

GUJARAT UNIVERSITY

MBA / MSc / PG Diploma Programmes

(Effective from Academic Year 2020-21)

PROGRAMME BROCHURE



INSTITUTE OF DEFENCE STUDIES AND RESEARCH

GUJARAT UNIVERSITY

NAVRANGPURA – AHMEDABAD

(Establishment: 2020)

ABOUT GUJARAT UNIVERSITY

The Gujarat University was conceived in the nineteen twenties in the minds of public-spirited and learned men like Gandhiji, Sardar Patel, Acharya Anandshankar B. Dhruva, Dada Saheb Mavlankar, Kasturbhai Lalbhai and many others. However, the University could come into existence only after the achievement of independence. In 1949, the University was incorporated under the Gujarat University Act of the State Government 'as a teaching and affiliating University.' This was done as a measure of decentralisation and reorganization of University education in the then Province of Bombay.

During the course of its life of more than five decades, the University has seen the establishment of seven more Universities which were carved out of the jurisdiction of the Gujarat University, viz., Sardar Patel University, Saurashtra University, Bhavnagar University, South Gujarat University, Gujarat Ayurveda University, Gujarat Agricultural University and North Gujarat University. Even then, the Gujarat University is the largest university in the state catering to the needs of higher education of more than two lakh students scattered over 235 colleges, 15 recognised institutions and 24 approved institutions. There are 34 Post-Graduate University departments and 221 P.G. Centres.

Gujarat University is an affiliating University at the under-graduate level, while it is a teaching one at the post-graduate level. Indeed, the responsibility for post-graduate instruction has been statutorily given to the University, and accordingly it has evolved a plan of co-ordinated instruction under the direct control and supervision of the University so as to ensure efficient and diversified instruction. An important feature of this University is the system of external examinations in the Faculties of Arts and Commerce, both at under-graduate and post-graduate levels. The external examinations were introduced with a view to enabling working students and the others who could not afford the high cost of university education to realize their dream.

Gujarat University has developed phenomenally in the last 67 years to be recognized as a premier University in the country today. It provides education in one of the widest range of disciplines to about two lakh students.



MISSION

- Empowering Student through Modernized Syllabi
- Innovation in Teaching
- Promotion Of Research, Consultancy and Extension for the Benefit of the Society
- Quality Improvement to Enhance Global Competitiveness

VISION

- To be a Center of Excellence
- Providing Value Based Quality Education
- Efficiency With Financial Sustainability
- Leading to Socio – economic Welfare of the Society through Enrichment of Human Capital

OBJECTIVES

- To provide instruction including correspondence courses, teaching and training in such branches of learning and courses of study as it may think fit, to make provision for research, advancement, and dissemination of knowledge, and to conduct special undergraduate courses for talented students;
- To make such provision as would enable affiliated colleges, recognized institutions and approved institution to undertake specialization of studies;
- To establish, maintain, take over by agreement and manage colleges, departments, centers and institutes of research or specialized studies;
- To organize common laboratories, libraries, museums and other equipment for teaching and research;
- To establish within the University area or outside that area such field stations, specialized laboratories and other units for research and instructions as are necessary for the furtherance of its objects;
- To create such teaching, administrative and such other posts as the University may deem necessary from time to time and to make appointments thereto;
- To institute professorships, readerships, lectureships and other posts of teachers required by the University;
- To appoint or recognize persons as professors, readers, or lecturers, or otherwise as teachers of the University;
- To guide teaching and research work in colleges, University Departments, University centers and recognized institutions;
- To lay down the course of instruction for the various examinations;
- To institute degrees, diplomas and other academic titles and distinctions;

- To hold examinations or tests and confer degrees and diplomas on, and grant certificates to, persons who-
- To confer honorary degrees or other academic distinctions in the manner laid down by Statutes;
- To grant such diplomas to, and to provide such lectures, instruction and training to, persons who are not enrolled students of the University, as may be determined by the Statutes, Ordinances, Regulations and Rules;
- To withdraw or cancel any degree, diploma or certificate conferred or granted by University in the manner prescribed by Statutes;
- To associate or admit educational institutions with or to the privileges of the University by way of affiliation, recognition or approval;
- To withdraw or modify either in whole or in part, affiliation, recognition or approval of educational institutions;
- To submit to the State Government proposals for conferment of autonomy on any affiliated colleges or a University college, or a University Department or a recognized institution entitling it to privileges in the in the matters of admission of students, prescribing the courses of study, imparting instruction, teaching and training in the courses of study, the holding and conduct of examinations and the powers to make necessary rules for the purpose;
- To recommend to the State Government withdrawal of autonomy conferred on any affiliated college, recognized institution or a University College or Department;
- To inspect colleges, recognized institutions and approved institutions and to take measures to ensure that proper standards of instruction, teaching and training are maintained in them and that adequate library and laboratory provisions are made therein;
- To lay down and regulate the salary scales, allowances and other conditions of service of the members of the teaching, other academic and non-teaching staff of the University;
- To lay down and regulate the salary scales, allowance and other conditions of service of the members of the teaching, other academic and non-teaching staff in the affiliated colleges, and recognized and approved institutions;
- To provide for the establishment and recognition of Students' Unions or associations of teachers, academic staff or other employees of the University, affiliated colleges and recognized institutions;
- To control and co-ordinate the activities of, and give financial aid to affiliated colleges and recognized and approved institutions; and
- To hold and manage trusts and endowments;
- To Institute and award fellowships, traveling fellowships, scholarships, studentships, medals, prizes and other awards;
- To make special provision for the spread of University education among classes and communities which are educationally backward;
- To lay down courses of study to meet the requirements of rural planning, development and reconstruction and to provide for instruction, teaching and training in such courses;
- To make special provision for disseminating knowledge and promoting arts and culture;

- To fix, to demand and to receive or recover such fees and other charges as may be prescribed by Ordinances;
- To establish, maintain and manage hostels;
- To recognize hostels not maintained by the University, to inspect such hostels and to withdraw recognition there from;
- To co-ordinate, supervise, regulate and control the residence, conduct and discipline of the students of the University and to make arrangements for promoting their health and general welfare;
- To take disciplinary action against the students of the University and to impose such punishments upon them as may be deemed fit for breach of discipline or misconduct, within or outside the University, including the use of unfair means at an examination or in relation thereto by themselves or by any other persons or abetment thereof;
- To conduct, co-ordinate, supervise, regulate and control post-graduates teaching and research work in the University Departments, affiliated colleges and institutions recognized or approved by the University;
- To co-ordinate, supervise, regulate and control the conduct of under graduate teaching and instruction in the affiliated colleges and to undertake the same in University colleges;
- To co-operative with any other universities, authorities or associations or any other public or private bodies in such manner and for such purposes at the University may determine;
- To make arrangements for training for competitive examinations for recruitment of services under the Union and State Governments;
- To promote the development of the study of Gujarati and Hindi (in Devnagari script) and the use of Gujarati and Hindi (in Devanagari script) or both, as the media of instruction and examination;
- To acquire, hold, manage and dispose of any property movable and immovable, including trust or endowed property within or outside the University area, for the purposes or objects of the University and to invest any funds representing such property in such manner as the university thinks fit;
- To raise public loans and the security of the assets of the University for the purposes of the University, with the previous approval of the State Government;
- To enter into any agreement for the incorporation in the University of any other institution and for taking over its rights, properties and liabilities and for any other purpose not repugnant to this Act;



FUNCTIONS AND ACTIVITIES OF DEPARTMENT

The department has envisioned engaging in activities inter alia the following:

1. Teaching Programmes Proposed

The courses are designed to equip young professionals with a new understanding of Defence Services. By offering this courses, department aims to contribute to a sustainable development in the Defence and armed forces. It provides students with the necessary theoretical foundations, practical management and communication skills and hands-on knowledge that make them capable of driving the defence forces.

2. Training and Development and Research

- Organizing Short Term course on Defence for the students and professionals pursuing higher degree in various disciplines in the University
- Conducting Management Development Programmes (MDPs) /Trainings for the working Executives, Managers Officers of Government, Private, Non-governmental organizations.

PROGRAMME STRUCTURE

- a) Duration of the programme :** Two years full time programmes.
- b) No. of semesters :** Two semester each in the 1st & 2nd year for the fulltime MBA program, 1st to 3rd semester programme are class room teaching and 4th semester will be exclusively on-site/ on job training in an institution engaged in industry
- c) Duration of one semester :** 15 weeks of direct teaching & 2-3 weeks for examination and related activities (beginning from July/August to December and

January to April/May
in each academic
year)

- d) Credit requirements** : A total of 108 credit hours
(one credit = one hour) of class room teaching)
- e) Summer project duration** : Eight to 10 weeks after the 2nd
semester for the programme.
- f) Validity of registration** : The students who have registered
for
for the programme
should complete the
same successfully
within five years.
Those who could not
complete the
programme within
this period should
seek the University's
approval for
continuation through
the School, which
may be granted at
the discretion of the
university.
- g) Students who drop out :** Those students who drop out of
programme in an
academic year after
having paid the fee
will be allowed to
rejoin the programme
in the subsequent
year, subject to the
discretion of the
School.
- h) Attendance** : For completing the
programme,
Attendance in 75%
of the total sessions
is necessary.
However it is
desirable to maintain
a reasonable level of
attendance in every
course.

- The Director of the School may condone the shortage of attendance up to 25%, on a case-to-case basis, if the absence is due to compelling circumstances. Beyond that it will be the decision of the faculty and University.

- i) Annual calendar** : The annual calendar will be declared by the University in the beginning of the year, indicating the start and end of semesters, internal and external examination time slots, etc.
- j) Intake per allocation** : 30 + EWS seats as
- k) Fees per Semester semester** : Rs. 20,000 per

CURRICULUM

The Participants will undergo courses in Defence services along with electives in their chosen area of interest. The programme provides conceptual, technical and analytical skills Defence studies. This will help in appreciating forces shaping the domestic and international environment for public policy. It also enhances soft skills in leadership, decision making and communication. The participants will be undertaking a Comprehensive Policy Project also which will help them to specialize in the chosen area in public policy field. They will select a department or programme, and conduct an intensive study on a policy issues or management challenges pertaining to it, under the guidance of a faculty. This will be a key take away for both the participants.

FEE STRUCTURE: Fee structure would be Rs. 20,000 per semester *4 Semester = 80,000 for the whole

course for full time.

BATCH SIZE/ INTAKE: 30 Students

CATEGORY : CMAT/ Non- CMAT can also apply.

C-MAT ADMISSION (MBA PROGRAMME)

- Candidate wishing to get admission at Department of Maritime Management, B.K. School of Business and Professional Management need to appear for CMAT Examination.
- After Declaration of CMAT Result, Candidate has to register at ACPC on <http://www.jacpcldce.ac.in>
- After Registration, Candidate waits for Merit List and Institution Cut-off List declared by ACPC.
- If the CMAT score is more than the Cut-off score, Candidate can apply for B.K. School (Maritime Department) at ACPC Web Portal.
- Once Confirmation is received from Institute as well as ACPC, Candidate pays fees and gets a confirmation of Admission.
- For More Information visit to <http://www.jacpcldce.ac.in>

NON C-MAT ADMISSION / MSc Admission/ PG Diploma Admission

Apply by clicking this link : eform@gujaratuniversity.ac.in

Reservation of Seats:

1. For the purpose of admission, the seats shall be reserved for the candidates who are of Gujarat origin and falling under the following categories and in following proportion, namely-

Scheduled Castes: (SC) 7 %

Scheduled Tribes: (ST) 15%

Socially and Educationally Backward Classes: (SEBC) 27%

A Candidate seeking admission on reserved seat shall be required to produce a Certificate of Caste:

Provided that the candidate belonging to Socially and Educationally Backward Classes shall be required to produce a valid certificate to the effect of non- inclusion in Creamy Layer in addition to the caste certificate.

No caste certificate shall be valid unless it is duly stamped, signed and issued by the authority empowered by the Government of Gujarat.

No certificate to the effect of non-inclusion in Creamy Layer shall be valid, unless it is duly stamped, signed and issued by the authority empowered by the Government of Gujarat. Such certificate must have validity for the year 2020- 2021.

A candidate belonging into the General category can claim reservation under Economically Weaker Section (EWS) quota provided that he/ she is classified under EWS, satisfying the eligibility criteria set by The Government of Gujarat. Candidate claiming admission under EWS quota shall have to produce a valid certificate, indicating that the candidate belongs into the EWS category, issued by the authority empowered by The Government of Gujarat. For other information about EWS, visit the GUAC website.

If a candidate fails to submit the certificates as required within the stipulated time, his/her candidature shall be considered for admission under unreserved category.

If a candidate of reserved category gets admission on unreserved seat in order of merit, he/she may be given admission on the unreserved seat according to his/her preference and merit.

The admission of a candidate of a reserved category on a reserved seat shall be valid subject to the verification of certificate(s) issued by the authority empowered by the State Government in this behalf. In case the certificate(s) is found invalid on verification, he/she shall not have right to claim his/her admission on reserved seat and if he/she has already been granted admission, such admission shall be cancelled. Admission of such candidate may be continued in case of availability of vacant unreserved seats, subject to the condition and eligibility of merit.

After granting admission to all the candidates of reserved categories (as per merit and eligibility) on respective reserved seats, the reserved category seats remaining vacant shall be transferred to the unreserved category seats.

1. Reservation For Physically Disabled Candidates:

Three percent of the available seats in each category shall be reserved, in accordance with the provisions of the Persons With Disabilities (Equal Opportunities, Protection of

Rights and Full Participation) Act, 1995 (1 of 1996), for the persons with permanent disability who can perform the academic activities in the respective program.

A candidate with disability shall have to submit certificate of disability issued and duly signed by the Civil Surgeon or issued by the authority empowered by The Government of Gujarat only.

Explanation: "person with disability" means a person suffering from not less than forty per cent of any permanent disability as certified by a competent medical authority (Civil Surgeon issued by the authority empowered by The Government of Gujarat only).

2. Reservation for the Children of Defense personnel and Ex-Servicemen:

There shall not be any reservation for the Children of Defense personnel and Ex-Servicemen.

However, children of the martyrs of the Armed forces of state/ central government shall be given admission on the supernumerary seats in the respective courses and University will not charge any tuition fees from such candidate. This benefit will be given to the eligible candidate one time only.

3. Distribution of Seats among Candidates of Gujarat University and other Universities:

For the purpose of admission, the available seats shall be distributed based on the merit list prepared as mentioned in 12.1:

5% seats of available seats for admission shall be reserved for candidate who has passed qualifying examination from other university.

4. Supernumerary Seats:

Economically Weaker Section (EWS) 10 % supernumerary seats are reserved for

Economically Weaker Section (EWS) category candidates. Candidate seeking admission in this

category shall have to produce Economically Weaker Section (EWS) certificate, issued by the authority empowered by the Gujarat State Government. Candidate seeking admission under this quota shall have to register online.

Sports/ NSS/ NCC/ cultural quota 2 % supernumerary seats are reserved for sports/ NSS/ NCC/ cultural quota in each course. Candidate seeking admission under this

quota shall have to register online. The criteria and verification will be done by competent committee constituted by Gujarat University. (Copies of supporting documents along with print of registration forms must be submitted to admission committee before the date specified on GUAC website).

Children of the martyrs of the Armed forces of state/ central government. There will be separate supernumerary seats for the Children of the martyrs of the Armed forces of state/ central government.

The candidate seeking admission under this quota shall have to register on line and produce necessary documents / certificates issued by the competent authority.

ABOUT THE COURSES AT INSTITUTE OF DEFENCE STUDIES & RESEARCH (IDSR)

Name of the courses	Type	Total	Seats	EWS	Fees/Year
MBA/ MSC Level COURSES					
MBA in Homeland Security	SFI	34	30	4	40,000
MBA in Defence Management	SFI	34	30	4	40,000
MBA in Disaster Management	SFI	33	30	4	40,000
MSc in Artificial Intelligence & Machine Learning	SFI	34	30	4	40,000
MSc in National Security & Defence Studies	SFI	34	30	4	40,000
PG DIPLOMA COURSES					
P G Diploma in counter terrorism studies	SFI	34	30	4	20,000
P G Diploma in Cyber Security	SFI	34	30	4	20,000
P G Diploma in Military Geography	SFI	34	30	4	20,000
P G Diploma in Defence Analyst	SFI	34	30	4	20,000
P G Diploma in Aerospace and Aviation Sciences	SFI	34	30	4	20,000

COURSE DELIVERY

Course delivery may use a combination of formats such as

- Lectures
- Classroom discussions
- Case study analyses
- Individual and group projects
- Field work
- Quizzes

- Role plays
- Dissertations, business games
- Managing Live Events
- Participating and collaborating with Event Giants and project work

1. MBA IN DEFENCE MANAGEMENT

INTRODUCTION

MBA in Defence Management has been designed as a a challenging learning experience that focuses on real-world problems, solutions and providing new knowledge and tools to face challenges in corporate arena. The focus of the Programme would be on all functional aspects of management, like, operations management, marketing, strategy, human resource management and organizational behavior, Information technology and its recent development, economics, finance and accounting, and supply chain management. This Programme acts as a platform for armed forces personnel to re-orient themselves towards their new professional life.

This course on MBA in Defence Management specifically designed with an aim to develop professionals in the defence sector with the contemporary global management practices through case-study method of instructions, class room studies, business presentations and Industry visits. The pedagogy and stringent course curriculum brings to fore the analytical & managerial skills which are a pre-requisite for success in corporate career. The officers will add value to any organization and contribute effectively to its productivity & growth Programme Objectives The objectives of the programme are: To familiarize the officers with a new framework, i.e. business environment., To orient them towards the management education and management training, To provide the understanding of the conceptual and analytical tools, To provide them skills related to all significant management fields including all technical and behavior techniques, To provide them the exposure in different areas of management that is necessary while selecting the second career.

SCOPE

The Programme prepares the course taker to take up key functional roles in the burgeoning Indian Defence industry in areas of Defence production, Defence Procurement, Defence Acquisition, Internal Security Management and specialised areas of Cyber Security. The course also equips professionals to take up challenging and leadership opportunities in the Private /public sector Defence Industries and their Ancilliary Units. Officers completing the course leave with an ability to apply their technical understanding to solve complex problems in the Defence domain, in terms of operations, equipment capability, acquisition and management in the Defence business.

Academic input is delivered through two types of courses: Core and elective courses. Core courses will be taught over first two terms. They provide participants with the fundamental conceptual knowledge, analytical skills and techniques, contextual understanding. The elective courses offered in the third term of the programme, give participants a deeper understanding of different functional areas and enable them to specialize in areas of their choice. The combination of core and elective courses helps the participants develop an in-depth understanding of the interrelationships crucial to successful business management. This will enable them to be more effective in their jobs while being sensitive to the issue and challenges confronting people in the other parts of the organization. Course learning would be through combination of various teaching methods such as cases, projects, computer aided instructions, group discussions, lectures, seminars, simulations, presentations by participants, and lectures by guest speakers from industry and government. The case method is the predominant pedagogical tool. This sharpens the analytical skills of participants and helps analyze problems from multi-functional perspectives. Instructors mainly guide the group, encourage participants to develop and defend arguments, and take decisions. A visit to different industries will also be conducted in order to understand the organization working in real environment. The course instructor will provide a course outline detailing the course objectives, contents, evaluation pattern and the appropriate references. Reading material or a book will also be provided to participants.

COURSE STRUCTURE

SEMESTER I

Course Code	Course Title	Course Credit
DM1001	Management Process for Defence Forces	04
DM1002	Defence Economics	04
DM1003	Evaluation of Strategic Thought of Defence	04
DM01004	Accounting for Defence Management	04
DM01005	Ethos and Corporate Social Responsibility in Defence Organisations	04
DM1006	Organization Behaviour and Design in Defence	04
DM1007	Regional Security and Global Governance	04
Total		28

SEMESTER II

Course No	Course Title	Course Credit
DM2001	Defence Mechanism of India	04
DM2002	Defence Marketing Management	04
DM2003	Defence Operations Management	04
DM2004	Defence Finance Management	04
DM2005	Fundamentals of Defence Contract and Tenders	04
DM2006	Defence Procurement Policies : National & International Perspectives	04
DM2007	Defence Laws and Policies in India	04
Total		28

SEMESTER III

Course No	Course Title	Course
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		Credit
DM3001	Defence Technology and Application	04
DM3002	International Institutions and Global Security	04
DM3003	International Relations and Defence Conflict Resolutions	04
DM3004	Data Visualisation for Defence Managers	04
DM3005	Entrepreneurship and Defence Intrapreneurship	04
	ELECTIVE 1	
DM3003	Risk and Vulnerability Analysis in Defence	04
DM3004	Disaster and Crisis Management in Defence	04
DM3005	Defence Management of Infrastructure	04
	ELECTIVE 2	
DM3006	Defence Management and International Relations	04
DM3007	Defence Intelligence	04
DM3008	Defence Psychology	04
Total		28

SEMESTER IV

Course No	Course Title	Course Credit
DM4001	On-site Project Training / On Job Training 4 to 5 Months (Long Term)	10
DM4002	Summer Internship Placement 6 to 8 Weeks after First MBA-I	02
Total		12
	Total Credits of Two Years	96

Project Report and Viva Voce in Sem-IV: The purpose of the project work is primarily to demonstrate the knowledge and skills in studying and analyzing a selected problem in the work situation, in a systematic manner while suggesting solution to the management of the company. It is desirable that the student identifies the area of project work at the beginning of the project. Each student is required to study any functional/management area of any company of his/her choice under the guidance of a faculty member of the Institution for three to four months, in semester four. The comprehensive project report shall be prepared and submitted by the students, three to four weeks before the commencement of semester IV final examinations.

MBA IN DISASTER MANAGEMENT

1. INTRODUCTION:

Disasters, natural or man-made result in untold misery on the human beings and adverse impacts on the community. The frequency and intensity of Disasters are mounting with every passing day as experienced in the past decade. The ability to manage and mitigate disaster assumes paramount importance. Disaster management is understood as the managerial function charged with creating the framework, within which communities reduce vulnerability to hazards and cope with disasters. The function of disaster managers is to evaluate risk and exposure, create response plans and ensure response capacity after an event. The response capacity to disaster becomes complete when the community is involved in the entire disaster management cycle.

2. SCOPE

Disaster Management is an inter-disciplinary and multi-disciplinary academic field devoted to various aspects of disaster management across societies and cultures. This program aspires to provide disaster management professionals and specialists for public and private sector Organizations, Institutions and Authorities who can plan, manage, and evaluate interventions in the field of disaster management and national security.

MBA IN HOMELAND SECURITY

INTRODUCTION:

MBA in Homeland Security specialization will enhance your skills in business analysis, fiscal management and organizational leadership with an emphasis on law enforcement, public safety, emergency medical care and disaster preparedness. The courses in this specialization span the spectrum of management, budgetary rules, personnel and critical issues relating to crisis management and the history of terrorism, prevention and response. Psychological, environmental and cultural factors that can drive individuals to commit such acts are also explored. As a Homeland Security MBA graduate, people will be prepared to pursue management positions in government from local to federal levels.

SCOPE

Master of Business Administration in Homeland Security is designed to prepare experts in the field of security profession. The course is intended to security management of any Nation / Company / Organization.

SYLLABUS MBA in HOMELAND SECURITY

Course Code	Course Title	Course Credit
HS01001	Economics for Managers (EFM)	04
HS01002	Financial Accounting (FA)	04
HS01003	Organizational Behaviour (OB)	04
HS01004	Organizational Structure & Dynamics (OSD)	04
HS01005	Seminar Course on Ethics, Ethos and Values	04
HS01006	Introduction to Forensic Science and Law	04
HS01007	Fundamentals of Home land Security	04
Total		28

Course No	Course Title	Course Credit
HS02001	Environment for Business (EB)	04

HS02002	Human Resource Management	04
HS02003	Business Research Methods	04
HS02004	Managerial Communication (MC)	04
HS02005	International Security, Diplomacy and Conflict Resolution	04
HS02006	Defence Technology and Defence Laws	04
HS02007	International Institutions and Global Security	04
Total		28

Course No	Course Title	Course Credit
HS03001	GIS and Remote Sensing in Disaster Management	04
HS03002	Basic Principles of Disaster Planning and Management	04
HS03003	Disaster Management, Indian Armed Forces & State Mechanism	04
HS03004	Psychological Impacts of Disasters	04
HS03005	Contingency Planning in Disaster Management	04
HS03006	Terrorism and Counter Terrorism	04
HS03007	Aviation, Space and Maritime Security Laws	04
Total		28

SEMESTER IV

Course No	Course Title	Course Credit
HS04001	On-site Project Training / On Job Training 4 to 5 Months (Long Term)	10
HS04002	Summer Internship Placement 6 to 8 Weeks after First MBA-I	02
Total		12
	Total Credits of Two Years	96

M.Sc. (AI & ML) with General/Defense track

M.Sc.(AI&ML) - Defense Specific at GU will have specialized subjects with reference to defense in 3rd - 4th Semester. The Course will be coordinated by Department of Computer Science.

INTRODUCTION

Artificial Intelligence (AI) technology is increasingly prevalent in our everyday lives. It has uses in a variety of areas ranging from gaming, journalism/media, to finance, as well as in the state-of-the-art research fields from robotics, medical diagnosis, quantum science and security. Artificial Intelligence (AI) helps in designing and programming machines and equipment to reduce human efforts in performing various efforts. It makes machine act and think like humans. Be it bank operations, medical science, security, air transport, surveillance – new applications and technologies are getting heavily based on AI and Machine learning.

Machine learning is the AI application which allows machines to learn themselves on giving them access to the data. It is the way to create a narrow AI model for the purpose of categorizing data, detecting fraud, recognizing images, or making predictions about the future (among other things).

With an objective of automating mundane task AI and machine learning products are on rise and in great demand. AI is evolving and rising and coming years are set for the giant forward leap in this discipline.

In this course we aim to teach students the basics and applications of AI, including: machine learning, probabilistic reasoning, computer vision in the first year and providing the option of General track and Defense track in second year.

Course Structure

2. SCOPE

The programme would prepare the students to:

- Develop an appreciation for what is involved in learning models from data
- Understand a wide variety of learning algorithms
- Understand how to evaluate models generated from data
- Understand and develop application involving computer vision and Natural Language Processing and Data Analytics in the field of Defense, Agriculture, Medical diagnostics, Industry, Education etc.

Course Structure

Semester-I

Course Code	Course Title	Credit
AIML 1001	Mathematical Foundation	4
AIML 1002	Introduction to Programming with Python	6
AIML 1003	Artificial Intelligence	4
AIML 1004	Object Oriented Concepts & Programming using C++	6
AIML 1004	Linear Algebra and Numerical Methods	6
AIML 1005	Project – I	4
Total Credits		30

Semester – II

Course Code	Course Title	Credit
AIML 2001	Numerical Optimization	4
AIML 2002	Advanced Python	6
AIML 2003	Machine Learning	6
AIML 2004	Computer Vision	6
AIML 2004	Statistical Foundation	4
AIML 2005	Project – II	4
Total credits		30

Semester – III – General Track

Course Code	Course Title	Credit
AIML 3001	Deep Learning Fundamentals	6
AIML 3002	Natural Language Processing	6
AIML 3003	Reinforcement Learning	4
AIML 3004	Project – III	8
Total credits		24

Semester – III- Defense Track

Course Code	Course Title	Credit
AIML 3001d	Deep Learning and its applications in Security	6
AIML 3002d	Data Analytics in Defence Applications	6
AIML 3003d	Emerging Sensor Technologies and Internet of Things	4
AIML 3004d	Project – III	8
Total credits		24

Semester – IV

Course Code	Course Title	Credit
AIML 4001	MOOCS	4
AIML 4002	Major Project	20
Total credits		24
	Total Credit of Two years	104

M.Sc. IN NATIONAL SECURITY & DEFENCE STUDIES

1. INTRODUCTION:

National Security and Defence studies, War studies, Strategic studies as currently taught only in a handful of Universities in India. Teaching and research activities are done in many universities of India, having as its primary focus on India's national security. National defence is not only the responsibility of the armed forces but it is a responsibility of all the citizens of a nation. The aim of the defence studies is closely related to other spheres of life. Gujarat University offers Defence studies with different courses focusing upon national security in interdisciplinary encompassing disciplines like Geopolitics and Military Geography, Science and Technology, Economics of Defence, Conflict Management and Conflict Resolution.

2. SCOPE

M.Sc. in National Security & Defence Studies intends to equip the course participants with national and international legal framework governing the defence and security industry in the global, regional and Indian context. The course would further train the participants in developing a strong foundation in management and governance of the defence sector by drawing from experiences across the globe and comparing the same in Indian context. Hence, the course will focus not only defence personnel of the country but will attract numerous scholars across the globe who are engaged in learning, teaching and research related activities in defence and strategic studies. Recent move towards liberalisation and privatisation of defence industry also demands for a programme of this kind. With an objective of bridging the gap between Law and defence studies, the University intends to offer this Course.

SYLLABUS M.SC. IN NATIONAL SECURITY & DEFENCE STUDIES

Course Code	Course Title	Course Credit
NSDS01001	Introduction to National Security	04
NSDS01002	National Security and Defence Economics	04
NSDS01003	Conceptual aspects of War	04
NSDS01004	General Principles of Law	04
NSDS01005	International Security, Diplomacy and Conflict Resolution	04
NSDS01006	Defence Technology and Defence Laws	04
NSDS01007	International Institutions and Global Security	04
Total		28

Course No	Course Title	Course Credit
NSDS02001	Defence Management and Strategic Studies	04
NSDS02002	Defence Contracts and Tenders	04
NSDS02003	Defence Procurement Policies: National and International Perspectives	04
NSDS02004	Defence Laws and Policies in India	04
NSDS02005	Non Traditional Security Threats	04
NSDS02006	India Defence Mechanism	04
NSDS02007	International Relations Defence aspects	04
Total		28

Course No	Course Title	Course Credit
NSDS03001	Regional Security and Global Governance	04
NSDS03002	Terrorism and Counter Terrorism	04
NSDS03003	Aviation, Space and Maritime Security Laws	04
NSDS03004	Cyber Space, Cyber Security and National Defence	04
NSDS03005	Conflict Resolution and Peace Building	04
NSDS03006	Military Sociology	04
NSDS03007	Human Rights and Humanitarian Law	04
Total		28

SEMESTER IV

Course No	Course Title	Course Credit
NSDS04001	On-site Project Training / On Job Training 4 to 5 Months (Long Term)	10
NSDS04002	Summer Internship Placement 6 to 8 Weeks after First MBA-I	02
Total		12
	Total Credits of Two Years	96

P G DIPLOMA PROGRAMMES

IDSR offers short term courses of one year Post Graduate Diploma Programmes. The target of the programmes is those persons who want to increase their employability or improve their professional skills but did not have the opportunity to do so earlier in a formal manner. The focus of the programmes will be to impart the required knowledge and skills. These programmes will be conducted during the evening hours so that employed persons or students pursuing other programmes can also join without affecting their normal pursuits. In other words, even Post Graduate students pursuing other full time programmes can also join any of these programmes.

In-take : The minimum intake will be 10 and the maximum number will be 60 students per course.

No of Papers : 4 Credit :16 (Each Paper have 4 credit)

Duration : One year

Eligibility : Minimum graduation in any discipline (Students pursuing any part time or full time programme after their graduation/employed persons who are graduates).

One participant can undergo only one programme at a time.

Fees: Rs.20,000/- to be paid at the time of admission.

Examination fees - Rs. 575/- would be paid to the University separately for each university exam

Timings : Two hours per day, three-four days a week (7:00 pm to 9:00 pm)

Reservation : As per Gujarat University rules Examination Pattern : Internal

Examination: 20% (Two hours)

Continuous evaluation: 30% (Quizzes, Presentation, Attendance Assignments and Project)

Post Graduate Diploma in Aerospace and Aviation

The course would be divided into the two semesters.

Course Coverage:

Basic Aerodynamics and Aircraft Structure, Aviation Law and Aircraft Rules and Regulations, Air Transportation Safety and Security, Communication of Navigation System, Maintenance Practices, Spacecraft Technology and Propulsion, Role of UAVs in Air Transportation, Project Work

Post Graduate Diploma in Counter Terrorism Studies

The course would be divided into the two semesters.

Course Coverage:

Insight Terrorism threat in Indian Context, Financing of Terrorism, Psychology of terrorism, Research Methodology, Recent development In Counter Terrorism at Globe, Counter Terrorism for Chemical ,Biological, Radiological and Nuclear Terrorism, Terrorism and IT : Cyber Terrorism and Cyber Security, Dissertation

Post Graduate Diploma in Cyber Security

The course would be divided into the two semesters.

Course Coverage:

Introduction to Computer Systems, Indian Cyber Law, Introduction to Geopolitics and Military geography, Introduction to Defence landscape, Introduction to Defence Intelligence, Advance Computer network security, Hacking : An Art or Science, Project Work

Post Graduate Diploma in Defence Analyst

The course would be divided into the two semesters.

Course Coverage:

Defense Establishment In India, National Security And Media, Research Methodology, Technology And Journalism In Digital Age, India's Defence And Security Policy, Dissertation

P. G. Diploma in Military Geography

The course would be divided into the two semesters.

Course Coverage:

Understanding Geopolitics and Concept of War and Peace, International and Regional Organizations, Strategy and Practice of Indian Foreign Policy, International Communication, Information and Public Diplomacy, Science, Technology and Geopolitics, Defence and Intelligence in India's National Security, Arms Control, Nuclear Disarmament and Nuclear Futures, Project Work

Visits us:

Institute of Defence Studies and Research (IDSR)

Dr. APJ Abdul Kalam Centre for Extension, Research and Innovation (CERI), Park for Industrial Extension and Research (PIER), Gujarat University

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