

VAC119	RESHAPING INTELLIGENT BUSINESS AND INDUSTRY: CONVERGENCE OF AI AND ML
Contact Hours	30 Hours
Prerequisite	Nil

Course Description

This course introduces concepts, algorithms, and techniques of machine learning algorithm on different types of datasets, which covers data mining algorithms. The course focus on understanding the application domains of artificial intelligence that covers wide range of sectors such as banking, retail, airline, agriculture and many more. The importance of research writing is also analyzed that includes identifying the research gaps and making inferences from the literature.

Course Objectives

Students will be able to:

- have clear understanding of the problem-solving processes.
- gain idea of supervised, unsupervised and reinforcement learning.
- understand the real time applications of AI and Machine learning.
- understand the scope and significance of research.
- develop basic skills of generating research reports.

Course Outcomes

On completion of this course students will be able to:

CO 1: Analyze and design a real world problem for implementation and understanding the dynamic behavior of a system.

CO 2: Understanding the various domains of Artificial Intelligence techniques such as game playing techniques, Healthcare, Banking and Education System.

CO 3: Understanding different Machine learning Algorithms

CO 4: Understanding the importance of Research Writing

CO 5: Develop an understanding of the data cleaning and its related Issues.

Course Content

Module I: Artificial Intelligence and its Applications

8 hours

Introduction to Artificial Intelligence, Introduction to AI levels, Types of Artificial Intelligence, AI Use Cases and its applications: Health care ,Human resource, Banking for Fraud detection, Supply chain, Game Playing, Military, Aviation and Education Sector, Reasons supporting the boom of AI.

Module II: Basics of Machine Learning

Introduction to Machine learning, Pattern interestingness, Machine learning process, Data Preprocessing, Data cleaning, Frequent Itemset Mining: Apriori Algorithm: Finding Frequent Itemsets by Confined Candidate Generation, Cluster Analysis, and Requirement for cluster analysis, Clustering techniques: K mean, hierarchical Methods, Outliers.

Module III: Techniques and Applications of Machine Learning

8 hours

Classification-decision trees, Attribute Selection Measures, TreePruning, Machine learning Use cases and its applications: Travel and Hospitality, Health care and Life sciences, Manufacturing, Travel Industry.

Module IV: Research and Technical Writing

8 hours

Introduction to Research, Research Objectives, Scope and Significance of research, Identifying research gaps, Literature Review, Comparative Analysis, basic principles in technical writing, Inferences.

Practicum

1. Students gather and preprocess data from a real business problem, such as customer behaviour data or financial data.
2. Students select appropriate machine learning algorithms and build predictive models using the pre-processed data.
3. Students work on projects where they design AI-driven solutions for specific business problems, like demand forecasting or fraud detection.
4. Students explore the challenges and considerations for deploying AI and ML models in a business or industry context.



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Textbooks

1. Data Mining Concepts and Techniques, Jiawei Han, Micheline Kamber, Jianpei, Morgan Kaufmann.
2. Data Mining Techniques – Arun K. Pujari, Universities Press

Reference Books

1. Introduction to Data Mining – Pang-Ning Tan, Vipinkumar, Michael Steinbach, Pearson.
2. Data Mining Principles & Applications – T. V. Suresh Kumar, B. Eswar Reddy, Jagadish S. Kalimani, Elsevier.

	Evaluation Component	Weightage (%)
1	Activities	20
2	Project/Presentation	20
3	Attendance	10
4	End Term Examination	50



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K.R. MANGALAM UNIVERSITY
E D U C A T I O N F O R L I F E
(Recognized by UGC and a member of AIU)

Ref.No.:KRMU/Admin./Notice/2021-22/ 2663 (P) Dated: 05th December, 2021

NOTICE

This is to put for information that School of Engineering & Technology is offering Value-Added Course (VAC) for all interested students during Even Semester as per the following specifications.

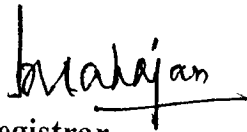
Course Code	Course Title	Coordinating Department / School	Duration
VAC118	Basic Software for Graduate Students	SOET	30 Hrs.
VAC119	Reshaping Intelligent Business and Industry: Convergence of AI and ML	SOET	30 Hrs.

Maximum 100 seats are available for the course.

Course Start Date: 02 January 2022

Course End Date: 19 March 2022

All interested students are required to confirm their registration with the Dean-School of Engineering & Technology latest by **28th December, 2021.**


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Copy to:

- Vice Chancellor : For kind information
- Dean (Academics Affairs)
- Controller of Examinations
- All Deans/ School Coordinators
- All Faculty Members/ Mentors
- Notice Board
- Office Copy


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ATTENDANCE SHEET

VAC COURSE FOR ACADEMIC YEAR 2021-22

COURSE CODE: VAC119

COURSE TITLE: RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:
CONVERGENCE OF AI AND ML

ROLL NO	NAME	PROGRAMME	SEMESTE R	2-Jan-22	3-Jan-22	4-Jan-22	7-Jan-22	9-Jan-22
2008790007	KHUSHI JAIN	B.A. (H) Psychology with spl in DH	IV	P	P	P	P	P
2101560024	AKASH KUMAR	MASTER OF COMPUTER APPLICATIONS	II	P	P	P	P	P
2101560017	AMAR SINGH	MASTER OF COMPUTER APPLICATIONS	II	P	P	P	P	P
2101560018	DEVENDRA KUMAR	MASTER OF COMPUTER APPLICATIONS	II	P	P	P	P	P
2012770004	DIYAA GUPTA	BACHELOR OF ARTS (HONS) Chinese with specialization in Digital Humanities	IV	P	P	P	P	P
2101560005	SAGAR AGGARWAL	MASTER OF COMPUTER APPLICATIONS	II	P	P	P	P	P

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K.R. Mangalam University
Sohna Road, Gurugram



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VAC COURSE FOR ACADEMIC YEAR 2021-22

COURSE CODE: VAC119

COURSE TITLE: RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:
CONVERGENCE OF AI AND ML

ROLL NO	NAME	10-Jan-22	11-Jan-22	14-Jan-22	15-Jan-22	16-Jan-22	18-Jan-22	21-Jan-22	24-Jan-22	28-Jan-22
2008790007	KHUSHI JAIN	P	P	P	A	P	P	P	P	P
2101560024	AKASH KUMAR	P	P	P	P	P	P	P	A	P
2101560017	AMAR SINGH	P	P	P	P	P	P	P	P	P
2101560018	DEVENDRA KUMAR	P	P	P	P	P	P	P	P	P
2012770004	DIYAA GUPTA	P	P	P	P	P	P	P	P	P
2101560005	SAGAR AGGARWAL	P	P	P	P	P	P	P	P	P

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COURSE CODE: VAC119

COURSE TITLE: RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:

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ROLL NO	NAME	30-Jan-22	1-Feb-22	4-Feb-22	5-Feb-22	6-Feb-22	7-Feb-22	8-Feb-22	11-Feb-22	12-Feb-22	14-Feb-22
2008790007	KHUSHI JAIN	P	P	P	P	P	P	P	P	P	P
2101560024	AKASH KUMAR	P	P	P	P	P	P	P	P	P	P
2101560017	AMAR SINGH	P	P	P	P	P	P	P	P	P	P
2101560018	DEVENDRA KUMAR	P	P	P	P	P	P	P	P	P	P
2012770004	DIYAA GUPTA	P	P	P	P	P	P	P	P	P	P
2101560005	SAGAR AGGARWAL	P	P	P	P	P	P	P	P	P	P

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COURSE CODE: VAC119

COURSE TITLE: RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:

CONVERGENCE OF AI AND ML

ROLL NO	NAME	15-Feb-22	19-Feb-22	22-Feb-22	25-Feb-22	1-Mar-22	6-Mar-22	12-Mar-22	14-Mar-22	15-Mar-22	18-Mar-22
2008790007	KHUSHI JAIN	P	P	P	P	P	P	A	P	P	P
2101560024	AKASH KUMAR	A	P	P	P	P	P	P	P	A	P
2101560017	AMAR SINGH	P	P	P	P	A	P	P	P	A	P
2101560018	DEVENDRA KUMAR	P	P	P	P	P	P	P	P	A	P
2012770004	DIYAA GUPTA	A	P	P	A	A	A	P	P	A	P
2101560005	SAGAR AGGARWAL	P	P	A	P	P	P	P	P	A	A

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VAC COURSE FOR ACADEMIC YEAR 2021-22

COURSE CODE: VAC119

COURSE TITLE: RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:
CONVERGENCE OF AI AND ML

ROLL NO	NAME	19-Mar-22	TOTAL	Present	Percentage
2008790007	KHUSHI JAIN	P	35	33	94.29
2101560024	AKASH KUMAR	A	35	31	88.57
2101560017	AMAR SINGH	P	35	33	94.29
2101560018	DEVENDRA KUMAR	A	35	33	94.29
2012770004	DIYAA GUPTA	P	35	30	85.71
2101560005	SAGAR AGGARWAL	P	35	32	91.43

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VALUE ADDED COURSE(VAC)

ACADEMIC YEAR 2021-22

COURSE CODE: VAC119

COURSE TITLE: RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:

CONVERGENCE OF AI AND ML

COURSE OFFERED BY: SOET

LIST OF STUDENTS COMPLETING THE COURSE

S.NO	SESSION	ROLL NO	NAME	PROGRAMME	SEMESTER	COURSE CODE	COURSE TITLE	SCHOOL
1	2021-22	2008790007	KHUSHI JAIN	B.A. (H) Psychology with spl in DH	SEMSTER IV	VAC119	RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:CONVERGENCE OF AI AND ML	SCHOOL OF HUMANITIES (SOHS)
2	2021-22	2101560024	AKASH KUMAR	MCA	SEMSTER II	VAC119	RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:CONVERGENCE OF AI AND ML	SCHOOL OF ENGINEERING & TECHNOLOGY (SOET)
3	2021-22	2101560017	AMAR SINGH	MCA	SEMSTER II	VAC119	RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:CONVERGENCE OF AI AND ML	SCHOOL OF ENGINEERING & TECHNOLOGY (SOET)
4	2021-22	2101560018	DEVENDRA KUMAR	MCA	SEMSTER II	VAC119	RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:CONVERGENCE OF AI AND ML	SCHOOL OF ENGINEERING & TECHNOLOGY (SOET)
5	2021-22	2012770004	DIYAA GUPTA	BA (HONS) Chinese with spl in DH	SEMSTER IV	VAC119	RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:CONVERGENCE OF AI AND ML	SCHOOL OF HUMANITIES (SOHS)
6	2021-22	2101560005	SAGAR AGGARWAL	MCA	SEMSTER II	VAC119	RESHAPING INTELLIGENT BUSINESS AND INDUSTRY:CONVERGENCE OF AI AND ML	SCHOOL OF ENGINEERING & TECHNOLOGY (SOET)

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This is to certify that **KHUSHI JAIN**, University Enrolment No **2008790007** of **B.A. (H) Psychology with spl in DH** programme has successfully qualified **VALUE ADDED COURSE VAC119 (RESHAPING INTELLIGENT BUSINESS AND INDUSTRY)** during Academic Session **2021-22 (Even Semester)**.

Date: 01.09.2022

Controller of Examination

hahajan

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This is to certify that **AKASH KUMAR**, University Enrolment No **2101560024** of **MASTER OF COMPUTER APPLICATIONS** programme has successfully qualified **VALUE ADDED COURSE VAC119 (RESHAPING INTELLIGENT BUSINESS AND INDUSTRY)** during Academic Session **2021-22 (Even Semester)**.

Date: 01.09.2022

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This is to certify that AMAR SINGH, University Enrolment No 2101560017 of MASTER OF COMPUTER APPLICATIONS programme has successfully qualified VALUE ADDED COURSE VAC119 (RESHAPING INTELLIGENT BUSINESS AND INDUSTRY) during Academic Session 2021-22 (Even Semester).

Date: 01.09.2022

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This is to certify that **DEVENDRA KUMAR**, University Enrolment No **2101560018** of **MASTER OF COMPUTER APPLICATIONS** programme has successfully qualified **VALUE ADDED COURSE VAC119 (RESHAPING INTELLIGENT BUSINESS AND INDUSTRY)** during Academic Session 2021-22 (Even Semester).

Date: 01.09.2022

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This is to certify that **DIYAA GUPTA**, University Enrolment No **2012770004** of **BACHELOR OF ARTS (HONS) Chinese with specialization in Digital Humanities** programme has successfully qualified **VALUE ADDED COURSE VAC119 (RESHAPING INTELLIGENT BUSINESS AND INDUSTRY)** during Academic Session **2021-22 (Even Semester)**.

Date: 01.09.2022

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This is to certify that **SAGAR AGGARWAL**, University Enrolment No **2101560005** of **MASTER OF COMPUTER APPLICATIONS** programme has successfully qualified **VALUE ADDED COURSE VAC119 (RESHAPING INTELLIGENT BUSINESS AND INDUSTRY)** during Academic Session **2021-22 (Even Semester)**.

Date: 01.09.2022

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