ಸಂ.ಕರಾಉಶಿಪ/ಜಿ.ಎಫ್.274/2015–16/187   ದಿನಾಂಕ: 10.06.2015

ಗೆ,

ಸರ್ಕಾರದ ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳು,
ಉನ್ನತ ಶಿಕ್ಷಣ ಇಲಾಖೆ,
ಬಹುಮಹಡಿಗಳ ಕಟ್ಟಡ,
ಬೆಂಗಳೂರು–01.

ಮಾನ್ಯರೇ,

ವಿಷಯ: ಸಾಮಾನ್ಯ ಪದವಿ ಶಿಕ್ಷಣದ ಪುನರ್ ರಚನೆ ಕುರಿತು ಡಾ.ಚಿದಾನಂದಗೌಡ ಇವರ ವರದಿ.
ಉಲ್ಲೇಖ: ಸರ್ಕಾರದ ಪತ್ರ ಇಡಿ 192 ಯುಆರ್‌ಸಿ 2015, ದಿನಾಂಕ: 22.04.2015.

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಸಾಮಾನ್ಯ ಪದವಿ ಶಿಕ್ಷಣದ ಪುನರ್ ರಚನೆ ಕುರಿತು ಈ ಪರಿಷತ್ತಿನಿಂದ ರಚಿಸಲ್ಪಟ್ಟ ಡಾ.ಚಿದಾನಂದಗೌಡ, ವಿಶ್ರಾಂತ ಕುಲಪತಿಗಳು, ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಇವರ ಸಮಿತಿಯು ಸಲ್ಲಿಸಿರುವ ಅಂತಿಮ ವರದಿಯನ್ನು ಅವಗಾಹನೆ ಹಾಗೂ ಮುಂದಿನ ಕ್ರಮಕ್ಕಾಗಿ ಈ ಪತ್ರದ ಸಂಗಡ ಲಗತ್ತಿಸಿ ಕಳುಹಿಸಿದೆ.

ವಂದನೆಗಳೊಂದಿಗೆ,

ತಮ್ಮ ವಿಶ್ವಾಸಿ

(ಡಾ.ಎಸ್.ಎ.ಕೋರಿ)
ಕಾರ್ಯನಿರ್ವಾಹಕ ನಿರ್ದೇಶಕರು

ಪ್ರತಿ:

1) ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಮಾನ್ಯ ಉನ್ನತ ಶಿಕ್ಷಣ ಮತ್ತು ಪ್ರವಾಸೋದ್ಯಮ ಸಚಿವರು ಹಾಗೂ ಅಧ್ಯಕ್ಷರು, ಕರ್ನಾಟಕ ರಾಜ್ಯ ಉನ್ನತ ಶಿಕ್ಷಣ ಪರಿಷತ್, ಮಾಹಿತಿಗಾಗಿ.

2) ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಮಾನ್ಯ ಉಪಾಧ್ಯಕ್ಷರು, ಕರ್ನಾಟಕ ರಾಜ್ಯ ಉನ್ನತ ಶಿಕ್ಷಣ ಪರಿಷತ್, ಮಾಹಿತಿಗಾಗಿ.

KARNATAKA STATE HIGHER EDUCATION COUNCIL
Govt. Institute of Printing Technology Bldg.,
Palace Road, Bangalore - 560 001.
Phone : 080-22341391 /Fax : 080-22341393

Sub: Constitution of an Expert Committee to restructure BA/B.Sc Degree Courses
Ref: Item No. 7-Proceedings of the 8th General Council meeting held on 21-08-2013

The General Council considered the declining interest of students to join BA/B.Sc Degree Courses in their present format. Expressing grave concern over the future of these subjects and also considering their relevance to the academic advancement of the state and nation, the General Council unanimously resolved to constitute an expert committee to make recommendations for restructuring these courses, so that the basic sciences, social sciences and humanities subjects find their rightful niche in higher education and at the same time provide the students with ample employment opportunity after graduation. Hon'ble Chairman directed that the committee shall consist of the following:

1) **Prof. K. Chidananda Gowda**
   Former Vice-Chancellor, Kuvempu University   -   Chairman
2) **Prof. P. Venkataramaiah**
   Former Vice-Chancellor, Kuvempu University   -   Member
3) **Prof. M.D. Muthamma**
   Former Director, Department of Collegiate Education -   Member

Hence, this order is issued to carry forward the directions of the Hon'ble Chairman, Karnataka State Higher Education Council.

No. KSHEC/Expert Committee BA/B.Sc/2013-14/215   **Date: 19-09-2013**

The committee is constituted with immediate effect to explore ways and means of making BA/B.Sc courses academically attractive as well as professionally compatible with the national/global challenges of the 21st century knowledge based society. Along with the proposal of packaging the arts/sciences/humanities subjects with IT and/or Information Technology subjects. As discussed in the General Council meeting, the committee may also consider other alternatives or complementary measures to evolve a uniform and robust higher education policy for the State.

The committee is directed to submit its report within 3 months for placing the same before Hon'ble Chairman for his kind consideration and needful.

Prof C.R Francis, e-Governance Coordinator, Dept. of Higher Education will be the Convener for the committee.

The committee is authorised to meet in locations desired by the Chairman in consultation with other members. The Chairman, Members and the Convener are entitled to admissible conveyance DA, sitting fee, sumptuary and all other allowances, payable by the Council.

Executive Director

CC to : 1) PS to Hon'ble Minister for Higher Education, Tourism and Chairman, KSHEC
           Vidhana Soudha, Bangalore-560001 for kind information.
        2) PS to Principal Secretary, Department of Higher Education, 6th Floor, M.S Building, Banglaore-560001 for information and needful.
        3) The Chairman and Members of the Committee for information and needful.
        4) The Convener of the Committee for necessary action
        5) Office Copy

DR. K. CHIDANANDA GOWDA
Former Vice Chancellor, Kuvempu University and
Chairman, Committee on Restructuring of Degree Courses

To
Dr. S A Kori,
Executive Director,
KSCHE,
Bangalore-560001

Dear Sir,

Sub: Submission of Final Report entitled "Skill Infused New Learning Pattern for Undergraduate Studies".

Ref: 1. Your Order No.: KSHEC/Expert Committee/BA/BSc. 2013-14 Dated: 19.09.2013.
2. Draft Report submitted earlier

*****

With reference to the above, I write to state that the committee submitted a draft report on the "Skill Infused New Learning Pattern for Undergraduate Studies" to the KSCHE in 2014. The same was placed before the General Body Meeting of the Council and was circulated for the remarks and suggestions of the Vice Chancellors of all Universities by email.

Subsequently, the Principal Secretary, Higher Education Department, convened a meeting of Vice Chancellors to discuss on various aspects of the report. Based on the suggestions given in the meeting, it was decided to appropriately modify the report. Accordingly, the committee deliberated and finalised the report.

The committee is pleased to submit the copy of the final report for further needful action.

Thanking you,

Yours sincerely,

(K. CHIDANANDA GOWDA)

Government of Karnataka

SKILL INFUSED NEW LEARNING PATTERN

FOR

UNDER-GRADUATE STUDIES

(BA, BSc, BCom, BBM, BCA, etc.)

IN

UNIVERSITIES OF KARNATAKA STATE

2015

A Report Submitted to the Department of Higher Education,

Govt. of Karnataka

CONTENTS

Appendix- i. Possible Areas of Mass Employment

Appendix-ii. Personality-centric Soft Skills

Appendix-iii. Special Soft Skills for Business

Appendix-iv. General Guidelines for the Evaluation of Courses under IMBHA

I. PREFACE

This Report is prepared by a Committee which was constituted by the Karnataka State Higher Education Council, Government of Karnataka during September 2013, Vide order **No.: KSHEC/Expert Committee BA/B.Sc./2013-14/215 Dated 19-09-2013.**

The committee was constituted with the objective to

1) Explore ways and means of making BA & BSc courses academically attractive as well as professionally compatible with national/global challenges of 21st century knowledge based society.
2) Look into possibility of packaging the arts/science/humanities subjects with IT subjects.
3) Possibly consider other alternatives or complementary measures to evolve a uniform and robust higher education policy for the state.

Therefore the terms of reference is to explore ways and means of making under-graduate BA/BSc. Courses academically attractive as well as professionally compatible with the national/global challenges of the 21st century knowledge based society.

Many reports indicate that good number of jobs is vacant in several private sectors due to non availability of graduate candidates with appropriate skills. Hence students of BA/ B. Sc./ B.Com. degree courses have to be provided with proper skills in order to make them employable. Generally the minimum skills desired by the job market are communication skills, mostly English language communication skills both oral and written in addition to proper professional aptitude and attitude.

Therefore in order to make our BA/B.Sc./B.Com. Graduates find acceptability in the job market of the 21st century, they have to be empowered with certain professional skills over and above the knowledge of the subject content they get during their study in the degree programme.

The Committee accordingly studied, compiled and synthesized information about the existing problems, difficulties, shortcomings and weak points in the present academic pattern that exists in all the conventional Universities in the State. Following this the Committee suggests the overhauling of the under-graduate academic pattern and make it modern by considering Theoretical and Practical aspects as well as the Skills needed in the 21st century along with Personal and Social Values to groom ideal citizenship so as to benefit all the stake holders and target groups, especially the students.

The committee examined in detail the various degree programmes offered at the undergraduate level followed by discussions with some renowned educationists, a few stakeholders and identified the shortcomings in the existing system of academic pattern followed and issues related problems by the stakeholders. The Committee had discussions

with peers and educational facilitators. The members also compiled information from all relevant primary, secondary, and tertiary sources available in print and on the web.

The committee also noted the following goals of Higher Education for the 21st century recommended by learned educationists: 1. Sharpen a student's awareness, 2. Fuel one's thirst for knowledge, 3. Teach students how to think and not what to think, 4. Develop one's creative thinking skills and imaginative power, 5. Make a good mix of Class-room Learning and Web-based learning, 6. Imbibe moral values in individuals, 7. Promote Fine Arts, Sports, Service, and Skills as part of educational process, 8. Impart skills and make a student employable and capable of earning a happy living, 9. Produce life-long learning individuals, 10. Produce individuals who are not mere resources, but assets for the society, 11. Teach individual life skills for internal harmony, 12. Expose a student to healthy competition and not cut-throat competition, 13. Promote entrepreneurship qualities in youngsters, 14. Build interpersonal skills of youngsters, 15. Make students acquire social skills, so that everyone blends well harmoniously with others in Society, and creates a cultured Society, 16. Develop individuals who can create wealth for the organization they work with and the country where they live. 17. Make everyone responsible citizens. 18. Make students to love, respect, and nurture nature.

Considering all the above, the Report was synthesized focussing mainly on the following relevant aspects:

1. The need for, and objectives of structural academic reforms
2. Lacuna in the current processes of teaching, learning and evaluation.
3. Limitations in the selection of subjects of choice for study in the existing system.
4. Offering 3 years Bachelor's Degree.
5. Skill-based courses
6. Multiple Exits
7. Use of ICT
8. Directed by the Hon'ble Supreme Court of India, to include courses on Human Rights, Environmental education, and Indian Constitution
9. Promoting Entrepreneurship qualities
10. Inclusion of FC (FOUNDATION COURSES)
11. Inclusion of IMBHA (Integrated Mind, Body, Heart Activities)

The members of the committee shall be very happy if academicians, educationists, intellectuals and administrators who peruse this report could forward their criticisms and feedback to Karnataka State higher Education Council which would be of value to the policy makers to improve the higher education system in the State of Karnataka.

1. **Dr. K. Chidananda Gowda**   ... Chairman
   Former Vice-Chancellor, Kuvempu University,
   3004, "Udayaravi", 5th Main, 12th Cross,
   V.V.Puram, Mysore-570 002.
   Tel: 0821-2511707, Mobile: 94 49 36 29 77
   e-mail: kcgowda12@yahoo.com

2. **Dr. P.Venkataramaiah**   ... Member
   Former Vice-Chancellor, Kuvempu University,
   436, Vishwamanava Double Road,
   Kuvempu Nagara, Mysore-570 009
   Tel: 0821-2543977; Mobile: 94 48 94 58 84
   e-mail: pvramaiah@hotmail.com and
   pvramaiahmysore@gmail.com

3. **Dr.M.D.Muthamma**   .... Member
   Former Director of Collegiate Education
   No.41, 1st Cross, 1st main,
   GKV Nagar, Judicial layout
   Jakkur, Bangalore-560065
   Mobile: 94 48 48 13 16
   e-mail: dir_bmscw@yahoo.com

4. **Sri C. R. Francis**   .... Convener
   Associate professor,
   Maharani's Science College for Women,
   Palace Road, Bangalore-560 001
   Mobile: 94 48 96 57 03
   e-mail: rajendrafrancis@rediffmail.com

GENERAL PATTERN: The general structure of the education imparted by any university should include the Theoretical background, Practical components, Exposure to field work, Skills, Innovations, Entrepreneurship, and Ethics. The general pattern proposed here, is to offer a three year under-graduate degree programme with any two subjects of equal depth in content. In the first three years, students study different Allied Subjects along with the other two subjects of equal depth. The Allied subjects are mainly for imparting skills to the students so as to make them eligible for employment. The Allied Subjects are generally related to the skills pertaining to the two main subjects. The students should be given freedom to choose the first two subjects of their choice and also the Allied courses offered in the college. There should not be any fixed combination of subjects to be studied by the students. The entire program is offered on CBCS pattern.

ALLIED SUBJECTS: The Courses of Allied subjects are to be decided to help the students to acquire skills that are required to make them become eligible for employment, and also to provide inter-disciplinary studies at higher level. There should be freedom to the students to choose the Allied courses offered in the college. The list of Courses of Allied subjects should be prepared by the concerned Faculty in each university. A list of probable **Allied Subjects** that can be offered to the UG students is placed in the sequel.

ADVANTAGES OF THE NEW PATTERN: The proposed new pattern of UG programme generally provides the following: (a) flexibility to the students in the choice of their subjects of study, (b) opportunity to acquire proper skills that are essential for their employability, including development of entrepreneurship skills, (c) option to exit from the programme at different stages, getting a Diploma or an Advanced Diploma, or a Degree enabling the students to get employment, (d) opportunity to help the students to get good knowledge in the subject content to make them highly competitive and also (e) an opportunity for the students to pursue higher education in their chosen field of study, as well as inter-disciplinary areas of knowledge. (f) help the students to develop their personalities with a balanced Intellectual, Emotional, Social, and Humanistic quotients, (g) opportunity to empower the youngsters with values of Character, Citizenship, Rights and Duty consciousness.

FOUNDATION COURSES (FC): The proposed new pattern of UG programme includes Foundation Courses (FC) with Credits as indicated in Tables 3(a) and 3(b) in all the 6 semesters which provides the following: (a) imparting education on three mandatory courses as directed by the Hon'ble Supreme Court of India, viz., courses on Human Rights, Environmental education, and Indian Constitution, and in addition (b) Computer Literacy, (c) Customer Service, (d) Soft skills for Employability, (e) Language for International Communication, (f) Entrepreneurship.

IMBHA (INTEGRATED MIND, BODY, HEART ACTIVITIES): Harmony in life is achieved by the integration of Body, Mind, and Heart so that all the three work together in an intra-dependence and mutually-beneficial way. Good health and vitality in the body, a grand vision in the horizon of the peaceful mind, and love and empathy in the Heart to make a life harmonious, meaningful and glorious. In other words, there should be a balance of IQ (Intelligence Quotient), EQ (Emotional Quotient), and SQ (Social Quotient). To achieve this balance, it is essential that the young University-students take part in one or more activities involving Sports, NCC, NSS, Physical exercises, Mental exercises, like Yoga, Mindfulness, General Knowledge, Co-curricular, Extra-curricular activities, and Voluntary Service to Society. All these subjects are grouped under IMBHA (integrated Mind, Body, Heart Activities). IMBHA is a compulsory subject of one credit/semester in all the 6 semesters of Bachelor's Degree course.

LANGUAGE STUDIES: The first 4 semesters include studies of English language and a Regional language of 3 credits each per semester.

GENERAL RECOMMENDATIONS

1) All Universities offering general degree programmes in the State of Karnataka shall adopt in their under graduate colleges a new pattern of 03 years composed of 06 semesters for BA, BSc, BCA, B Com and BBM Degree programmes from the academic year 2015-16 to replace the existing system with a new Choice Based Credit System having two/one major subjects with emphasis on skill infusion.

    (i) All courses shall be based on credit pattern under L-T-P structure with continuous assessment.

    (ii) The new pattern offers in each of the first four semesters two language courses, one foundation course, one course on an Allied subject and a compulsory course on Integrated Mind Body and Heart Activities (IMBHA) in addition to the courses on two major subjects chosen by a student. In each of the fifth and sixth semesters, one Foundation course, one course on IMBHA, and 2 each on major subjects and one Allied course are offered.

    (iii) The new pattern provides freedom to the students to select any two subjects of their choice within a Faculty in lieu of the present pattern of three subjects of equal importance.

    (iv) The proposed pattern provides opportunities to the students to exit after one year earning a Diploma, exit after two years earning an Advanced Diploma, exit after three years getting B A/ B Sc/BCA/ B Com/BBM degree in addition to acquiring at each stage certain skills useful for their employment.

2) A Guidance Bureau needs to be created in each University to provide information to guide the students coming to degree colleges with regard to choosing of subjects and also career opportunities available after graduating in such subjects. These details should be made available on the website of the University. In turn, each college should have a counselling centre with a mentor to guide the students and explain to them about the information available on the University website in this respect.

3) KSHEC should create a repository of video lectures of eminent scholars in different subjects developed by all the universities, UGC and the lectures available on YouTube and it should be made available to all the colleges through its website.

4) Universities should encourage the colleges to adopt the system of peer teaching in which the talented senior students are used to teach juniors. In fact it should be a routine practice to be adopted in colleges.

5) Universities need to adopt in their regulations to ensure constant engagement of students through project work, study tour, assignments- either individually or in

group, report writing and its presentation, model preparation, Internship, discussions and debates.

6) KSCHE should play a pivotal role in the creation of a constantly upgraded Web based contents on each subject and the question bank and the same should be made available to all the colleges in the state.

7) Colleges should develop a system of making the best answers of students available as models for all other students through the college website.

8) Universities should design many Allied courses catering to the needs of different and diverse interests of students; for example, learning for Civil Service and other competitive Examinations, learning Foreign/other Indian languages, learning cross-disciplinary subjects and so on.

POLICY RECOMMENDATIONS:

1) Government as a policy may replace the present 3-year Undergraduate Degree program in general subjects with the proposed skill infused Choice Based Credit System.

2) Government may enforce the implementation of Lecture-Tutorial-Practice (L T P) structure as a Teaching Learning model with continuous assessment in a Credit Based System.

3) A work load of one teacher to sixty students (1:60) for theory and 1:15 for tutorial/ practical classes need to be adopted for ensuring Quality in Higher Education.

4) Government may have to increase the number of merit cum means scholarships, introduce fee waiver and also offer other types of assistance to the needy students coming to Higher Education like the introduction of earn while you learn scheme.

5) Government may introduce Remote Learning Scheme in viable subjects through ICT infrastructure.

Rabindranath Tagore, first non-European and Indian to win the Nobel prize for literature in 1913, whose compositions were chosen by two nations as national anthems, India's "Jana Gana Mana" and Bangladesh's "Amar Shonar Bangla", and Founder of Visva-Bharati University, held profound thoughts on Education needed for India, comprising practicality of education and skills. Another great thinker of modern India and mentor for many well-known Indians and foreigners, Swami Vivekananda, stresses the importance of skills and character in his much-quoted saying: "We want that education by which character is formed, strength of mind is increased, the intellect is expanded, and by which one can stand on one's own feet".

According to Rabindranath Tagore, teaching should be practical and real but not artificial and theoretical. As a naturalist out and out, Tagore laid emphasis on the practicality of education that will definitely increase the creative skill within a learner. That creativity will bring perfection in the learning process and the student will be a master in his own field but not a slave to mere theoretical knowledge which one delves deep. Tagore attached great importance to the fine arts in his educational curriculum. To him, game, dance, music, drama, painting etc. should form a part of educational process. Students should take active part in these finer aspects of human life for these are very essential to enrich soul.

Swami Vivekananda stresses the importance of skill at all levels and he gives expression to this in his immortal quotation: "Let New India arise - out of the peasants' cottage, grasping the plough; out of the huts of the fisherman, the cobbler, and the sweeper. Let her spring from the grocer's shop, from beside the oven of the fritter-seller. Let her emanate from the factory, from marts, and from markets. Let her emerge from groves and forests, from hills and mountains..."

India's higher education system is the third largest in the world, after China and the United States. Restructuring and Revitalizing Education System in India, in general, and Karnataka, in particular, is of utmost importance to reduce unemployment, to impart skills to general graduates (Arts/Sciences/Commerce), and also to seize mass employment opportunities in emerging areas that are around the corner. These emerging areas include: retailing, food processing, hospitality and tourism, IT-KPO and BPO that include store management, buying, merchandising and central management; Food Processing Industry and Packaging; Maintenance and Servicing of equipments; Interior Decoration, Landscaping, Floriculture; Travel Industry; Hospitality; Printing, Digitization and Storage of Documents; Packaging; Translation and Transcription; Infotainment and Edutainment; Advertisement, Journalism; Regional Service and Support Centres; Facility Management; Security Management, and many more.

It is essential for us to know the current thought processes going on around education in an international organization like UNESCO. As an international laboratory of ideas and a platform for dialogue, UNESCO has initiated a process of rethinking education in the light of global societal transformations since 1970's.

UNESCO's vision on education outlined in the two landmark UNESCO publications, Learning to Be (1972), or the 'Faure Report', and Learning: The Treasure Within (1996), or the 'Delors Report'. The Delor's Report based in the context of Globalization and needs of the 21st century emphasizes on Four Pillars of Learning that are known as follows:

1. Learning to Know   2. Learning to Do   3. Learning to Live Together and 4. Learning to Be.

The four pillars of education cover different aspects of the type of education needed in the 21st century:

1. Learning to know: This suggests combining a sufficiently broad general knowledge with the opportunity to work in depth on a small number of subjects. This also means learning to learn, so as to benefit from the opportunities education provides throughout life.

2. Learning to do: This suggests acquiring not only an occupational skill but also, more broadly, the competence to deal with many situations and work in teams. It also means learning to do in the context of young peoples' various social and work experiences which may be informal, as result of the local or national context, or formal, involving courses, alternating study and work.

3. Learning to live together: This suggests developing an understanding of other people and an appreciation of interdependence - carrying out joint projects and learning to manage conflicts - in a spirit of respect for the values of pluralism, mutual understanding and peace.

4. Learning to be: This is about developing one's personality and be able to act with ever greater autonomy, judgement and personal responsibility. In that connection, education must not disregard any aspect of a person's potential: memory, reasoning, aesthetic sense, physical capacities and communication skills.

Irina Bokova, Director-General of UNESCO, in the beginning of 2014 opined as follows: "... Education policy is the ultimate long-term policy – it needs to be visionary, it needs to be strategic...   The world is getting younger every day, and the expectations of young people are rising, for decent jobs, for dignified lives. The world is changing – education must change too. Every woman and man today needs new skills to withstand the pressures of change and to make the most of all its opportunities. This requires education for creativity, education for solidarity and education for sustainability."

The February 2013 meeting of UNESCO held in Paris with the theme **"Rethinking Education in a Changing World"** highlights the following 10 aspects of education for the 21st century:

1. Strengthening the link between education & employment

Low-employment growth as well as requisite skill shortages in educated youngsters are challenging the link between education and employment upon which international, national, and regional development plans and practices have made investment in 'human capital' over the past few decades. Here low-employment growth is a global phenomenon, not easy to solve, whereas skill empowerments are not so difficult at all levels. This needs immediate attention of central and state governments. Thomas Friedman, in his popular and noteworthy book entitled 'The World is Flat' opines as follows : 'The jobs are going to go where the best educated workforce is with the most competitive infrastructure and environment for creativity and supportive Government'.

2. The digital revolution

Education is also undergoing radical transformation as a result of the digital revolution and the rapid development of information and communication technologies and digital media. The transformation has been likened to that of the historical transition from the traditional pre-industrial educational model to that of mass schooling initiated in the 19th century. While in the traditional pre-industrial model, most of what people learned they did through their daily life and work activities, the industrial educational model equated learning – to a very large extent – with schooling. Learning spaces are now undergoing an important transformation.

3. Emergence of new learning spaces

The multiplication and diversification of sources of information, the continued acceleration in the production and circulation of knowledge, combined with the development of new information and communication technologies and digital media, are spurring the emergence of new forms of learning in the context of the knowledge society. These changes in the spaces, times, and relations in which learning is taking place favours the idea of a network of learning spaces where non-formal and informal spaces of learning will increasingly need to interact with and complement formal educational institutions.

4. Role of teachers

While their role in the digital age of learning is evolving, the role of teachers and other learning professionals remains central for the change of mind-set that we seek in our quest for new sustainable models of societal development. No matter how we conceptualize education, the learning professions will play a central role whatever we try to achieve. The role of the teaching profession is therefore crucial. It is very important to address the role of teachers and their role in setting standards for the profession.

5. A humanistic vision of education for the 21st century

While the economic functions of education are important, there is a need to go beyond the utilitarian vision that characterizes education. We should consider the role of education as a means of personal, cultural and social development. This highlights the importance of value-based education. Education is not simply about knowledge and skills, but also about human values, respect for human dignity appreciation of human diversity required for achieving harmony in a diverse world. There is a need to rediscover, and rethink, the humanistic dimensions of education for the 21st century.

6. Knowledge and education as public good

The knowledge commons are an integral part of world heritage, and education is a public good that should be made available to all. While the State has a custodial role for formal education, it is important to recall that the delivery of formal and non-formal education is a collective responsibility that involves families, communities, civil society organizations, private business and other stakeholders. There is a need to rethink the 'educational pact' or the social contract on education.

7. Local knowledge systems and globalization

Due respect must be given to local knowledge systems which are losing out in a global economy based on the dominant industrialized model of knowledge. These systems must be recognized, not only as part of the present, but also by giving them a future and by imagining greater connections between alternative yet complementary knowledge systems and livelihoods and work.

8. Science education

Science education must be rethought beyond the training of specialists. It should include ethical dimensions of the development of science as a contribution to active and responsible citizenship.

9. Holistic Education

Formal education systems tend to emphasize the acquisition of knowledge to the detriment of other types of learning; but it is vital now to conceive education in a more encompassing fashion. Such a vision should inform and guide future educational reforms and policy, in relation both to contents and to methods.

10. Learning beyond the classroom

It is important to conceive education as not being limited to classroom teaching and learning. There is a need to be innovative in imagining mechanisms for learning that are not restricted to the classroom setting. Education cannot be reduced to formal schooling – there is a need to consider the role of non-formal education and informal learning.

Keeping in view the essence of the above ten aspects highlighted by UNESCO for the education in the 21st century, the Committee is of the opinion that an over all change needs to be initiated in our Under Graduate pattern of education. If we want to produce graduates who are ready to be employable, many changes are required to be made in the entire set up of our U G education.

We have to make our Higher Education attractive with equity and excellence. The students should have the freedom to select the subjects of their choice and this requires lot of flexibility in our university admission regulations. Students coming to higher education are from all types of socio-economic background and these persons require proper counselling not only about the selection of subjects but also about the career opportunities. Such counselling should be inbuilt in to the system. The information needed to the students with regard to selection of subjects and career opportunities should also be made available to the students through web based information system. Career guidance information has to be created in each college and it should be made available in the website all the time.

The colleges should adopt plenty of innovations in the teaching-learning processes. It is essential to create content in the digital form and it should be made available to the students through the college website. Video lectures of eminent scholars developed by the affiliating university or those that are available in the You Tubes should be made accessible to all the students. The system of making the best answers of some students available to all other students, creation of question bank in each subject, availability of case study reports and reference books should be adopted in the college.

Affiliating university will have to adopt proper regulations to engage the students continuously in academic programmes. For example apart from the class work there should be project work, seminar, group discussion, group assignments, problem solving sessions and mock interviews organized with the help of industrialists. There should be scope for peer teaching in which good senior students are given opportunities to teach juniors. There should be a system of tutorials for the weak learners, bridge courses for persons coming from different inadequate academic background.

UNEMPLOYMENT VIS-A-VIS SKILLED WOKERS

The previous 2011 census of India indicates that about 17% of India's graduates are unemployed. They are about 44.5 million in number. India also faces a shortage of about 45 million skilled workers. This is a paradox. Have Indian Universities failed the youth? Many say an emphatic Yes! For long the Indian education system has focused as knowledge as an end itself, that is knowledge delinked from skills and work. A modern economy has no use for such knowledge. India aims to grow at more than 10% over the next decade, and for this skilled labour force is of utmost importance.

It is not true that knowledge was not there earlier. Knowledge has been there all through. A nation which has the capacity to generate knowledge, and convert the knowledge into a Product or a Process or a Service has the strength of converting knowledge into wealth. This requires various types of skills. The knowledge is generated in the fertile minds of young people. Young people can have fertile minds only if we give them the right type of teaching and training through education. This is how Education, Knowledge, Skill, and Wealth of a State and the nation get linked.

In the background of all the above, the committee studied in detail the existing higher education pattern in the State of Karnataka, carefully observed the lacunae in the system and evolved a new learning pattern which emphasizes the infusion of skill.

VI. HIGHER EDUCATION AND SKILL DEVELOPMENT IN KARNATAKA

1) THE EVOLUTION OF UNIVERSITY EDUCATION IN KARNATAKA

Karnataka state, before 1960, had only two universities viz University of Mysore located at Mysore and Karnataka University located at Dharwad. The pattern of undergraduate programmes was not identical in these two universities. After 11 years of school education and two years of Intermediate education the students had opportunity to study degree programme in the universities. University of Mysore was offering Honors Courses in Science and Arts including Humanities subjects at Central College Bangalore and Maharaja College Mysore respectively. These Honors courses of three years duration were followed by one year Masters' degree programme. However two year U G programme was offered in all the degree colleges affiliated to University of Mysore. The students after getting degree of two year duration had an opportunity to have a lateral entry to Honors course at the second year.

Even though Karnataka University was also offering undergraduate and post graduate programmes in Arts and Science the pattern was entirely different from that followed by University of Mysore. After 1960 University of Mysore discontinued offering three years Honors degree and one year Masters programme. The University introduced two year Masters Degree programme for those who are completing two year degree programme. The degree programme was offered with three subjects of equal importance. The students had the opportunity to choose one of the subjects for their P G studies.

Later on, when the Pre-University course was changed from two years to one year, the duration of the degree programme was changed to three years by offering instead of three subjects (called Major Subjects or Optional Subjects) of equal importance only two major subjects of equal importance along with one minor subject. The minor subject would end after two years of study and only major subjects were studied in the third year. The students could pursue their PG studies in one of the Major subjects but not in Minor subject.

Subsequently when 10+2 school and higher secondary school system was adopted, the three year degree programme with three subjects of equal importance was introduced and this pattern became common in all the universities in the state as it was there in the entire country.

It is well established that higher education is the most essential and powerful tool to build knowledge based society for the future. Higher education in the state of Karnataka is going through a phase of tremendous expansion in terms of huge increase in the volume of students. This expansion is slightly imbalanced in the state. This is because quite a good percentage of merit students seek admission to professional courses irrespective of their

16

aptitude. Unfortunately students of less merit get admitted to general degree courses both in science and social science. Subjects like Physics, Chemistry, Botany, Zoology, Bio-Technology, Mathematics, Economics, Sociology, Psychology, Philosophy, Political Science, Languages, etc. are not getting students of high merit. Added to this much is desired to be done in the teaching-learning process adopted in our degree programme and the exposure of our students to acquire additional skills needed by them to get employment and to face the external world. In the system of lecture based teaching and evaluation of the knowledge of the students only at the end of the year through a test for three hours it is not possible really to test the level of knowledge of the subject acquired by the students. This method of teaching-learning and evaluation also does not help the students to develop communication skill, leadership qualities, sensitiveness for societal issues, ability to work together and above all to develop finer aspects of human life as these are very essential to enrich soul, as visualized by great Indian and Foreign thinkers and Educationists.

Further, the present system of undergraduate education offers no scope to give credit to the talents of the students in areas of sports, yoga, cultural and extracurricular activities like, music, drama, dance, debate, oratory, etc., achievements in in NSS, NCC, Scouts activities and so on.

In addition, the globalized era has necessitated inculcation of competitive spirit at all levels. This can be achieved only by bringing quality of highest standards to every sphere of work. Therefore the Quality of higher education has become a major concern.

2) SKILL DEVELOPMENT IN KARNATAKA

Higher education and skill development are essential elements for the progress and development of any society. In the Karnataka context, this is particularly the case as the State strives towards achieving a knowledge society as outlined in its Vision 2020.

While Karnataka is considered a hub for institutes of higher education and research, much needs to be done to enhance the overall educational and skill levels of the population. As per the 61st Round of NSSO survey, only 3% of rural population and 16% of the urban population have a degree, diploma or a certification in Karnataka. This suggests that a significant section of the State's population has not pursued higher education, nor been formally certified for a skill. Additionally, a survey conducted by the Ministry of Labour, Government of India indicates that the share of the population in Karnataka with diplomas, graduate degrees or higher levels of education is only 7.5%.

In terms of the distribution of enrolment in graduate degree courses, 38.8% of enrolment is in Arts, followed by 21.2% in Commerce and 19.8% in Engineering/ Technology/ Architecture/ Design. At the post-graduate level, 35.4% of enrolment is in the Arts stream, while 21.6% is in Medicine and 27.6% in Science courses. These are shown in Figure 1.
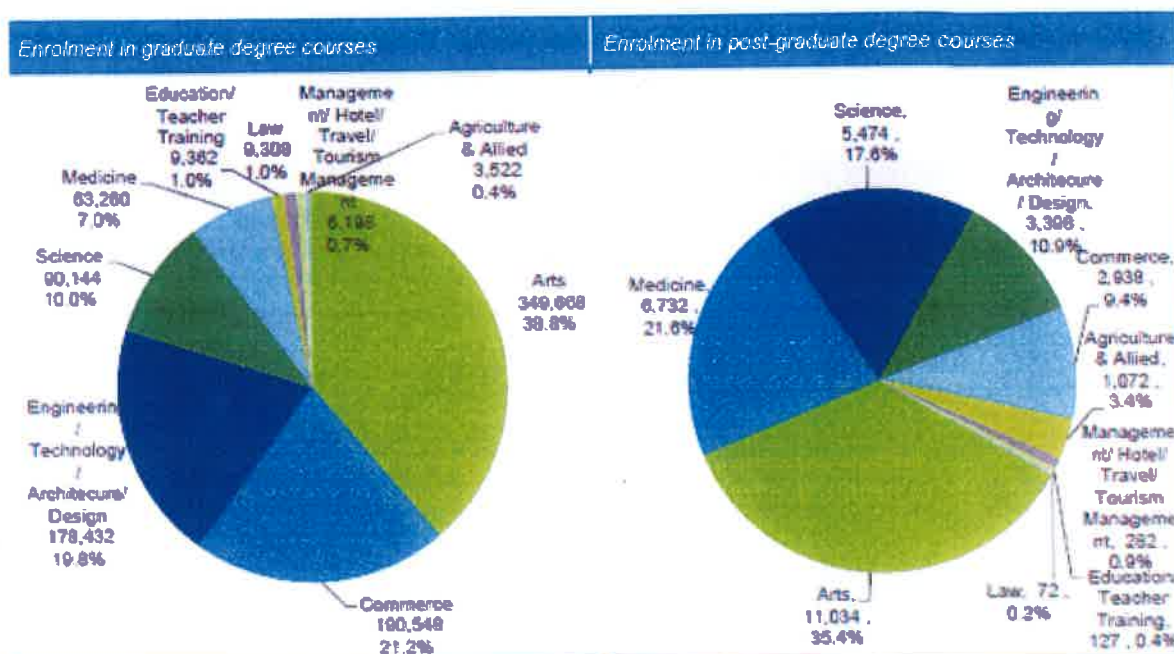
Source: Statistics of Higher & Technical Education 2009-10 (Provisional), MHRD, GoI

Figure 1. Enrolment in graduate and post-graduate Degree courses in Karnataka (2009-10)

The low levels of skill the population in Karnataka is an area of concern. The skill mismatch is a feature amongst graduates of higher education institutes in Karnataka State. The Karnataka Expenditure Reforms Commission has highlighted the fact that the employability of graduates is not satisfactory, primarily owing to the lack of required language and job skills. The lack of sufficient industry-academia linkages is a contributory factor towards this situation. Additionally, placement services activities in many universities are very limited resulting in a lack of co-ordination between employment seeking graduates and prospective employers who are looking for suitably qualified candidates.

The issues of skill mismatches and educated unemployment in Karnataka are illustrated by the fact that unemployment rates for educated persons in the State over the age of 15 years are as high as 27% in rural areas and 48% in urban areas. These rates are particularly high amongst women.

Our earnest effort should be to move towards the final objective of generating the finest breed of citizens equipped with knowledge and skill-talent to serve the society.

Keeping these goals and objectives in mind, the committee introspected critically on the following issues:

(i) present practice of compulsion upon students to memorize,

(ii) lack of critical assimilation and comprehension by the students,

(iii) failure in transforming the learners as knowledge practitioners,

(iv) empowerment of the learners to acquire skills and talents so that they can become knowledge practitioners,

In pursuit of addressing the above issue, there is a need to revive the pattern of our Higher Education system so as to address many key aspects that are listed below:

- Lack of freedom to select subjects of interest for study

- Exam-oriented Teaching and learning

- Focus on acquiring knowledge rather than learning

- Requisite skills are not imparted to students

- Dominance of Rote learning

- Homogeneous system doesn't cater to multiple learning styles and disabilities

- Social pressure on learners, leading to high rates of teenage depression and suicides

- Lack of ease in transferring credits from one University to another

- Shortage of competent and well-trained teachers

- Outdated modes of teaching

- Obsolete methods of teacher training

- Inequities at all levels

- ethnically diverse state

- Politicization of education

- Absence of any structured research in pedagogy

- Teaching/learning not based on any sound research

- Knowledge gap between rural and urban learners

- inability to address job needs in the curriculum

6) JOB POTENTIAL

For 2010, it was estimated as follows: Retail creates 2.5 million direct jobs and 2.5 million indirect jobs; Food Processing needs 1.6 million; IT Sector creates 1, 50, 000 direct jobs; and BPO needs 3,60,000. Hotel and Tourism creates more than 3 million jobs by 2015. Current requirements in industry and skill set available in our educated mass are not at all matching. This is the time to open up and revitalize our education system.

Such being the case, it is essential to empower our graduates with skills in their areas of interest, and their capability based on the type of intelligence they possess based on Howard Gardner's Multiple Intelligences. The possible combination of Multiple Intelligence which could be harnessed upon as listed by Howard Gardner are the Body / Kinesthetic Intelligence, the Environmental / Ethical Intelligence, the Logical / Mathematical Intelligence, the Musical / Rhythmic Intelligence, the Interpersonal Intelligence, the Intrapersonal Intelligence, the Verbal / Linguistic Intelligence, and the Visual / Spatial Intelligence.

VII. ACADEMIC REFORMS

In order to impart better quality higher education and infuse skills among our graduates, Academic Reforms are very important. This academic reform should be oriented towards employability and innovation. These reforms should also aim at making the higher education system more flexible to the needs of students and society. Some of the reforms that are needed to achieve the desired aims are :

(1) introduction of Semester system in order to enhance the student- faculty contact hours, to enlarge the curricular space and to support accelerated learning opportunities for all concerned, to accommodate diverse choices of subjects to the dynamic and motivated students. Semester system also helps in reconfiguration and revision of curricula.

(2) Choice Based Credit System (CBCS): This enhances learning opportunities and ability to match students' scholastic needs and aspirations. The importance of CBCS is highlighted in the RUSA (Rastreeya Uchatama Shikshana Abhiyana) document as follows:

"The CBCS eminently fits into the emerging socio-economic milieu, and could effectively respond to the educational and occupational aspirations of the upcoming generations. In view of this, institutions of higher education in India would do well to invest their available resources into introducing CBCS. Aided by modern communication and information technology, CBCS has a high potency to be operationalised efficiently and effectively - elevating students, institutions and higher education system in the country to newer heights."

In the light of the foregoing discussion it has become essential to propose a new pattern of UG programme in order to provide (a) flexibility to the students in the choice of their subjects of study, (b) opportunity to acquire proper skills that are essential for their employability, (c) option to exit from the programme at different stages, (d) opportunity to help the students to get good knowledge in the subject content to make them highly competitive and also (e) an opportunity for the students to pursue higher education in their chosen field of study, (f) help the students to develop their personalities with a balanced Intellectual, Emotional, Social, and Humanistic quotients, (g) opportunity to empower the youngsters with values of Character, Citizenship, Rights and Duty consciousness. The new pattern will have to be naturally different from the existing pattern necessitating total structural reforms.

NEW UGC INITIATIVES

It is heartening to note that both MHRD and UGC are insisting that all the Universities in the country should adopt CBCS pattern in undergraduate and postgraduate programmes. Recently UGC has issued guidelines to all the Universities in the country to adopt CBCS in all the UG programs in the affiliated colleges in addition to semester pattern of study. This CBCS helps the students to choose subjects of their choice for study, learn at their own pace of learning, choose subjects for interdisciplinary studies and also earn extra credits depending upon their capabilities. Keeping in view the spirit of RUSA document, the guidelines of UGC and the points of discussion highlighted above, the Committee proposes a new pattern of UG studies to be adopted in all the colleges in the State of Karnataka.

The present pattern of three subjects of equal importance along with two language courses in addition to the learning of three Courses as directed by the Hon'ble Supreme Court of India, viz courses on Human Rights, Environmental education and Indian Constitution, do not provide adequate space for imparting skill oriented Courses. Therefore there is a need to reduce the existing three subject load and introduce certain essential courses that can provide skills to the students to make them employable. However the three topics suggested by the Supreme Court have to be continued even in the new pattern. In view of these, the Committee after intense deliberations, decided to suggest a system of offering two subjects of equal importance along with a set of Allied Courses. The choice of two subjects should not be made rigid but the system should provide flexibility of choosing the subjects of their choice to the students.

In order to provide wider scope to the students, even in undergraduate colleges, for them to go to higher education all colleges may offer a four year Honors Course with two major subjects along with Foundation courses that will provide skills and also Allied courses. Opportunity should be provided to students to exit after one year earning a Diploma, exit after two years earning an Advanced Diploma, exit after three years getting a BA, BCom or BSc degree and continue in the fourth year choosing one of the major subjects to earn Honors degree in the chosen subject. The courses may be devised to achieve many outcomes like:

1. Demonstrated depth of knowledge in the major subject.
2. Ability to think as a Professional in the subject.
3. Ability to communicate well both orally and in writing.
4. Ability to function in a multi disciplinary setting.
5. Demonstrated depth of knowledge.

In terms of flexibility, the students who exit after one year with exposure to foundation courses will equip themselves for the job profile such as, Junior Customer Service Executive", with two years diploma, the students will be equipped with additional proficiency and skills suitable for a higher profile employment. Similarly, the person with a three year degree will be able to speak confidently in public, exposure to teamwork, team spirit, awareness of basic business skills, analyse business problems, and professional communicative ability and similar qualities essential for employability in corporate sector. The students will have the option to select the allied courses that help them to gain better understanding of the Major subjects and also help them to pursue interdisciplinary research at PG level.

As an example, BSc. with Physics major can have Associated or second major subjects like Mathematics, Biology, Chemistry, Computer Science, Earth & Atmospheric Science and Statistics. This will help students of Physics to pursue research in interdisciplinary areas like Bio-physics, Geo-physics, Atmospheric science and Chemical Physics. The learning in the two major subjects can further be supplemented through a set of Choice Based Allied Courses.

All UG students should acquire a few generic skills, irrespective of the faculty of their graduation, before they get their degree. The skills that are essentials are the skills of

numeracy, computer literacy, problem solving and communication both oral and written preferably in English language. These essential skills are to be imbibed through appropriate Foundation courses and/or Allied courses.

PROPOSED REFORMS

In addition to the setbacks that were brought out in the previous sections, the other major lacunae with the conventional UG programs- BSc,BA, etc., are as follows:
The present system is nonflexible and built upon conventional courses and scheme of evaluation pursued by the University system. The system only churns out a large number of unskilled graduates adding to the number of educated unemployed and underemployed. But the need of the hour is to mould trained manpower in tune with the actual requirement for sustained development. Hence, the current emphasis should be on knowledge, skill development and employability.

In general, a Bachelor's degree program is expected to contain courses which cut across disciplines to provide breadth, cross disciplinary exposure which prepares a candidate to build up confidence through appropriate skill learning to be ready to enter into a job as a beginner/starter along with an elevated level of knowledge acquired in one particular branch of learning.

The presently practised three optional undergraduate programs making a candidate study three different subjects fail to accomplish the objectives as generally expected to happen. It is evident that such BSc graduates cannot become entry level Scientists and cannot hope to become good Scientific Assistants. Similarly BA graduates cannot hope to stand independently on the strength of their knowledge so acquired in their BA studies

The skill sets earned by the learners in these UG programs even in their optional streams is so poor that they cannot confidently offer themselves to take up any entry level jobs. It is also experienced that the life skill-set they ought to have acquired by the time they complete UG studies, seldom is realised. The fact is that these candidates most of the time cannot even confidently be considered for their language abilities in terms of communication skills, documenting skills and such language related skills.

In this backdrop, it now becomes necessary to restructure the undergraduate programmes to include courses of study in a hierarchically graded structure so that a candidate could experience a sort of logical completion in learning process at the end of every year and should gain required skill based confidence to face the world, in addition to shaping himself as an excellent human being.

Accordingly opportunities are built in for lateral exits at the end of respective years and similarly for lateral entries.

Further, in order to improve the depth along with the breadth of study, the number of major optional subjects is recommended to be limited to two against three and to provide an opportunity for a learner to choose choice based allied courses, generally related to Major Optional subjects to enhance the skill expertise.

It is also recommended to encourage single major optional subject based UG programs such as BSc Natural/Biological Science, BSc Chemical Science, BA Social Science, etc., just like existing single major degree courses like BCA, B Com, BBM.

CREDIT BASED TEACHING-LEARNING MECHANISM

A closer look and critical analysis of the existing teaching–learning model reveals that theory classes are more often lecture based and the laboratory/field works have been limited to just routinely implementing the practical procedures. It is high time that we examine critically whether our teaching efforts have been towards making students creative and whether they inspire students to acquire skill and talent based knowledge.

No doubt that the material content passed on to students through lecture classes are rich with information. But, unfortunately, little provision is created for reinforcement of the information through students' assimilation, absorption, and creative utilization of the same in the course of solving problems. Even the knowledge component, present within the information input, is fed to a student through lectures. The student is not challenged to acquire knowledge and to create knowledge as well. It is possible to strengthen these aspects by compelling a student through some drilling/reinforcing tutorial sessions and by encouraging students to design and conduct suitable practical/field/case studies to experience and acquire the knowledge. This approach will facilitate a student to acquire a command over two major components of learning, viz., (i) acquisition of talent and skill required for designing, devising and conducting practical/case/field studies, and (ii) the intelligence to think logically from a research-perspective. This approach enriches the analytical capabilities of a learner. In other words, what is to be appreciated is that students' acquisition of knowledge should be tempered with and tamed by practical experiences. Curriculum content of every subject/paper should have an integrated composition of information, knowledge and skill parameters to be learnt. It is important to note that practical/field studies should not be isolated as independent papers of study. Both theory and practice should be taught in a holistic manner.

Experts recommend reduction of lecture - oriented theory classes and integration of tutorial/practical classes for reinforced learning. The model proposed is phrased as L-T-P structure that focuses on learner-centric-teaching. 'L' (Lecture classes) stands for conventional class room contact sessions. 'T' stands for Tutorial sessions for reinforced learning through participatory discussion/self study/desk work and such other novel methods that make a student understand and assimilate more effectively the contents delivered in the lecture classes. 'P' stands for Practice/Practical sessions for laboratory/field studies that equip students to acquire the much required skill component.

It may be possible in some specific papers to fuse together T & P components or to drop either T or P component depending upon the nature and content of the paper. For example, in teaching a paper on Ancient History, visiting Archaeological sites makes a Tutorial learning, but it may not warrant an explicit Practical component. However, it cannot be ignored that both knowledge and talent for skills are picked up by the learner through T and/or P sessions whereas L sessions highlight the contents to be learnt.

Tutorial sessions should be more ICT based. Web enabled/interactive tutorial sessions should be designed. As far as possible, assessments in all such tutorial performances should also be ICT enabled. Further the tutorial sessions should enable the students to acquire skills for creating opportunities for themselves.

In a semester pattern, the task of teaching a course is completed in a span of 16 weeks. If a course is taught by administering all three L, T & P components, one possible distribution of learning hours/week in that course could be as follows:

L: Two sessions each of 1 Hour/week amounting to 2 credits of learning/semester by a student in the course;

T: One session of 2 Hours/week amounting to 1 credit of learning per semester by a student in the course;

P: One session of 2 Hours/week amounting to 1 credit of learning per semester by a student in the course.

This distribution of 2 credits for L (2 Hrs of Lecture classes), one credit for T (one session of 2 hours of tutorial) and 1 credit for P (one session of 2 hours of practical) defines a value of 2+1+1 = 4 credits for the course.

Conversely, if a course in a particular semester is defined as a 4 credit course, then a candidate is said to have earned 4 credits in that semester by successfully completing the said course within the duration of 16 weeks in that semester. The typical L-T-P structure, as illustrated above for a 4 credit course is of 2:1:1 type with the split up for L, T and P sessions as indicated in the previous paragraph, resulting in a credit value of 2+1+1=4 for that course.

It is not necessary that every paper should be designed as a paper of credit value 4, in a 2:1:1 pattern. It is possible that even a paper of 4 credits, in practice can have different credit patterns such as 3:0:1 or 3:1:0 or 2:1:1 or 2:2:0 or 2:0:2 or 1:1:2 or 1:2:1 or 1:0:3 or 1:3:0 in L:T:P structure. These diversities illustrate the amount of flexibilities possible in designing a course/paper and in deciding how the contents of the course/paper should be taught/ learnt.

Depending upon the volume of content and the nature of the course to be taught, generally the papers can be of 3 credits or 4 credits, and occasionally, there may be some papers of 2 credits and rarely of 5 credits. In order to motivate the students to participate in creative activities through independent thinking and researching, a project work of 4 credits may also be included in the course work.

PROVISIONS FOR LATERAL EXIT & LATERAL ENTRY TRANSITIONS

In the proposed new system, a learner shall be provided with different possible transition provisions. One can leave at the end of first year/second year/third year and similarly one could report to second/third year after a gap in between (but not exceeding the

double duration norm in one stretch from the date of joining). After exiting, a candidate is entitled to receive Diploma/Degree certification as illustrated in the schematic diagram shown in Fig.2.
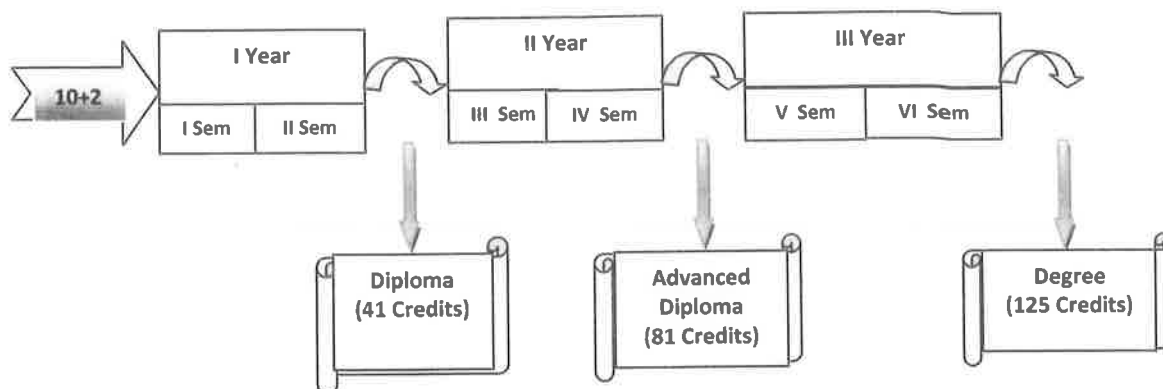
Fig.2 Schematic Diagram illustrating the Transition provisions

CREDITS PER SEMESTER & TOTAL NUMBER OF CREDITS:

A candidate can enroll for a maximum of 30 credits per Semester including:

i. dropped courses of corresponding semester(s) of previous year(s), if any.
ii. additional courses from the list of allied courses/choice based subjects.

Only such candidates who have earned the stipulated 125 credits by the end of the 6th semester, completing the six semesters in succession from the date of his/her admission to first semester shall be considered for declaration of Ranks, Medals, and Prizes.

A candidate admitted to UG program can exercise an option to exit with respective Diploma / Advanced Diploma at the end of second semester /fourth semester respectively as stated earlier.

ADD-ON FACILITIES:

At the completion of degree, if a candidate has earned a minimum of 20 extra credits from additional courses (i.e. in excess of the usual 125 credits as stipulated for awarding the degree), then such a candidate will be eligible for ADD-ON Certificate and in case of minimum of 40 credits from additional courses, a candidate will be eligible for an ADD-ON Diploma in addition to Degree.

The proposal is to start three year undergraduate degree programme with options to exit after earning 41 credits stipulated for 1st year (1st and 2nd semester) to earn a Diploma, or after earning 81 credits stipulated for 2 years to earn Advanced Diploma, or after earning 125 credits to earn Bachelor's degree.

The general pattern is to offer a **three year under-graduate degree programme with any two subjects of equal depth in content for three years with CBCS system.** These two subjects need not be always limited to one Faculty; they can also be from related Faculties such as Economics and Mathematics, Zoology and Anthropology, Human Development Studies and Psychology, Geography and Geology etc. All the three years, students will select different allied subjects along with the other two core subjects of equal depth. The **Courses of Allied subjects are to be decided to help the students to acquire skills that are required to make them become eligible for employment.** There should be freedom to the students to choose the Allied courses offered in the college. **Hence there should not be any fixed combination of subjects to be studied by the students.** The list of Courses of Allied subjects should be prepared by the concerned Board of Studies in each university. A suggestive list of probable **Allied Subjects** that can be offered to the U G students is placed in the next section. The general structure of the education imparted by the university should include the Practical components, Exposure to field work, Innovations, and Entrepreneurship.

A LIST OF DISCIPLINE-WISE ALLIED SUBJECTS (Suggested, but not limited)

The allied subjects that can be offered to the under-graduate students can be drawn, discipline-wise from the following list. Based on the region where the college is located, interest of the student, availability of the jobs, and the training facilities, the students can select the allied subject.

ARTS FACULTY

ECONOMICS: Financial Advisory & marketing, Awareness of LPG, value addition strategies, poverty reduction strategies, Public distribution network, Participatory micro-plan,

POLITICAL SCIENCE: Panchayat Raj governance, Rural leadership, Electoral duties, Concepts of forming world government, Adult Education, Educating Panchayat members,

SOCIOLOGY: Community & health, Establishing communal harmony, Dalit and tribal welfare, Population education, Social conflict resolution, Spiritual unification of the world, Building Team spirit, multi-religious meetings,

HISTORY: Tourism & Hospitality, Promotion of Art and culture, Promotion of good traditions, Awareness of historical mistakes, and bad traditions, Archaeology, Preservation of Art pieces & monuments,

GEOLOGY: Surveying of earth resources, Remote sensing data applications, Wasteland development, Identification of soil & rock types

REGIONAL LANGUAGE: Language skill- written & oral, Promotion of the importance of mother tongue, DTP in local language, Poetry, story, & article writing, Translation, Film appreciation,

ENGLISH: Spoken English, Language skill-written & oral, DTP in English, Enhancement of communication skill, Art of English teaching, Poetry-story-article writing, Film appreciation, Translation to regional languages,

PSYCHOLOGY: Personality Development & Interpersonal skills, Counselling, Value inculcation, Personality development, Meditation, Yoga,

JOURNALISM: Promotion of Rights & Duties, News-item writing, Video making, Managing News & Views,

PHYSICAL EDUCATION: Recreation & Fitness, Promotion of Sports & Games, Spreading Gymnasium culture,

COMMERCE FACULTY

COMMERCE: Auditing, Accounting, Sales management, Banking & Finance, Retail skills, Gems & Jewellery, Furniture & Furnishing, Managing of Cooperative Societies, Agricultural product distribution Network, Export of agricultural products, Micro credit management, Micro enterprises, Rural entrepreneurship, handmade paper making, Toy making, Glass blowing, Pottery, Servicing,

SCIENCE FACULTY

CHEMISTRY: Chemicals & Pharmaceuticals, Pharmacist course, Awareness of safe drinking water, Fluoride toxity prevention & control, Oil extraction, Rural water supply & sanitation, Herbal products, Food processing, Soap making,

MATHEMATICS: Numeric ability, Promotion of Importance of Maths, Promotion of Reason & Logic, Highlighting importance of Maths in Computers,

PHYSICS: Optometry, Awareness of the physical world, Physics & Metaphysics, Wiring & lighting, Electronics servicing, renewable energy sources.

BOTANY: Training in horticulture, Floriculture, Biotechnology and its applications, Mushroom cultivation, Sustainable agriculture & organic farming, Jatropha cultivation, Bio-diesel plant cultivation, Waste harvesting for manure,

ZOOLOGY: Clinical Biology, Bee keeping, Training in vermiculture & sericulture, Vermi-composting, Training in fish breeding ,Ornamental fish breeding, Cattle rearing, Poultry farming, Maintenance of pets, Animal waste harvesting for manure,

ENVIRONMENTAL SCIENCE: Environment pollution & prevention, Rain water harvesting, Watershed management, Waste water recycling, Culture of cleanliness sanitation, Plastic free environment, waste management, recycling of waste.

HOME SCIENCE: Fashion Technology, Beauty therapy, Restaurant services, Dietetics, Bakery, Food processing, Tailoring, Fruits & Vegetable preservation, Preservation of Cooked Food, Embroidery, Natal Care, Childcare, Ikebana, Maintenance of Pets, First Aid and simple treatments, Textile.

COMPUTER SCIENCE: Information technology, Graphic design, Computer literacy & training, Computer servicing, Use of mother tongue & computers, Computer networking, animations.

ELECTRONICS: Medical Instrumentation, Electronics Sevicing, Mobile servicing, X-ray technician, Electronics & IT Hardware.

IMBHA (Integrated Mind, Body, Heart Activities)

We are all one entity with three aspects: Body, Mind, and Heart. Each has its needs. Each part of us needs to honor, respect, and work in an integrated way with the other parts in order that each gets its needs. Heart cannot stay detached from Mind or Body. Mind cannot ignore Heart or Body. Body has a duty to Mind and heart. Our Body, Mind, and Heart should work in an integrated fashion to achieve a unique purpose of life.

The Body is a complex machine designed by nature to house the Mind and Heart. It interacts with its surrounding through the sense of sight, smell, taste, touch, and hearing. The senses should be used to support the trinity of Body, Mind, and Heart, guiding us to the things that are in harmony with our path of life or that are good for achieving the purpose of life. The needs of the Body at the basic level are food, water, clothing, and shelter. At the Second Level, it needs to be healthy, to feel well, to feel good, to be pampered, and to be touched. The needs of the Mind, at the basic level, are control, safety, and security. At the Second Level it needs to be loved, to be connected, and to be enabled to achieve self-actualization. The needs of the Heart are-to be loved, to be known, to be recognized, to be accepted as existing. At the second level, the needs of the Heart are-to be blissful, to be peaceful, to become whole, to know itself, and to find wisdom.

In this technological era, we have turned more to logic and reasoning alone without using our natural instinct or the inner guidance of the Heart for making major decisions in our lives. When this happens we start to make compromises in life, taking decisions as dictated by our Head, completely ignoring the Heart which results in improper and sometimes inhuman decisions resulting in loss of feeling of fulfillment and true happiness. As a result, many youngsters suffer from disorders like worry, anxiety, depression, boredom, and unhappiness, which sometimes leads to acts of suicides. In order to get back into a balanced life, the remedy is to interconnect seamlessly Head and Heart in the foreground of a healthy Body.

Harmony of Body, Mind, and Heart is the key to ultimate wellness and happiness, and as such, attaining this balance should be an important goal for every individual. However, most of us rarely give it a thought. We talk about living in peace and harmony with others, but very little is said about living in harmony with ourselves. Most people emphasize one aspect over the others. Some are primarily concerned about their body, either making it look good or making it healthy, almost forgetting the welfare of the other two. Some are concerned about Heart and Spirit, and they denigrate their body, learn to overcome physical discomfort, and also denigrate the mind, attributing to it negatives such as selfishness. Some give more importance to active mental activities, almost neglecting the importance of Body and Heart. Generally, in the materialistic world of today most people spend time and effort concentrating on the demands and needs of the Brain and Body, and ignore the Mind and Heart.

We are all placed in this world, not to escape from it, but to deal with the world proactively integrating ourselves with it. A piano that is out of tune cannot produce all the melodious notes. In the same way the piano of our life consisting of Body, Mind, and Heart, which are out of tune, cannot produce melodious music while performing on the stage of life. In order to make this piano of life produce harmonious music, it is essential to integrate Body, Mind, and Heart harmoniously. Harmony is the integration of Body, Mind, and Heart so that all the three work together in an intra-dependence and mutually-beneficial way. Good health and vitality in the body, a grand vision in the horizon of the peaceful mind, and love and empathy in the Heart make a life harmonious, meaningful and glorious.

In other words, there should be a balance of IQ (Intelligence Quotient), EQ (Emotional Quotient), and SQ (Social Quotient). To achieve this balance, it is essential that the young University-students take part in one or more activities involving Sports, NCC, NSS, Physical exercises, Scouts & Rangering, Red Cross, Mental exercises, like Yoga, Mindfulness, General Knowledge, Co-curricular activities, and Voluntary Service to Society.

As education is the development of Body, Mind, Heart, and Skill of a student, Sports admirably serves this purpose. Physical Exercise not only makes one healthier, but also more intelligent. New research has shown that, in addition to causing the release of chemicals called endorphins, responsible for decreased feelings of pain, euphoria, modulation of appetite, enhancement of immune responses, exercises also contribute to the formation of

new connections among the neurons of the brain and even to the formation of new cells. In addition, playing sports improves self confidence, builds team spirit, and makes one happy.

NCC is a very important activity which teaches the young minds the importance of discipline in life, develops the physique of the youngsters, gives the mind necessary self control and a satisfaction of achievement, promotes patriotism, and it teaches leadership as well as good follower qualities.

NSS seeks young persons to help channelize their energies and capabilities towards nation building activities by organizing them into groups of volunteers. It plays a vital role in personality development of the students. It provides an opportunity to devote the time of the students to the service of the nation, inculcation of social responsibilities, and provide creative outlets for the energies of the youngsters.

Yogic exercises recharge the body and facilitate attainment of perfect equilibrium and harmony, promote self-healing, remove negative blocks from the mind and toxins from the body, enhance personal power, increase self-awareness, help to increase concentration, and reduce stress and tension in the physical body.

Many Graduates coming out of our colleges are usually found to have inadequate General Knowledge with regard to national and international current affairs. This gap can be filled up through a paper on General Knowledge under IMBHA.

Students have to be inculcated sense of empathy in their character to be sensitive for societal problems trough organizing Social Service activities. For example, a group of students can take up projects to address illiteracy problems, hygienic issues, etc.

Students should have opportunities to exhibit talent in Creative writing, Debate, Quiz, Music, Dance, Drama, Paintings, and other talents under Fine Arts. These talents can be appropriately assessed for the credit under IMBHA. IMBHA has several components like Sports, NCC, NSS, Social Service, Co-curricular activities, and General knowledge and current affairs. Students have the opportunities to get credits under IMBHA for the talents they exhibit under any one or more of the components. Every course under IMBHA will be a one credit course. A student earns totally 6 credits during 06 semesters at the rate of one credit per Semester, choosing different components under IMBHA.

In summary IMBHA is a course offered in all the six semesters to give academic credits for the talents of the students in the areas of Sports, NCC, NSS, Scouts and Guides, Red Cross, Cultural activities, Yoga, Co-curricular activities and General knowledge.

The general guidelines for the evaluation of Sports & Games, Yoga, NSS & NCC, Scouts and Guides, Co-Curricular and Extension Activities, and Cultural Activities may be adopted by the Universities while working out the courses for all the six semesters for IMBHA as given in –Appendix -IV.

There shall be two types of programs:

I. *Two Major optional subjects contained UG program* in which *the* Graduate Program has multiple exit options and lateral entry.

II. *Single major subject based UG program,* which is a Core Subject Graduate program, leading to specialization in a single major subject with multiple exit options and lateral entry.

The different degree programs are listed below:

Science & Technology Faculty: B.Sc., B.Sc. Home Science, B.C.A., B. Multimedia and Communication, B Lib. Sci. B. FAD, B. Computer Animation, B. Visual Arts, B. Interior Design and Management

Arts & Humanities Faculty: BA, B Fine Arts, B. Performing Arts, B Music. B.A Social works, etc

Commerce & Management Faculty: B.Com, BBM, B. Hotel Management, B. Tourism and Travel Management, B. Finance and Accountancy

PROPOSED SKILL INFUSED NEW LEARNING PATTERN FOR 3 YEAR DEGREE COURSES WITH OPTION FOR MULTIPLE EXITS

Structure
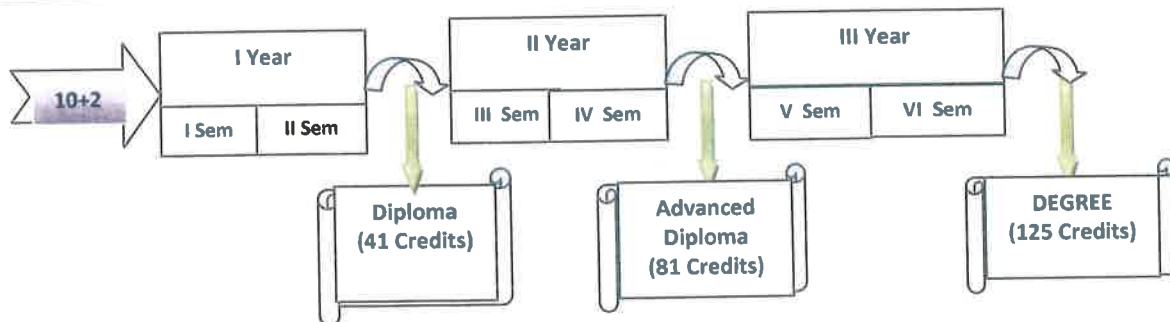
Fig.3 Schematic Diagram for 3 Years Degree Course with Two Major Optional Subjects

PROPOSED SKILL INFUSED NEW LEARNING PATTERN FOR 3 YEAR UG STUDIES WITH OPTION FOR MULTIPLE EXITS

Single Major Optional Subject such as B.Sc in Computer Science or Electronics or BCA in Computer Applications, or B.Com, BBM, etc.

Structure
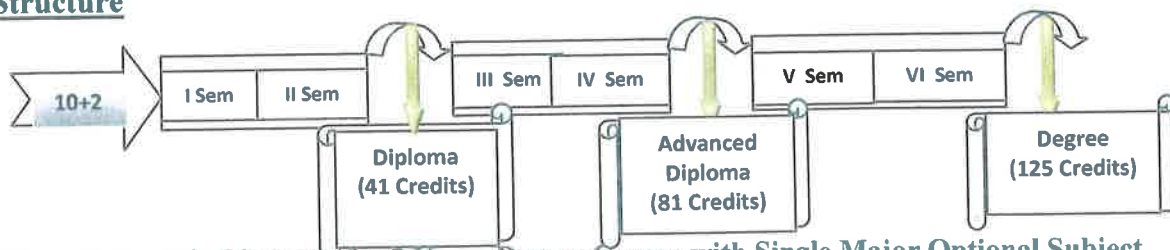
Fig. 4 Schematic Diagram for 3 Years Degree Course with Single Major Optional Subject

The purpose of any reformation in the system of higher education should be to move towards Outcome Based Education. It is the purpose of the Committee to suggest a pattern of higher education to take the present system of Teacher centric education to Learner centric education. In view of this, the Committee has made an earnest effort in addressing the problems that confront the present system of undergraduate programs in our colleges affiliated to different universities in the state of Karnataka. The proposed pattern is expected to accomplish the following:

(a) Reduce the exam-oriented teaching and learning and help the students acquire knowledge rather than mere learning,

(b) Give flexibility in providing opportunities to the students to choose subjects of their liking for their study

(c) Give credit to the talents exhibited by the students in Sports, Yoga, NCC, NSS, Scouts, General Knowledge and current affairs, and Co- curricular activities through IMBHA

(d) Create scope to acquire different types of skills that may help the students become employable at different stages of the degree program through a set of Foundation Courses

(e) Expand the scope for interdisciplinary studies and research through the selection of courses listed under Allied courses

(f) Provide opportunities to students for multiple exits and reentry during the program to suit their personal conveniences and finally

(g) Give credits to the students based on their level of learning instead of awarding marks.

The new pattern has several outcomes like helping the students acquire good depth of knowledge in the major subject and create ability among the students to communicate well both orally and in writing. It helps the students to develop entrepreneurship skills and also think as professionals in the subject. The pattern also helps the students become IT savvy in addition to developing leadership qualities. Of course, the new pattern envisages lots of responsibilities on the part of our faculty whose involvement solely decides the success of the new program or for that matter any program.

X. REGULATIONS FOR 3 YEARS UG PROGRAM INCORPORATING CREDIT BASED CONTINUOUS ASSESSMENT, 2015

1. Title and Commencement:

These Regulations shall be called the **"UNIVERSITY REGULATIONS FOR SKILL INFUSED CREDIT BASED LEARNING AND CONTINOUS ASSESSMENT PATTERN FOR UNDERGRADUATE DEGREE PROGRAM"**.

These Regulations shall come into force from the date of assent of the Honorable Chancellor.

2. The Programs:

There shall be two types of programs:

i. *UG program with Two Major optional subjects* with multiple exit options.

ii. *UG program with Single major subject* which is a Core Subject Graduate Program leading to specialization in a single major subject with multiple exit options.

The different degree programs are listed below:

Science & Technology Faculty: B.Sc., B.Sc. Home Science, B.C.A., B. Multimedia and Communication, B Lib. Sci. B. FAD, B. Computer Animation, B. Visual Arts, B. Interior Design and Management

Arts & Humanities Faculty: BA, B Fine Arts, B. Performing Arts, B Music. B.A Social works, etc

Commerce & Management Faculty: B.Com, BBM, B. Hotel Management, B. Tourism and Travel Management, B. Finance and Accountancy

3. Definitions:

Programme: An educational programme leading to award of a Degree, Diploma or Certificate.

Course: Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. Every course offered will have three components associated with the teaching-learning process of the course, namely:

      (i)   L= Lecture (ii) T= Tutorial (iii) P= Practice, where:

L stands for **Lecture** session consisting of classroom instruction.

T stands for **Tutorial** session consisting participatory discussion / self study/ desk work/ brief seminar presentations by students and such other novel methods that make a student to absorb and assimilate more effectively the contents delivered in the Lecture classes and to orient towards the skill application.

P stands for **Practice** session and it contains of Hands-on-Experience / Laboratory Experiments / Field Studies / Case Studies / Outreach activities/ Project work, / Vocational training/ Viva/ Seminars / Term papers / Assignments / Presentations / Self-study, etc., or a combination of these that equip students to acquire the much required skill component.

Choice Based Credit System (CBCS) means it provides choice for students to select from the prescribed courses (Core, Elective or Minor or Allied or Soft/Hard skills). Under this system the requirement for awarding a Degree or Diploma or Certificate is prescribed in terms of number of credits to be earned by the students.

Credit: A unit by which the course is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (Lecture or Tutorial) or two hours of practical work/field work per week. In terms of credits, every **one hour session of L amounts to 1 credit per Semester** and a minimum of **two hour session of T or P amounts to 1 credit per Semester,** over a period of one Semester of 16 weeks for teaching-learning process. **The total duration of a semester is 20 weeks inclusive of semester-end examination.**

A course shall have either or all the three components. That means, a course may have only lecture component, or only practical component or combination of any two or all the three components.

Grades and Grade Points

Grade: It is an index of the performance of a student in a said course. Grades are denoted by letters as given in the Table below.

Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale.

A 10-point grading system with the following letter grades as given below may be adopted.

The grade and the grade point earned by the candidate in the subject will be as given below.

Marks/Status (M)	Grade (G)	Grade Point (GP = V x G)	Letter Grade
91-100	10	V*10	O
81-90	9.0	V*9.0	A+
71-80	8.0	V*8.0	A
61-70	7.0	V*7.0	B+
51-60	6.0	V*6.0	B
41-50	5.0	V*5.0	C
35-40	4.0	V*4.0	P
Fail	0	V*0	F
Course Completed	0	V*0	CC
Absent	0	V*0	Ab

Table 1. Grades and Grade Points

Here, M is the percentage of marks secured by a candidate in a course which is rounded to nearest integer. V is the credit value of course. G is the grade and GP is the grade point.

Overall cumulative grade point average (CGPA) of a candidate after successful completion the required number of credits (125) is given by CGPA = ΣGP / Total number of credits

Credit Point: It is the product of grade point and number of credits for a course.
The total credits earned by a student at the end of the semester upon successfully completing the course are L + T + P. **The credit pattern of the course is indicated as L: T: P.**

However, it is necessary that every course should have at least L *and* T, *or* L *and* P, or T and P, and preferably all the three - L,T, P.

If a course is of 3 credits then the different credit distribution patterns in L: T: P format could be:

$$3:0:0, \ 1:2:0, \ 1:1:1, \ 1:0:2, \ 2:1:0,$$
$$2:0:1, \ 0:2:1, \ 2:1:0, \ 0:1:2, \ 0:0:3,$$
$$0:2:1, \ 0:3:0,$$

Semester: Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.

Types of Courses:

Courses in a programme may be of four kinds: Core, Elective or Allied, Foundation and IMBHA.

1. Core Course:

There may be core course in every semester. This is the course which is to be compulsorily studied by a student as a ore requirement to complete the requirement of a programme in a said discipline of study.

2. Elective Or Allied Course:

Elective course is a course which can be chosen from a pool of courses. It may be:

1. Supportive to the discipline of study;
2. Providing an expanded Scope
3. Enabling an exposure to some other discipline/domain
4. Nurturing students proficiency/skill

An elective may be "Generic Elective" focusing on those courses which add generic proficiency to the students. An elective may be "Discipline Centric" or may be chosen from an unrelated discipline. It may be called an "Open Elective"

3. Foundation Course:

The foundation courses may be of two kinds: Compulsory Foundation and Elective Foundation Course. "Compulsory Foundation" courses are the courses based on the content

that leads to Knowledge enhancement. They are mandatory for all disciplines. Elective Foundation courses are value-based and are aimed at man-making education.

4. **IMBHA (Integrated mind, body, heart activities):**

It is essential that the young University-students take part in one or more activities involving Sports, NCC, NSS, Physical exercises, Mental exercises, like Yoga, Mindfulness, General Knowledge, Co-curricular, Extra-curricular activities, and Voluntary Service to Society. All these subjects are grouped under IMBHA (integrated Mind, Body, and Heart Activities). IMBHA is a compulsory subject of one credit in all the 6 semesters of Bachelor's Degree course.

'Knowledge' means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. Knowledge is described as theoretical and / or factual.

'Skill' means the ability to apply knowledge and use know-how to complete tasks and solve problems. Skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments).

'Competence' means the proven ability to use acquired knowledge, skills and personal and social abilities, in discharge of responsibility roles. It is the ability to do a job well.

The concerned BoS will choose the convenient Credit Pattern for every course based on the requirement. However, generally, a course shall be of FOUR Credits and occasionally may be of ONE Credit/TWO Credits/ THREE Credits/ FIVE Credits.

Different Courses of Study are labelled and defined as follows:

1) TWO MAJOR OPTIONAL SUBJECT PROGRAM

1	Language Course Regional (LC-R) Contents on the Right side are only suggestive	Language: Kannada/Mother Tongue/One of the languages as listed by the University Prose: Comprising of Essay,Famous Regional- National Personalities\ Fictional stories\Moral Strories\Episodes from epics Poetry: Comprising of Nature, Epic sequences, Morality boosters \ confidence promoters etc. Drama : Aiming at developing and improving communication skills and learning through Role plays. Composition : Comprising of Summary Writing, Proposal Writing.			
2	Language Course International-English (LC-E) Contents on the Right side are only suggestive	Language: English Prose: Comprising of Essay, Famous National-International Personalities, Fictional stories\Moral Stories\Episodes from epics Poetry: Comprising of Nature, Epic sequences, Morality boosters, confidence promoters etc. Drama : Aiming at developing and improving communication skills Composition : Comprising of Summary Writing, Proposal Writing			
3	Foundation Course (FC)	FC-1: Computer Literacy-using Proprietary and Open Source Software,			
4		FC-2: Soft Skills for Employability, Logical reasoning, Emotional Intelligence, Personality development			
5		FC-3: Constitution, Citizen Duties and Citizenship, Human Rights, Civic Sense-Society & Ethics, Environment, Renewable Energy, Go Green			
6		FC-4: Inter-personal Communication Skills such as Customer Service, Behavioural communication, etc.			
7		FC-5: English for International Business Communication			
8		FC-6: Invention, Innovation, & Entrepreneurship including Business Entrepreneurship Management			
9	Optional Subjects S1-Major1 S2-Major2 S3-Related Allied courses	Optional BA Subject Ex: **PS**	B.Sc. Ex: **PM**	B.Sc. Ex: **EC**	BA Ex: **HE**
10		S1 Political Science	Physics	Electronics	History
11		S2 Sociology	Maths	Computer Science	Economics
		S3 -----------------------------Allied Courses ------------------------------------			
12	Integrated Mind, Body, Heart Activities(IMBHA)	Sports & Yoga / NCC/NSS /Social Service / Co-curricular activities /General Knowledge			

Table 2 (a): Subjects in Two Major Optional Program

1	Language Course Regional (LC-R) Contents on the Right side are only suggestive	Language: Kannada/Mother Tongue/One of the languages as listed by the University Prose: Comprising of Essay, Famous Regional- National Personalities \ Fictional stories \ Moral Stories \ Episodes from epics Poetry: Comprising of Nature, Epic sequences, Morality boosters, confidence promoters etc Drama : Aiming at developing and improving communication skills and learning through Role plays. Composition : Comprising of Summary Writing, Proposal Writing
2	Language Course International-English (LC-E) Contents on the Right side are only suggestive	Language: English Prose: Comprising of Essay, Famous National-International Personalities\ Fictional stories\Moral Stories\Episodes from epics Poetry: Comprising of Nature, Epic sequences, Morality boosters, confidence promoters etc Drama : Aiming at developing and improving communication skills Composition : Comprising of Summary Writing, Proposal Writing
3	Foundation Course (FC)	FC-1: Computer Literacy-using Proprietary and Open Source Software
4		FC-2: Soft Skills for Employability, Logical reasoning, Emotional Intelligence, Personality development
5		FC-3: Constitution, Citizen Duties and Citizenship, Human Rights, Civic Sense-Society & Ethics, Environment, Renewable Energy, Go Green
6		FC-4: Inter-personal Communication Skills such as Customer Service, Behavioural communication, etc.
7		FC-5: English for International Business communication
8		FC-6: Invention, Innovation, & Entrepreneurship including Business Entrepreneurship Management
9	S1*	Commerce, Computer Applications (For instance)
11	S3*	Any allied subject
12	Integrated Mind, Body, Heart Activities(IMBHA)	Courses on Sports & Yoga / NCC/NSS /Scouts, Social Service / Co-curricular activities /General Knowledge and Current affairs,

Table 2 (b): Subjects in Single Major Subject Program

3. PROJECT WORK:

The Project work shall be in the theme area of major subject involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problems.

4. ELIGIBILITY FOR ADMISSION:

To be decided by the respective Universities for different streams of study

5. SCHEME

5.1 DURATION:

In view of horizontal and vertical mobility offered in this system, provided with multiple exit points, and the vision of life-long learning, it is recommended that the existing restrictions of duration to complete a degree course, namely double the duration, should be made applicable to the proposed 3 year Degree Course. A student who has exited with Diploma/Advanced Diploma can complete degree at any point of time by seeking readmission. But such a candidate should adhere to prevailing scheme of study.

5.2 EXIT OPTIONS

A candidate can exercise option to exit with a Diploma/ Advanced Diploma /UG degree by completing the stipulated number of credits as mentioned below in table 3 and as detailed in table 3(a) and table 3(b)

Exit	At the end of	Credits to be completed
Diploma	Earning 41 credits stipulated for 1st year	$(8*2)+(6*3)+5+2 = 41$
Advanced Diploma	Earning 81 credits stipulated for 1st & 2nd year	$41 + 40 = 81$
BSc/BCA/BA/BCom/BBM(UG)	Earning 125 credits	$81+ 44 = 125$

Table 3: Exit Options

5.3 A candidate has to earn 125 credits for successful completion of degree with the distribution of credits for different courses as given in **Table 3(a) for Two Major Optional degree and Table 3(b) for Single Major degree.**

Two Major Optional Subjects Program												
Subject	**I**	**II**	*Diploma*	**III**	**IV**	*Advanced Diploma*	**V**	**VI**	*UG*			**Pap ers**
LC-E	3	3	6	3	3	12		-	12			4
LC-R	3	3	6	3	3	12	-	-	12			4
FC	3	2	5	2	2	9	2	2	13			6
S1	4	4	8	4	4	16	4+4	4+4	32			8
S2	4	4	8	4	4	16	4+4	4+4	32			8
S3	3	3	6	3	3	12	3	3	18			6
IMBHA	1	1	2	1	1	4	1	1	6			6
Sub Total	21	20		20	20		22	22				
Total			41			81			125			42

*Assuming S1 and S2 to be the major subjects and S3 is Allied Subject

Table 3(a): Credits and Exit Options in Two Major Optional Subjects Program

Subject	I	II	Diploma	III	IV	Advanced Diploma	V	VI	BSc	Papers
LC-E	3	3	6	3	3	12		-	12	4
LC-R	3	3	6	3	3	12	-	-	12	4
FC	3	2	5	2	2	9	2	2	13	6
S1	8	8	16	8	8	32	16	16	64	16
S3	3	3	6	3	3	12	3	3	18	6
IMBHA	1	1	2	1	1	4	1	1	6	6
Sub Total	21	20		20	20		22	22		
Total			41			81			125	42

Table 3(b) : Credits and Exit Options in Single Major Subject Program

5.4 A candidate can enrol for a maximum of 30 credits per Semester including:

    I.   **Dropped Courses** of corresponding semester(s) of previous year(s), if any:

    II.   **Additional Courses** that are Allied courses/Choice based papers

5.5 Only such candidates who register for a minimum of 16 credits per semester and complete all the 125 credits prescribed for the degree programme in six successive semesters shall be considered for declaration of Ranks, Medals, and Prizes.

5.6 Generally a full-time candidate may register for 20-22 credits per semester.

5.7 A candidate admitted to UG program can exercise an option to exit with respective Diploma / Degrees as described in Table 2.

5.8 ADD-ON FACILITIES

a) At the completion of degree, if a candidate earns a minimum of 28 credits extra from additional courses (i.e. in excess of the usual 125 credits as stipulated for awarding a degree), then such a candidate will be eligible for ADD-ON *Graduate Diploma in addition to degree.*

(b) At the completion of Degree/Honors Degree, if a candidate has earned a minimum of 20 extra credits from additional courses, then such a candidate will be eligible for an ADD-ON Diploma.

(c) However all other candidates who have earned extra credits less than 20 will obtain ADD-ON certification as applicable.

The evaluation of the candidate shall be based on continuous assessment. The structure for evaluation is as follows:

6.1 Assessment and evaluation processes happen in a continuous mode. However, for reporting purposes, a semester is divided into 3 discrete components identified as C1, C2, and C3.

6.2 The performance of a candidate in a course will be assessed for a maximum of 100 marks as explained below in I to IV semester and for a maximum of 150 marks from V to VI semesters.

6.3 The first component (C1), of assessment is for 15 marks (I to IV Sem.) 25 marks (V to V1Sem.). This will be based on tests and assignments. During the first half of the semester, the first 50% of the syllabus (unit 1 and 2) will be completed. This shall be consolidated during the 9th week of the semester. Beyond 9th week, making changes in C1 is not permitted.

C1 Split		15 marks(I to IV Sem)	25 marks(V to VI Sem)
Assignment	Unit1	4	8
Assignment	Unit2	4	8
Review test	Unit1, Unit2	7	9

Table 4 (a): Break up of Component -C1

6.3 The second component (C2), of assessment is for 15 marks (I to IV Sem)/25 marks(V to V1 Sem). This will be based on tests and assignments. The continuous assessment and scores of second half of the semester will be consolidated during the 17th / 18th week of the semester .During the second half of the semester the remaining units (unit 3 and 4) of the syllabus will be completed.

C2 Split		15 marks(I to IV Sem)	25 marks(V to VI Sem)
Assignment	Unit3	4	8
Assignment	Unit4	4	8
Review test	Unit3, Unit4	7	9

Table 4 (b): Break up of Component –C2

6.4 The evaluated assignments and answer papers of review tests during Component I (C1) and Component II (C2) of assessment are immediately returned to the candidates after obtaining acknowledgement in the register maintained by the concerned teacher for this purpose. *A minimum of 40% should be scored in (C1+C2)*

6.5 The semester-end examinations will be conducted during the 18th -20th week of the semester. The Theory examinations will be of 2 hours duration for each course in I to 1V semester and of 3 hours duration in V to VI Semester. Practical examinations will also be of 2 hours and 3 hours duration respectively. This forms the third/final component of assessment (C3) and the maximum marks for the final component will be 70 during I to IV semesters and will be 100 marks during V to VI semesters for both theory and practical examinations put together. *A minimum of 35% should be scored in C3*

Note: C1, C2, C3 break-up for IMBHA is as indicated in the tables which follow.

SETTING QUESTIONS PAPERS AND EVALUATION OF ANSWER SCRIPTS

I. Questions papers (for C3) in three sets shall be set by the suitable examiners for a course. The chairman of Board of Examiners (BoE) shall get the question papers set.

II. The Board of Examiners shall scrutinize and approve the question papers and scheme of valuation.

III. a) There shall be central valuation for all theory papers.
b) The examination for Practical work/Project work will be conducted jointly by internal and external examiners. However the Chairman of BoE on discretion can also choose both the examiners from the panel of external examiners whenever the College does not have qualified internal examiners.

IV. Challenge Valuation

A student who desires to apply for challenge valuation shall obtain a photo copy of the answer script by paying the prescribed fee within 10 days after the announcement of the results. He / She can challenge the marks awarded to him/her by surrendering the marks card and by submitting an application along with the prescribed fee to the Registrar (Evaluation) within 10 days after the announcement of the results. This challenge valuation is only for C3 component.

The answer scripts for which challenge valuation is sought for shall be sent to another examiner. The higher of two marks from first valuation and challenge valuation shall be the final.

6.6 In case of a practical examination, it will be conducted with both internal and external

examiners. A candidate will be assessed on the basis of a) knowledge of relevant processes b) Skills and operations involved c) Results including calculation and reporting. The duration for semester-end practical examination shall be 2 hrs for I to IV semester and 3 hrs from V to VIII semester.

6.8 (a) The scheme of study and assessment for the different semesters can be found in the tables below for *Two Major Optional Subjects Program*

2 Major Optional				Continuous assessment			Semester-end assessment			
Sem I, II, III & IV	Code	Cou rse	LTP (Credit Value)	8th week (C1)	16th Week (C2)	Total	Writing	Practical	Total (C3)	Total marks (C1+C2+C3)
1	LC-E		L:T:P = 3	15	15	30	40	30	70	100
2	LC-R		L:T:P = 3	15	15	30	40	30	70	100
3	FC		L:T:P = 3+2+2+2	15	15	30	40	30	70	100
4	S1		L:T:P = 4	15	15	30	40	30	70	100
5	S2		L:T:P = 4	15	15	30	40	30	70	100
6	S3		L:T:P = 3	15	15	30	40	30	70	100
7	**IMBH A**		L:T:P = 1	15	15	30	-	20	20	50

Total 21,20,20,20 credits in semester I, II, III & IV

Table 5 (a): Scheme of Study and Assessment for two Major Optional Subjects Programme Semester I-IV

2 Major Optional				Continuous assessment			Semester-end assessment			
Sem V	Code	Cou rse	LTP(Credit Value)	8th week (C1)	16th Week (C2)	Total	Writing	Practical	Total (C3)	Total marks (C1+C2+C3)
1	FC-5		L:T:P = 2	25	25	50	50	50	100	150
2	S1.1		L:T:P = 4	25	25	50	50	50	100	150
3	S1.2		L:T:P = 4	25	25	50	50	50	100	150
4	S2.1		L:T:P = 4	25	25	50	50	50	100	150
5	S2.2		L:T:P = 4	25	25	50	50	50	100	150
6	S3		L:T:P = 3	25	25	50	50	50	100	150
7	**IMBH A**		L:T:P = 1	15	15	30	-	20	20	50

Total 22 credits

Table 5 (b): Scheme of Study and Assessment for two Major Optional Subjects Programme Semester V

2 Major Optional				Continuous assessment			Semester-end assessment			
Sem VI	Code	Course	LTP(Credit Value)	8th week (C1)	16th Week (C2)	Total	Writing	Practical	Total (C3)	Total marks (C1+C2+C3)
1	FC-6		L:T:P = 2	25	25	50	50	50	100	150
2	S1.1		L:T:P = 4	25	25	50	50	50	100	150
3	S1.2	Project-1/ A Course	L:T:P = 4	25	25	50	50(Project report)	50(final demo & viva)	100	150
4	S2.1		L:T:P = 4	25	25	50	50	50	100	150
5	S2.2	Project-2/ A Course	L:T:P = 4	25	25	50	50(Project report)	50(final demo & viva)	100	150
6	S3		L:T:P = 3	25	25	50	50	50	100	150
7	IMBHA		L:T:P = 1	15	15	30	-	20	20	50
					Total 22 credits					

Table 5 (c): Scheme of Study and Assessment for two Major Optional Subjects Programme Semester VI

6.8(b) The scheme of study and assessment for the different semesters can be found in the tables below for *Single Major Subject Program:*

Single Major				Continuous assessment			Semester-end assessment			
Sem I ,I1, 111&1V	Code	Course	LTP(Credit Value)	8th week (C1)	16th Week (C2)	Total	Writing	Practical	Total (C3)	Total marks (C1 +C2 +C3)
1	LC-E		L:T:P = 3	15	15	30	40	30	70	100
2	LC-R		L:T:P = 3	15	15	30	40	30	70	100
3	FC		L:T:P = 3,2,2,2	15	15	30	40	30	70	100
4	S1		L:T:P = 4	15	15	30	40	30	70	100
5	S2		L:T:P = 4	15	15	30	40	30	70	100
6	S3		L:T:P = 3	15	15	30	40	30	70	100
7	IMBHA		L:T:P = 1	15	15	30	-	20	20	50
				Total : 21, 20, 20, 20 credits in I, II, III & IV semesters						

Table 6 (a): Scheme of Study and Assessment for Single Major Optional Subjects Programme Semester I-IV

Single Major				Continuous assessment			Semester end assessment			
Sem V	Code	Cou rse	LTP(Credit Value)	8th week (C1)	16th Week (C2)	Tota l	Writin g	Pract ical	Total (C3)	Total marks C1+C2+C3)
1	FC-5		L:T:P = 2	25	25	50	50	50	100	150
2	S1.1		L:T:P = 4	25	25	50	50	50	100	150
3	S1.2		L:T:P = 4	25	25	50	50	50	100	150
4	S2.1		L:T:P = 4	25	25	50	50	50	100	150
5	S2.2		L:T:P = 4	25	25	50	50	50	100	150
6	S3		L:T:P = 3	25	25	50	50	50	100	150
7	IMBH A		L:T:P = 1	15	15	30	-	20	20	50
Total 22 credits for each semester										

Table 6 (b): Scheme of Study and Assessment for Single Major Optional

Subjects Programme Semester V

Single Major				Continuous assessment			Semester end assessment			
Sem VI	Code	Course	LTP(Credit Value)	8th week (C1)	16th Week (C2)	Total	Writing	Practical	Total (C3)	Total marks (C1+C 2+C3)
1	FC-6		L:T:P = 2	25	25	50	50	50	100	150
2	S1.1		L:T:P = 4	25	25	50	50	50	100	150
3	S1.2	Project-1/ A Course	L:T:P = 4	25	25	50	50 (Project Report)	50 (Final demo & Viva)	100	150
4	S2.1		L:T:P = 4	25	25	50	50	50	100	150
5	S2.2	Project-2 / A Course	L:T:P = 4	25	25	50	50 (Project Report)	50 (Final demo & Viva)	100	150
6	S3		L:T:P = 3	25	25	50	50	50	100	150
7	IMB HA		L:T:P = 1	15	15	30	-	20	20	50
Total 22 credits for each semester										

Table 6 (c): Scheme of Study and Assessment for Single Major Optional

Subjects Programme Semester VI

6.9 The details of continuous assessment are summarized in the following Table.

Component	Period	Syllabus	Weightage	Activity.
C1	1st Week to 8th Week	First 50% (First two units of the course)	15 marks (I to IV Sem) 25 marks(V to VI Sem)	Instructional process and Continuous Assessment
	First 3 days of 9th Week			Consolidation of C1(By teachers)
C2	From 9th Week to 16th Week	Second 50% (remaining two units of the course)	15 marks (I to IV Sem) 25marks (V to VI Sem)	Instructional process and Continuous Assessment Consolidation of C2 (By teachers) Revision and preparation for semester – end exam
	17th Week			
C3	18th Week to 20th Week	Entire syllabus	70 marks (I to IV Sem) 100 marks (V to VI Sem)	* Conduct of Semester -end Exams
	21st Week to 22nd Week			Evaluation and Tabulation
	22nd Week			Announcement of results
*Examination and Evaluation shall take place concurrently and Final Marks be announced latest by 22nd week				

6.10 A candidate's performance from all 3 components will be in terms of scores, and the sum of all three scores will be for a maximum of 100 marks (15 + 15 + 70) from I to IV semester and for a maximum of 150 marks (25+25+100) from V to VI semester.

6.11 Finally, announcing the results should be completed latest by 24th week of the semester.

6.12   Evaluation of Projects

Right from the initial stage of defining the problem, the candidate has to submit the progress reports biweekly and also present his/her progress in the form of seminars in addition to the regular discussion with the guide. Components of evaluation are as in the tables.

6.13 In case a candidate secures less than 40% in C1and C2 put together in a course, the candidate is said to have DROPPED that course, and such a candidate is not allowed to appear for C3 in that course.

In case a candidate's class attendance in a course is less than 75% or as stipulated by the University, the candidate is said to have DROPPED that course, and such a candidate is not allowed to appear for C3 in that course.

Teachers offering the courses will place the above details in a meeting convened by the Principal of the Institution during the last week of the semester, before the commencement of C3, and subsequently a notification pertaining to the above will be brought out by the Principal of the institute before the commencement of C3 examination. A copy of this notification shall also be sent to the office of the Registrar &Registrar (Evaluation).

6.14 **In case a candidate secures more than 40% in C1+C2 but less than 35% in C3, such a candidate may opt to DROP that course or may opt to appear for C3 examination during the subsequent examinations. In case he/she opts to appear for just C3 examination, then the marks scored in C1+C2 shall get continued. Repeat C3 examinations will be conducted in every semester.**

6.15 **Re-Registration for Dropped Course**: A candidate has to re-register for the DROPPED course when the course is offered again by Department. The candidate may choose the same or an alternative course in case the Dropped Course is a choice based course. A Candidate who is said to have DROPPED project work has to re-register for the same subsequently within the stipulated period. The provision of re-registration is subject to the condition laid down in section 5.4. **The details of any DROPPED course will not appear in the Marks Card.**

Provisional Marks Card: The tentative / provisional marks card will be issued by the Registrar (Evaluation) at the end of every semester indicating the courses completed successfully. This statement will not contain the list of DROPPED courses.

6.16 Final Marks Card: Upon successful completion of Degree a Final Marks card consisting of marks of all courses successfully completed by the candidate will be issued by the Registrar (Evaluation). When a candidate chooses to exit at optional exit points, he/she gets consolidated marks card upto the exit point along with the respective Diploma/Degree

6.17 A candidate can DROP any course within ten days from the date of notification of final results. Whenever a candidate drops a paper, he/she has to register for the DROPPED course as stated in 6.15, subject to the condition laid down in section 5.4.

7. Classification of Results

The final classification of Results after successful completion of the course is as follows.

%	Classification
<55%	Pass Class
55 <= % < 65	Second Class
65<= % < 75	First Class
>=75%	Distinction

Table-7: Results Classification

8. Provision for Appeal

If a candidate is not satisfied with the evaluation of C1 and C2 components, he/she can approach the grievance cell with the written submission together with all facts, the assignments, and test papers etc, which were evaluated. He/she can do so before the commencement of Semester-end examination (and not after the commencement of Semester-end examination). The grievance cell is empowered to revise the marks if the case is genuine and is also empowered to levy penalty as prescribed by the university on the candidate if his/her submission is found to be baseless and unduly motivated. This cell may recommend taking disciplinary/corrective action on an evaluator if he/she is found guilty. The decision taken by the grievance cell is final. For every program there will be one grievance cell. The composition of the grievance cell is as follows.

1. The Registrar (Evaluation) - Ex-officio Chairman / Convener
2. One Senior Faculty Member (other than those concerned with the evaluation of the course concerned) from the same College.
3. One Senior Faculty Member / Subject Expert drawn from outside the College.

9. Work Load

Every teaching hour is treated as 1 hr of work. Every tutorial/practical session is treated as 2 hours of work.

A batch for theory class may have upto 60 students. A batch for tutorial/practical session may have a maximum of 15 students and 1 teacher for supervision.

Eg: If L:T:P structure of a course is 3:1:0 or 3:0:1 and the class strength is 60 then a minimum of 4 batches with 15 students each should be made for tuturoial/practical sessions.Accordingly the workload is (3 hrs of theory) + (2X4=8 hrs of Practical/Tutorial sessions) = 11 hours

If L:T:P structure of a course is 2:1:1 or 2:2:0 or 2:0:2 and the class strength is 60 then a minimum of 4 batches with 15 students each should be made for tutorial/practical sessions. Accordingly the workload is (2 hrs of theory) + (2X2X4=16 hrs of Practical/Tutorial sessions) = 18 hours

10. ANY AMBIGUITY

With regard to any specific case of ambiguity and unsolved problem, the decision of the Vice-Chancellor shall be final.

SOME TYPICAL EXAMPLES:

(a)Single Major Subject program: A typical example showing knowledge, tools and Skills required for B.Sc. (Computer Science) Degree

Semester	Course	L:T:P Credit	Aptitude necessary to learn the subject	Knowledge to be gained	Tools to be learnt	Required skill level to be reached
Sem I-S1	Concepts of computers, information technology and office automation	2:1:1	Interest in technology, Eager to automate manual tasks	Computerized Accounting, Entering And Manipulating data, Anatomy of email , FTP, Basic concepts of computer organization and memory	OS like Windows XP, MS Word, Excel, Access, PPT , Intranet, Internet, VBA	Office Assistant, Data Entry Operator, Back office Assistant, Computer Operator, Helpdesk technician
Sem I-S2	Elements of Electronic and Electrical technology	2:1:1	Basic of Digital Arithmetic, Number systems	Counters And Registers, Data Conversion Circuits - D/A and A/D Converters, Programmable Logic Devices, Microprocessors	na	
Sem I-S3	Applied Math-1	2:1:0		Linear Algebra, Vector Calculus, Differential Equations, Waveforms		
Sem II-S1	Problem solving and programming in C	1:1:2	Keen to solve problems, Back-tracking, Trouble shooting	Fundamental building blocks for solving problems using computers, procedural language concepts	C language, Debuggers	MIS Executive, Manual Tester

Sem	Course	Credits	Prerequisite	Topics	Tools	Job Roles
Sem II-S2	Logic Design	2:1:1	Binary System, Complements, octal and hexadecimal numbers	Boolean Logic, fundamentals of digital logic, Sequential and combinational logic	Microprocessor	
Sem II -S3	Applied Math-II	2:1:0	Applied Math-1	Fourier Series, Fourier Transforms, Evaluation of derivatives		
Sem III-S1	Problem Solving and programming in C++/.NET	1:1:2	Concepts of OOP, Exploiting Reusable techniques in software	Object Oriented Programming, Advanced IDE Concepts, .NET Framework	Turbo C++, C#,VB.NET	Advanced Programmer , Tester
Sem III-S2	Computer Organization & Architecture	2:1:1	Understand salient features of computer system, Assembly level operation of processor	Basic architecture and organisation of CPU Bus and other key components	Basics of UNIX (compulsory)	System Support, Tech Support, System Maintenance
Sem III-S3	Applied Math - 3	2:1:0	Applied Math-2	Probability and Statistics, Stochastic processes, Numerical Methods		
Sem IV-S1	Introduction to JAVA, HTML , Internet &Web	1:1:2	Understand E-Commerce, Business Intelligence	Advanced features of OOB, GUI Programming, Threading, Remote Method Invocation, Website Design	JAVA Enterprise Edition, HTML, JSP	Programmer, Web Developer
Sem 1V-S2	Operating Systems	2:1:1	Knowledge of C and C++,Unix	Process Management, Memory Management, Distributed Systems, Time sharing systems, Compilation linking and loading, UNIX scripting	UNIX and shell scripting	System Support, Tech Support, System Maintenance

Sem 1V-S3	Discrete Mathematics	2:1:0	Applied Math-3	Fundamentals of logic, relations, Coding Theory Groups and Rings , Graphs		
Sem V-S1	Data Structures and Algorithms	2:1:1	Programming strategies, Resource Optimization	Searching ,Sorting techniques, Complexity of Algorithms, Abstract data type implementation, graphs, trees etc.	Implement data structures using C/C++/JAVA	Advanced Programmer
Sem V -S2	Software Engineering	2:1:1	Development, Maintenance, Operation of software and software products	Software processes, SDLC, Legal aspects of Software Engineering, Reliability and Performance of software, Business aspects of Software Engineering, S/W metrics, Risks of Software Engineering	Debuggers, Compilers, Interpreters, Test Generators, MPP	Programmer Analyst, System Architect, System Analyst
Sem V - S3	System Analysis and Design	2:1:1	Fact finding, Decision making, Critical thinking, Testing and Quality Assurance,	Data Modelling techniques, Manage Application Development, Prototyping, System & Integration testing	Simple Object Access Protocol(SOAP) , SSIS/ Informatica / Ab-initio, Web services	Software Architect, Application Engineer, System Analyst
Sem V - S4	Database Management &Query Optimization	2:1:1	DB Management, Develop queries and Reporting techniques	Relational DB Concepts , Query Performance & Optimization, Normalization	MS SQL, SSIS,SSRS	Business Analyst, DB/SQL developer
Sem V - S5	Elective #1	2:1:1	Elective #1	Elective #1	Elective #1	Elective #1

Sem VI -S1	Cloud Computing	2:1:1	Operating Systems, Computer networks	Cloud Computing, Cloud Virtualization, Cloud Models and Solutions, Cloud software environment		
Sem VI -S2	Computer Graphics & Multimedia	1:1:2	Demonstrate use of Interactive multimedia, Automation, Scanned Images	Computer Graphics, Electronic images, Electronic Publishing, Vector based graphics, Interactive multimedia, 3-d Graphics	Hyper-Studio, Netscape, Photoshop	Web / Graphics developer
Sem VI -S3	Elective #2	2:1:1	Elective #2	Elective #2	Elective #2	Elective #2
Sem VI -S4	Project	PROJECT SUBMISSION AND VIVA				
Sem VI -S5						

List of Electives

Graph Theory	Operations Research	Formal Languages and Automata Theory	Data warehousing and Data mining
Analysis and Design of Algorithms	Advanced DBMS	Internetworking with TCP/IP	Parallel Programming Principles
Microprocessor	Entrepreneurship development, Management, IPR		

Additional courses for skill development with the main objective of making our graduates become employable can be offered exclusively on Saturdays by making the regular subject courses to be covered with in five days a week. The courses that can be offered during Saturdays are (1) Customer Service Course (2) one or more courses from the list of courses that can be picked from the website of TAFE SA which offers more than 1000 courses. There are many short term courses.

Degree program consists of 01 major subject in any discipline + 01 minor subject+ 02 Language courses + 01 Compulsory course + Life coping skill courses for two years. The life coping skills are numeracy ability, computer literacy, spoken English, personality development and interpersonal skills and finally Advance Science & Technology; knowledge

XI. CONCLUSIONS

It is well established that in to-day's globalized world, technology and knowledge workers are very important for enhancing the economic development and future growth of a country. In order to create knowledge workers in the field of Science & Technology and Knowledge, we need to have a vision for science and technology and a policy frame work for education and research to be adopted in our institutions of Higher Education. This should begin at our Undergraduate colleges. The new pattern of Undergraduate education proposed in this Report hopes not only to create skilled human resource to meet the demands of industrial sector both in public and private enterprise but also provides scope to pursue inter disciplinary studies in higher education. It has also incorporated the recent guidelines of UGC with regard to CBCS.

It is hoped that adoption of this report will also infuse among the youngsters human qualities, concerns for societal problems and above all, become knowledge workers by bringing down Rote learning. The new pattern will be a robust system of Higher Education that can make Karnataka a pioneer state with many new initiatives. It has been observed that, generally the changes are not accepted easily by our academics. But it is hoped that the entire proposal will be viewed by all the concerned in the larger context of bringing in a new system to train our graduates to become more useful to themselves as well as to the society and country at large.

XII. ACKNOWLEDGEMENT

This report is the result of the combined efforts and collective thinking of a number of academicians. The report has taken into consideration the existing position of the academic system in the various Universities in the State. For this, the Committee interacted with all the concerned stake-holders and target groups of some of the University system. In doing so, the Committee acknowledges the contributions made by many knowledgeable people, groups, and institutions.

The PG and UG teachers, students and non-teaching staff of these Universities have enriched the Committee's perceptions by their experiences, valuable feedback and inputs.

The Chairman and members of the Committee would like to place on record their appreciation and thanks to Hon'ble Chief Minister, Hon'ble Minister for Higher Education, Government of Karnataka, Principal Secretary, Department of Higher Education, GOK.

The committee specially acknowledges the support and encouragement extended by Prof. Pundi Narasimham, Mr. Venkatesh, and their colleagues from Novus STS for their inputs regarding Foundation courses, and Dr. P. Nagabhushan, Professor of Computer Science, Mysore University and Sri M.N. Srinivas, Visiting Faculty, University of Mysore for many useful academic inputs, Dr. Arunkumar Khannur, Chairman & CEO, ISQT Process and Consulting Services for providing details about Skills, and Ms. Preethi Mahadev for proper formatting. The Committee has a deep sense of appreciation for the proactive involvement of the staff of Higher Education Council, Govt. of Karnataka.

XIII. REFERENCES

1. Statistics of Higher & Technical Education 2009-10 (Provisional), MHRD, GOI

2. Innovations for Skills Compendium, National Skill Development Corp.(NSDC)

3. Delor's Report, "The Treasure Within"(1996), UNESCO Publication

4. "Rethinking Education in a changing world", Report, UNESCO Meeting, Paris, February, 2013.

5. Revitalizing Higher Education System in Karnataka to Cater to Mass Employment Opportunities in Different Retail; Food Processing; Hotel and Tourism; IT, KPO and BPO Sectors: By Dr. Arunkumar Khannur, Chairman & CEO, ISQT Process and Consulting Services.

XIV. ANNEXURES

APPENDIX I. POSSIBLE AREAS OF MASS EMPLOYMENT

Possible areas of mass employment are basically of types:

- Skill Centric
- Consumer Centric
- Knowledge Centric

Skill Centric Areas
In Skill Centric areas, opportunities for mass employment are:

- Retailing that includes:
    o Marketing/Advertising
    o Store Operations
    o Loss Prevention
    o Store Management
    o Finance
    o Human Resources
    o IT and E-Commerce
    o Sales and Sales-Related
    o Distribution, Logistics, Supply Chain Management Merchandise Buying/Planning
- Food Processing Industry and Packaging
- Maintenance and Servicing of Equipments
- Interior Decoration, Landscaping, Floriculture
- Printing Digitisation and Storage of Documents
- Packaging
- Translation and Transcription
- Advertisement, Journalism
- Facility Management

Consumer Centric Areas
In Consumer Centric areas, opportunities for mass employment are:

- Regional Service and Support Centres
- Telemarketing

- Tele Services
- Documentation
- Hospitality
- Travel Industry
- Customer Relationship Management
- Ticketing and Travel Support
- Front end Office and Help Desk Management
- Stress Management and Yoga

Knowledge Centric Areas

Skill Centric areas of mass employment are related to IT and IT related which will continue to play a significant role in the economic development of India for years to come. Following are the areas in IT related fields:

- IT, Telecom, Mechatronics, Robotics and Intelligent Control
- Multimedia and Animation
- Infotainment and Edutainment
- Content Management
- Technical Writing
- Software Testing

Above areas are some emerging areas of mass employment.

APPENDIX-II PERSONALITY CENTRIC SOFT SKILLS

The youth power endowed with good education and proficiency in skills become pillars of the economy of a country in the era of globalization. The educational training of the youth should also equip them with the following soft skills:

1. Communication, presentation, and listening ability
2. Cooperative working
3. Inter-personal skills
4. Organizational ability
5. Team building ability
6. Business acumen
7. Diligence
8. Resilience
9. Honesty
10. Obedience
11. Self-motivation
12. Self-awareness
13. Self-control
14. Awareness of 'personal-good' and 'social-good'

APPENDIX-III SPECIAL SOFT SKILLS FOR BUSINESS

Following are set of Soft skills that we need in Retail, Food Processing, KPO, BPO:

- Basic English, Business English, Communication skills,
- Managing clients
- Basics of accounting, Billing and Collection
- Word processing, Preparation of Presentations
- Sales and Marketing
- Repairs and Maintenance of Appliances
- Digitisation
- Printing
- Packaging
- Cold Storage Management
- Facility Management
- Front-end Office Management
- Administration
- Security Management
- Store Operations
- Loss Prevention
- Store Management
- Human Resources Development and Training Management
- Sales and Sales-Related
- Distribution, Logistics, Supply Chain Management
- Merchandise Buying/Planning
- Psychiatry, Stress Management and Yoga
- Ticketing and Travel Support
- Tour Operation
- Travel Hostess
- Customer Management
- Food and beverage service,
- Housekeeping,
- Front office operation

In IT also, current skill set are not addressing the need in upcoming areas. We need skills that include:

- Fundamentals that include-Software Engineering; Programming Languages; Database concepts
- Soft Skills- Communication skills; Presentations skills, Aptitude, Group Discussions, Facing Interviews
- Technical area of current lead like Software Testing/Telecom/Mobile Computing/ Banking, Finance, and Insurance / Health care

Note of Caution:

i) It is important to have a glance at the international degree education scenario wherein four year courses are considered to be Graduate Degree Programmes. The three years duration UG programs are not considered equivalent with the Bachelor's degree programs at international arena, since they fall short by one year. Currently, in India, all non-professional degree programs are of 3 years duration. These students when they go abroad, will have to undergo additional course of one more year to be on par with international degree.

ii) Even within India the three year Degree Programmes have virtually been reduced to second level Bachelor's degree programs in comparison with Bachelor's degree programs in professional programmes such as Engineering/Technology, Medicine, and Agriculture.

iii) In view of the above, there is a need for the University Grants Commission to revisit the policy of restricting General Degree Programme to three years duration. UGC also needs to consider Honours Degree programme of four years duration in case of general degree programmes with two major or three major subjects, as UGC has already approved Honours Degree Programme with single major subject of three years duration.

iv) Every subject irrespective of discipline such as Arts, Science or Commerce needs to be professionalised as single major program wherein the students study all the related subjects in an interdisciplinary mode. Efforts in this direction may be made only after UGC gives green signal for such drastic changes.

GUIDELINES FOR EVALUATION OF SPORTS GAMES AND YOGA

Max. Marks: 50   Credits:1

1. Attendance for sports activities in the college: Maximum Marks : 25
   - Between 60% and 70%:   10
   - Between 70% and 80%:   15
   - Between 80% and 90%:   20
   - Above 90%:   25

2. College Sports Activities: Maximum Marks: 15
   - a. Participation in natural sports and games.   10
   - b. First three winners (I5, II-3, III-2)   05

3. Intercollegiate sports activities: Maximum Marks:05
   - a. Intercollegiate District level competitions   03
     (Representing College)
   - b. Medallist (any of the first three places) in the
     inter collegiate/ District level.   02
     (Representing College)

4. Interuniversity/National Level Activities: Maximum Marks: 05
   - a. Inter-University / national level participation   03
   - b. Medallist (any of the first three places)
     in Inter university / national Level   02

Note: Evaluation shall be done by the college Physical Education Director / Instructor/
Coach. He shall do so with the help of a committee constituted by the Principal with
not less than three members.

****

1. **Attendance: Maximum Marks 25**

2. **Regular NSS activities in the college**

   a. Day Camp or week-end Camp: 10

   b. Any five of the following Activities of 3 Marks each: 15

1	Blood Donation	8	Monument Protection
2	Tree Planting	9	Inter-College Day Camp
3	Programmes in the Adopted Village	10	NSS Day Celebration
4	Medical Camp	11	Waste Management
5	Leadership Training Programme	12	Rain Water Harvesting
6	Literacy Activity	13	Traffic Management
7	Renewable & Solar Energy programmes	14	Pollution Control

II and IV Semester

I. Attendance: Maximum Marks:25		College level Regular Activities:15	
Total Sessions attended	Marks	a. 7 days College camp	10
Between 60% and 70% (above 60%)	10	b. Week-end Camp	05
Between 70% and 80% (above 70%)	15		
Between 80% and 90% (above 80%)	20		
Above 90%	25		

c. **Any five of the following activities of two marks each: 10**

1. State level Camp	10. Leadership Training
2. University Level Camp	11. Awareness Programme in the College
3. National Level Camp (RD/NIC	a. Special Legal Awareness
4. Monument/Historical Protection	b. Gender Sensitisation
5. Energy Club	c. Scientific Temperament
6. AIDS/HIV Awareness programme	d. Civic Sense
7. Youth Week /Day	e. Hygiene and sensitisation
8. Programmes in the adopted Village	f. **Trekking**
9. Medical/Blood Donation Camp	12. Participation in State Level RD

Note: Evaluation shall be done by the NS programme Officer of the College. He /She shall do so with the help of committee constituted by the Principal with not less than three members.

****

1. **Regular Parade Attendance: 25**

Between 60% and 70% (above 60%)	10
Between 70% and 80% (above 70%)	15
Between 80% and 90% (above 80%)	20
Above 90%	25

2. **Any one of the following**

Participating in Trekking/ Group Level Camps (CATCV)/ Guard of Honour/ Social Activity	10

3. **Independence day/ Republic Day/ College day   15**

III Semester: Maximum marks: 50

1. **Regular Parade Attendance: 25**

Between 60% and 70% (above 60%)	10
Between 70% and 80% (above 70%)	15
Between 80% and 90% (above 80%)	20
Above 90%	25
1. **Any Group Level Camps (CATC)**	**05**
2. **State Level Camps**	**10**
3. **National Level Camps**	**10**

IV Semester: Maximum Marks: 50

1. **Regular Parade Attendance: 25**

Between 60% and 70% (above 60%)	10
Between 70% and 80% (above 70%)	15
Between 80% and 90% (above 80%)	20
Above 90%	25

2. **Any Group Activity**   05

3. **Any State Level Activity**   05

4. **Any National Level Activity**   05

5. **'B' Certificate Examination:**   **10 Marks**

'A' Grade: 10

'B' grade: 06

'C' Grade : 04

Note: Evaluation shall be done by the NCC Officer of the college. He shall do so with the help of a committee constituted by the Principal with not less than three members.

****

Rover Aspirant	
Rovers	3 Stages
Rovers in Service	(Age Group 16-25)

Scheme of Advancement: PRAVESH   - 1 Year

                 PRAVEEN   -1 Year

                 Nipun   - 1 Year (After the 4th Sem. If he /she

                 Rashtrapathi Award   - 1 Year   continues)

Requirements:

PRAVESH:

I Semester   :   Study of Scouting and Roving / Guiding and Ranging Books

PRAVESH Requirements of Scout /Guide

Section (Law & Promise). Scout signs, Knowledge of Uniforms, Flag

Salute, Knowledge of National Flag, Anthem, Participation in Crew

Meetings.

II Semester   :   Preparing for PRAVEEN namely, Family Job, Hobby, G.D.

All Faith Prayer/A Day in camp, Camp craft and simple Knots

PRAVEEN

III Semester   :   Hobbies/Handicraft

Mode Knots and Lashings

First Aid

IV Semester   :   Talk on Population Education/ Family Life

One Proficiency Badges, Service in Rally / camps

(Test card is attached)

Proficiency Badges:

1	Blood Donor	7	Literacy
2	Civil & Defence	8	Population Education
3	Community Worker	9	Rambler
4	Climber	10	Soil Conservation
5	Desert Folk	11	World Conservation
6	Heritage Rover	12	World Friendship

International / National Level/ DG NCC Organised Camps

1	Republic Day Camps (Delhi)	8	Advanced Leadership Camp
2	Basic Leadership Camp	9	Ship Attachment camp
3	Nav Sainik Camp (NSC)	10	Army Attachment Camp
4	Vayu Saink Camp (VSC)	11	Air Attachment Camp
5	Tal Sainic Camp (TSC)	12	Hospital Attachment camp
6	National Integration Camp (NIC)	13	Trekking/Cycle expedition organised by DGNCC
7	Youth Exchange Programme (YEP)		

State Level (District Level Camps)
1. Ocean Sailing Expedition
2. NSC/I/II/III Phase
3. VSC I/II/III Phase
4. TSC I/II/III Phase
5. Pre-RD
6. Mountaineering / Rafting/Skying/ Rock climbing organised by the Directorates

Group Level:
1. Combined Annual Training Camp (CATS)
2. Trekking organised by the Unit.
3. Cycle expedition by the Unit
4. Independence Day/ republic day/ NCC Day organised by the Unit
5. Guard of Honour

College level:
Independence Day /Republic Day/ College day Social Activities organised at the college level/ Taluk Level/ District level.

(District Level Badge= Committee Badge + Certificate)
District Chief Commissioner will appoint Examiner for each badge

Evaluation Method: Maximum Marks:50

Attendance:		25 marks
	Between 60% and 70% (above 60%)	10
	Between 70% and 80% (above 70%)	15
	Between 80% and 90% (above 80%)	20
	Above 90%	25

College Participation – Leadership   **05 Marks**
(Weightage to be given to Senior
Crew Mate & Crew mate & Seconds)

Intercollegiate Participation   **10 Marks**
(Taluk / District Rally) College level
Rover & Ranger Trekking / Hiking

University/ Higher Level Events   **10 Marks**
(State level / National Level Moots)
Adventure Camps or Service Camps)
NTC Panchmachi (M.P.) Programmes
Or Additional Proficiency Badges

1. The student shall register for a particular Cultural curricular Activity s approved by the University. This process may be ensured through proper counselling at the college level.
2. There shall be a student welfare officer to coordinate the cultural activities
3. There shall be staff members in charge of a specific cultural Activity

Broad Areas of Activities Identified.

1	Literary Activities – Wall Magazine, Language Association, etc.	8	Web-based learning, e-library skills (Cloud Computing)
2	Fine Arts – painting, College Sculpture, etc	9	Life Skill Development programme
3	Performing Arts – Music/Dance/Theatre	10	Community Work
4	Activities of subject Associations	11	Seminar circles on Indian Thoughts and Ideas
5	Personality and Leadership Development Activities	12	Different aspects of Indian Civilisations
6	Publication Activities	13	Visual Arts
7	Project Work / Field Studies		

4. **Contact Classes:**

   a. There shall be a minimum of 20 Hrs. Of contact session for each activity in each semester.
   b. The staff in charge shall maintain the proper records for attendance and activities.

5. **Evaluation: Maximum Marks: 50**

Attendance	**25** (60-70%:10, 70-80%:15; 80-90%:20; above 90% : 25
College participation	15 (10 for participation + 05 for Medals)
I.C. Level participation	05 (03 for participation + For Medals)
University	05 (03 for participation + For Medals)

6. **The records are open for scrutiny of the university from time to time.**

7. **Records to be maintained till the degree is awarded.**

                      ****

CHAIRMAN AND MEMBERS OF THE COMMITTEE

Dr. K. Chidananda Gowda
Chairman

Dr. P.Venkataramaiah
Member

Dr.M.D.Muthamma
Member

Sri C. R. Francis
Convener