Vision - 2030

Vision Document Government MCA College (GMCA)

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Preamble

It is duty (धर्म) of every education institute to impart knowledge to fulfil the National and State vision. The role of technical education institution is to provide education to meet needs of the industry and society considering the latest technological development.

An institute's vision must be framed in context of National Vision, State Vision, Technological development, industry needs, inputs from the technical professional societies in the relevant domains, and inputs from the stakeholders. This section presents the above mentioned context in details to guide the process of the institute Vision and Mission development.

National Vision

The ultimate Indian Vision is very profound, inclusive, and it is eternal in nature. It is stated as below –

सर्वे भवन्तु सुखिनः , सर्वे सन्तु निरमयाः ।

सर्वे भद्राणी पश्यन्तु , मा कश्चित् दुःख भाग्भवेत ॥

॥ ॐ शान्तिः शान्तिः शान्तिः ॥

May all sentient beings be happy and prosperous, May all be free from illness, May all see what is auspicious (spiritually uplifting), and May no one suffer in any way.

OM Peace, Peace, Peace

The above 'Shloka' is very altruistic in which it includes the whole humanity. Always, it has been Indian Philosophy and Tradition to do any act with holistic view in which there is consideration of betterment of all the living and non-living part of the whole universe.

The Government of India has aspiration to excel in all front of the development by participation of every citizen and extending benefit to all the citizens i.e. "सबका साथ, सबका विकास, सबका विश्वास".

There are many mission programs of Government of India to fulfil the above vision of India. The programs which are relevant to the Computer Application education are as below –

- Digital India (https://www.digitalindia.gov.in/)
- Startup India (https://www.startupindia.gov.in/)
- Innovate India (https://innovateindia.mygov.in/)
- Atmanirbhar Bharat (https://aatmanirbharbharat.mygov.in/)
- Skill India (https://indiaai.gov.in/missions/national-skill-development-mission-nsdm)

In addition to the above mentioned mission programs, the Government of India has many other projects such as 'Smart Cities', 'Ayushman Bharat', 'Svachchha Bharat', 'Fit India' and many mores for the betterment of the society.

Technology can play very important role to achieve the vision and meet the aspiration of society. The next section discusses the technology advancement in the area of Information and Communication Technology (ICT).

Technology development

Over the past two decades, Information and Communication Technology (ICT) has changed the way we work and communicate. It has influenced each and every individual as well as organization. It has accelerated the industry growth and brought efficiency in government and businesses. It has eased services and improved quality of services.

Today, cutting edge development in the areas of Artificial Intelligence, Machine Learning, Big Data Analytics, Internet of Things, Industry 4.0, Networking and Cyber Security, Parallel Computing, Cloud Computing have impact in all sectors. Technological advances is moving our society from information society to knowledge society, and breaking the boundaries and bringing people close to each other.

The future citizens need to be trained for the current technology as well as the skills, values and ethics to be a good universal citizen.

Industry and Business Context

The Information and Communication Technology (ICT) is used in various industry sectors, businesses, agriculture sector, health-care, and education.

Industries are using ICT in each and every task such as logistics, material handling, processing, assembling, packaging, marketing, and customer support. Businesses are using ICT for their activities such as project planning, project management, customer care, finance management, marketing, and services. Agriculture sector is using ICT for planning the crops, precision agriculture, irrigation scheduling, plant growth and health monitoring, fertilizer and pesticide management, crop harvesting, and food chain supply management. Health care sector is using ICT for patient monitoring, patient data management, and patient care. Education sector is one of the most pioneer sectors in using ICT for online teaching learning, assessment, and student management.

Today, every organization uses ICT to perform various activities. The knowledge of ICT is very much necessary for everyone in the society.

The technical education institute must consider the current technological advancement and industry needs at the same time it has to consider the future technological trends to make the education relevant and useful to the society. There are many technical professional societies in various specialized technology domains. Such professional societies publishes white papers and sample curricula considering the current technology and future trends. The next section discusses the perception of the technology changes and its impact on education by the professional societies related to ICT.

Professional Society Context

There are few international and national level professional societies in the area related to computing, information, and communication technology.

Association of Computing Machinery (ACM) is the world's largest educational and scientific computing society. It is international society having professional members across the globe. It publishes curriculum framework, software body of knowledge, and computing code of ethics at regular interval considering the current and future technology trends.

Computer Society of India (CSI), is only a professional society related to computing in India. It publishes the CSI Communication, and organizes conferences and workshops across the country.

Both the professional societies, emphasis on using information and communication technology to solve real-life problems of the society, demonstrate the professional ethics in solving problems to be a good professional in the field of computing. They also emphasis on lifelong learning ability to keep pace with fast changing technologies.

Introduction to GMCA

Government MCA College, Maninagar, Ahmedabad is established in the June 2012. The institute was envisioned by the Honorable Prime Minister Shri. Narendrabhai Modi, then Chief Minister of Gujarat. It is the only Government run MCA College in the State of the Gujarat. It is situated in the Padma Shri KK Shashtri Education Campus, Khokhara, Maninagar (East), Ahmedabad.

The institute is administered by the Education Department, Government of Gujarat and affiliated to Gujarat Technological University. The institute has excellent academic and other infrastructure to run the program.

In the year 2012, postgraduate program in Master of Computer Application (MCA) was introduced with an intake of 60 students. Admission to institute is done through State level Admission Committee for Professional Courses. Meritorious students across the state prefer this institute for their MCA study. The institute is gaining recognition among the student community and industry.

Vision and Mission of GMCA

In the context of National Vision, National mission programs, industry needs, recommendation of professional societies, and very importantly based on the Strength – Weakness – Opportunity – Threat (SWOT) analysis conducted with the stakeholders our institute has defined her vision and mission. We have also defined the Program Educational Objectives (PEOs), and Program Specific Objectives (PSOs) also as recommended by National Board of Accreditation (NBA).

The vision of GMCA is defined as below –

Vision:
Provide value-based quality education for applications of computer science to enable students to solve real-life problems of society.

Mission:
- To equip our students with good knowledge, skills and attitude to solve real – life problems in the domain of computer applications.

- To establish industry-academia interaction to facilitate the students to work proficiently in the industrial environment.

- To imbibe high moral values and professional ethics.

- To provide conducive environment so as to achieve excellence in teaching-learning, and research and development activities.

Program Educational Objectives:

1. Identify and analyze real life problems and design computing systems appropriate to its solutions that are technically sound, economically feasible and socially acceptable

2. Exhibit professionalism, ethical attitude, good communication skills, team work in their profession

3. Adapt to current trends by engaging in lifelong learning.

Program Specific Outcomes:

After completing the program students will be able to –

1. Meet the needs of users within an organizational and societal context through the selection, creation, application, integration, and administration of computing technologies.

2. Apply concepts, probability, statistics, mathematics, through calculus (differential and integral), numerical methods and sciences including applications appropriate in the field of computing problems.

3. Use algorithms, data structures, database management, software design, concepts of programming languages and computer organization and architecture in the field of computer applications.

Process of Developing Vision and Mission

This vision document is prepared after carrying out SWOT analysis by various stakeholders and also by arranging brainstorming sessions. Some of the steps have already been taken to achieve the desired goal (Annexure – 1).

To achieve Vision- 2030, implementation plan in phased manner will be chalked out. The progress will periodically be reviewed in order to take suitable corrective actions, if necessary. It is believed that with this vision document and with sincere efforts of all stakeholders, substantial growth of GMCA will be observed by the end of the decade.