imparted”.

Apart from addressing the needs of a large illiterate population, an important national concern is dealing with the very severe problem of school drop-outs. It has been estimated that by the year 2016 there will be approximately 500 million people in the country with less than five years of schooling, and another 300 million that will not have completed high school. An enormous increase in the number of teachers will be required to deal with this problem adequately. Estimates indicate that the country will require an additional three million primary school teachers, more than twice the number currently employed. Similar increases will be required at middle and secondary school levels. The training of such large number of teachers will ordinarily require the establishment of additional teacher training colleges and much larger budgetary allocations for teachers’ salaries. A Centre for Distance Education as envisaged in the proposed university can certainly contribute

to this national need for teacher training apart from handling many of the other employability skills required by the nation, in collaboration with the different academic schools mentioned earlier.

17. Innovative Courses:

Undergraduate:

- ❖ B.Sc. Actuarial Science with a Year in Industry
- ❖ B.Sc. Business Statistics
- ❖ B.Sc. Computing for Business
- ❖ BA International Relations and Politics
- ❖ MChem Forensic and Investigative Chemistry
- ❖ BA Physical Education and Sport
- ❖ BA Physical Education and Sport with Education Studies
- ❖ B.Sc. Biochemistry with a Year in Industry
- ❖ B.Sc. Biological Sciences with a Year in Industry
- ❖ B.Sc. Applied Computing Science with a Foundation Year

Postgraduate:

- ❖ M.Sc. Biotechnology
- ❖ M.A. Development Practice
- ❖ M.Sc. Climate Change and International Development
- ❖ MA Media and International Development

- ❖ MA Media, Culture and Society
- ❖ MA International Development and Business
- ❖ MBA Strategic Carbon Management

Add-On Courses:

- ❖ MA Creative Entrepreneurship
- ❖ M.Sc. International Accounting and Financial Management
- ❖ MA Mathematics Education
- ❖ MA Adult Literacy, Lifelong Learning and Development

Other Courses:

- ❖ M.A. Financial Inclusion
- ❖ M.Sc. Geoinformatics
- ❖ M.Sc. Environmental Social Science
- ❖ M.Sc. in Clinical Education
- ❖ PG Diploma in Clinical Education
- ❖ PG Certificate in Clinical Education

18. Constituent College on the Campus:

In addition to the above, the constituent college on the campus will also be started in due course of time. Selective academic programmes will be operated through the constituent college. Thus the total students on the campus envisioned are around 25,000.

The striking feature of the proposed constituent college is to integrate undergraduate, postgraduate and Doctoral programmes. One of the main objectives of the above said constituent college will be to attract the best talent towards basic sciences.

19. Faculty

Quality is a pre-requisite for survival in the academic world today. As President Dr. A.P.J Abdul Kalam has quoted in the India Vision 2020 document “The Spirit of inquiry, creativity, entrepreneurial and moral leadership are the capabilities central to nation building in a democracy. Educators should develop in our children these capabilities and make them autonomous learners who are self directed and self-controlled”. A recent UNESCO document states that education should provide the skills for “learning to know, learning to live together, learning to do and learning to be”. Thus, education is the primary agent for transformation towards sustainable development and for increasing the people’s capacities to transform their vision of society into reality.

It is evident that in order to achieve the desired level of quality and ultimately “excellence”, the presence of highly qualified, motivated, dedicated and research oriented faculty, fully committed to the profession, is a *sine-qua-non*. The proposed university will appoint regular faculty as per the UGC regulations and in addition, it will also appoint additional tenure faculty from the industry and repatriated faculty from abroad in a need-based manner.

20. Research, Collaboration and Extension

The Central University of Rajasthan will undertake research activities in the thrust areas as identified by the CSIR, DST, DBT, ICMR and such other agencies working at the national and international level. Research activities will also be undertaken in collaboration with other reputed institutions engaged in doing similar research work. The proposed university will also carry out extension activities that will ultimately benefit the society as a whole.

21. Social Justice Policy of the State

In order to meet the Social Justice Policy of the State, the proposed university will create an “Endowment Fund”. It will also implement the positive discrimination policies of the state. Various charitable institutions established by sponsoring bodies will also help the students from poorer and weaker sections of the society.

22. Selection of students

Selection of the students for various programmes of the Central University of Rajasthan shall be made on the basis of an All India Entrance Test conducted by the proposed university. Some seats will be reserved for the NRI students.

23. Evaluation Technology

In the Indian higher education context in particular, performance evaluation of students and their final certification occupy a crucial place, whether it is in the

formal education system or in an individual or group setting within the non-formal mode. It is this final evaluation that eventually qualifies the individual to get a degree, diploma or certificate as the case may be and becomes his ultimate passport to the world of work. The importance of a well-systematized student evaluation system, therefore, cannot be undermined.

As the Central University of Rajasthan will have twinning or collaborative arrangements with foreign universities, it will also need to evolve an evaluation system that is compatible with them. The university will therefore adopt the semester system with continuous internal assessment and offer the facility for accumulation and transfer of credits. A modular approach with ample scope for vertical and lateral mobility of students will also be worked out. The UGC-recommended Grading system will be implemented when reporting performance and a system wherein a student may enter the university at various points of an academic programme and leave with some certification regarding the amount of knowledge / skill acquired in a restricted area (multiple entries and multiple exit) will be in place shortly after the University is established.

24. Governance

While the President of India as a Visitor of the University for running the University, the Vice-Chancellor will act as a Principal Executive and Academic Officer supported by the Registrar, Finance Officer and other supporting and technical staff. The members of AC and EC to be constituted will be in accordance

with the provisions of the Act and will be the authority vested with powers to take policy decisions for the smooth running of the University. On the Academic side, it will be the Academic Council that will be the ultimate authority for all academic matters. In addition, there will be the Finance and other usual authorities and bodies to function in specified areas.

25. Additional Constituent Bodies:

The Central University of Rajasthan will also form Industry-Institute Interaction Cell, Alumni Association, Extension and Outreach Unit appointing a coordinator for each of the above mentioned units from the appointed faculty members.

26. Epilogue

In the context of the present knowledge-driven economy across the world and the need to provide high quality education as well as facilitate high-end research in cutting edge areas, India needs more and more institutions of excellence that will produce students with global competencies and competitiveness. It is these students that will ultimately constitute the nation's expert and trained human resources - those that can contribute substantially to the all-round development of the country as a whole and boost the national economy. The creation of such institutions of excellence requires the participation of big business houses in contributing to the knowledge domain of the country for the benefit of the people of India.

A Business Plan for the Central University of in this context will be worked out later, after detailed discussions regarding the curricular offerings to be taken up on

priority, the student intake capacity, compensation packages for the faculty and staff etc. and the extent of corporate responsibility after the establishment of the university and its smooth operation in the initial few years. The latter in particular is in order that the university gets the necessary gestation period for organizing itself to be self-sufficient in its operational costs, with some cushion for future developmental initiatives.

As the India Vision 2020 Report states, “The pace of India’s future progress will depend to a large extent on its ability to make available the latest and most useful knowledge to vast sections of the population”. It is obvious, therefore, that the Public and Private Providers of higher education – both from the formal as well as the non-formal stream – must work together to achieve this national vision.

The present concept paper puts forth strategic plan for the Central University of Rajasthan. All the stake holders should join together with this upcoming premier institution of higher learning in a collaborative manner to create the world class University of international repute. A special blog at <http://mmsalunkhe.wordpress.com> is also created to invite suggestions and disseminate information regarding the Central University of Rajasthan to ensure participation of all the stakeholders.

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