

Department of Electronic Science
Short Term Course Report 2021-22

Course Name: Artificial Intelligence
No of Beneficiaries: 17
Name of Coordinator: Ms. Afroj M Dange
Objective: To prepare students for innovation in the area of Artificial Intelligence, in two ways: firstly, the creation of innovative techniques and methods within the research area of Artificial Intelligence and, secondly, the application of these techniques and methods relative to social and business reality as well as creating processes and innovative computer solutions.

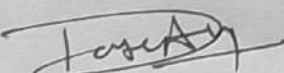
The Department of Electronic Science has organized Short Term Course on **"Artificial Intelligence"** in the academic year 2021-22. The lecture has been started on 15th December 2021 via online mode. There are 17 students enrolled in this course. The course has been taken by guest lecturer **Ms. S. Y Shivarkar, Head Department of Computer Applications, S M Joshi College, Hadapsar Pune 28.** under the guidance of the head of the department Mr. Belage S. A.

The lectures were conducted via an online google meet. At the end of the lecture, feedback was also taken. The examination was also conducted via Google form on the date 25th July 2022.

Students benefited from that course; The primary objective of this program is to enhance the skills of students in advanced domains of Information Technology keeping pace with the IT industry. The students may be exposed to the needs of the IT industry so that they can in turn nurture, educate and mold their career while they are still in college.

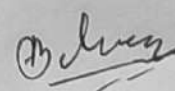
Outcomes: Students have gained extensive details of subject knowledge along with practical knowledge. Case studies and practical examples enrich concept on that topic and that will help to make projects.

Enclosed: 1] Photos of Short-term Course
2] BOS Meeting Report


Ms. Afroj M. Dange

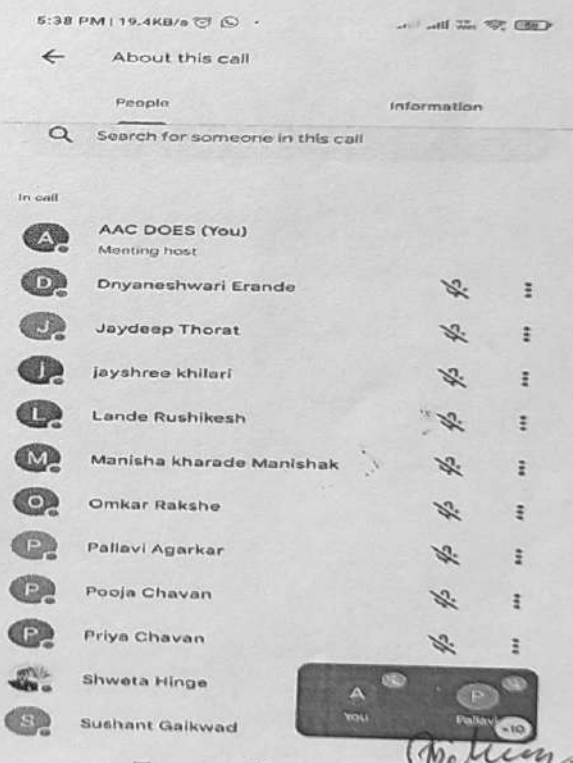
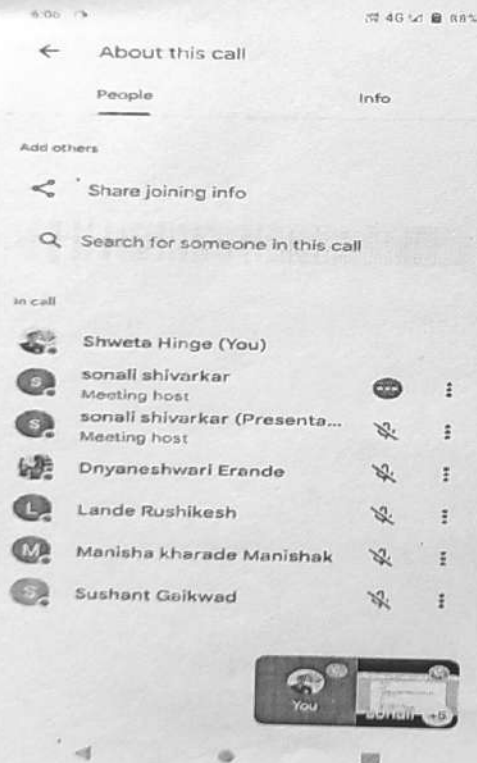
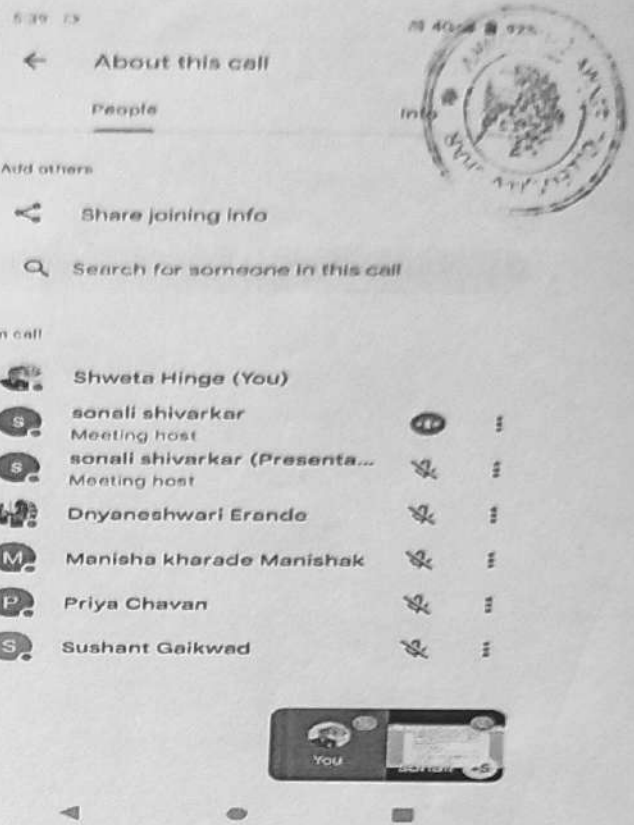
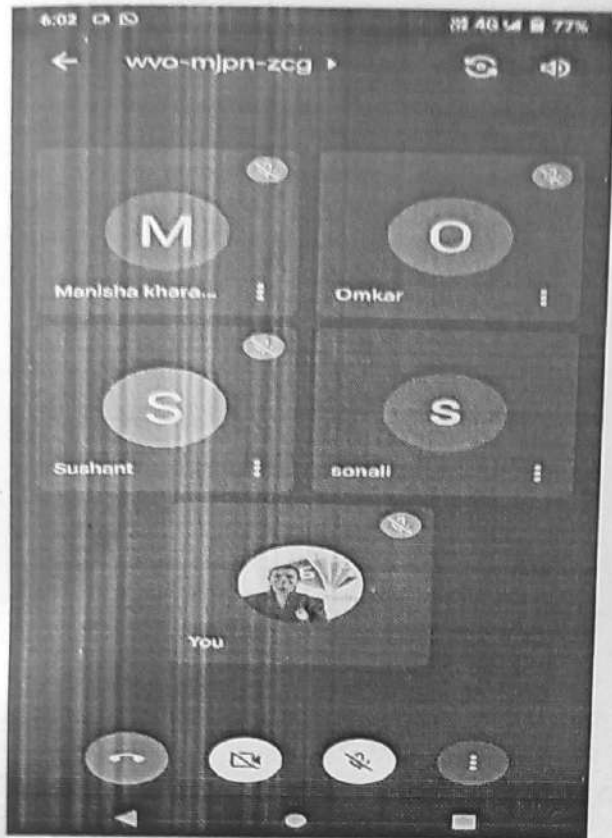
Course-Coordinator




Ms. Belage S. A.

Head of the Department

DOES, AAC MANCHAR



Head
Dept. of Electronics Science
A. A. College, Manchar

Rayat Shikshan Sanstha's
Annasaheb Awate Arts, Commerce & Hutatma Babu Genu Science College
Manchar, Pune

Department of Electronic Science

Short Term Course 2021-22

BOS Meeting Report

BOS meeting for short term course on Artificial Intelligence held on 13th November 2021 at 11.30 a.m. that are carried out through online mode during the COVID -19 lockdown periods.

The following persons were present in the meeting:

- 1] Mr. Belage S A, Chairman, DOES, AA College Manchar
- 2] Ms. Shivarkar S Y, Outside Expert (Attended Online)
- 3] Mrs. Patil S S, Outside Expert (Attended Online)
- 4] Ms. Dange A M, Member
- 5] Ms. Khilari J B, Member

At the onset, the Chairman welcomed the members to the in the meeting of BOS and placed the agenda for the deliberations of the members. The following deliberations were made as per the items of the circulated agenda:

1. Finalization of Syllabus for Short term course for FYBSc
2. Total number of credits and marks distribution for the course
3. Any other, with approval of the Chair

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the curriculum and syllabi.

The members approved the curricula for consideration of Faculty of Electronics. The matter regarding the implementation of this course for academic year 2021-22 was also discussed and it was decided that the new scheme can be implemented for FYBSc students for 3 credits on Artificial Intelligence.

Ms. Dange A M thanked all the members for their kind cooperation and meeting came to end up.



Head
Dept. of Electronic Science
A. A. College, Manchar

Rayat Shikshan Sanstha's
Annasaheb Awate Arts, Commerce & Hutatma
Babu Genu Science College Manchar, Pune

Syllabus

For
Short Term Course on Artificial Intelligence
in
Electronic Science

Prepared by

Board of Studies in Electronic Science

Members

- 1) **Miss. Sonali Shivarkar**
HOD, & Assistant Professor
S M Joshi College, Hadapsar 28
- 2) **Mrs. S S Patil**
Assistant Professor,
BJS ASC College, Wagholi Pune
- 3) **Mr. S.A Belage**
HOD & Associate Professor,
AAC Manchar
- 4) **Miss. A.M. Dange**
Assistant Professor,
AAC Manchar
- 5) **Miss. J. B. Khilari**
Assistant Professor,
AAC Manchar

DOES, AAC MANCHAR

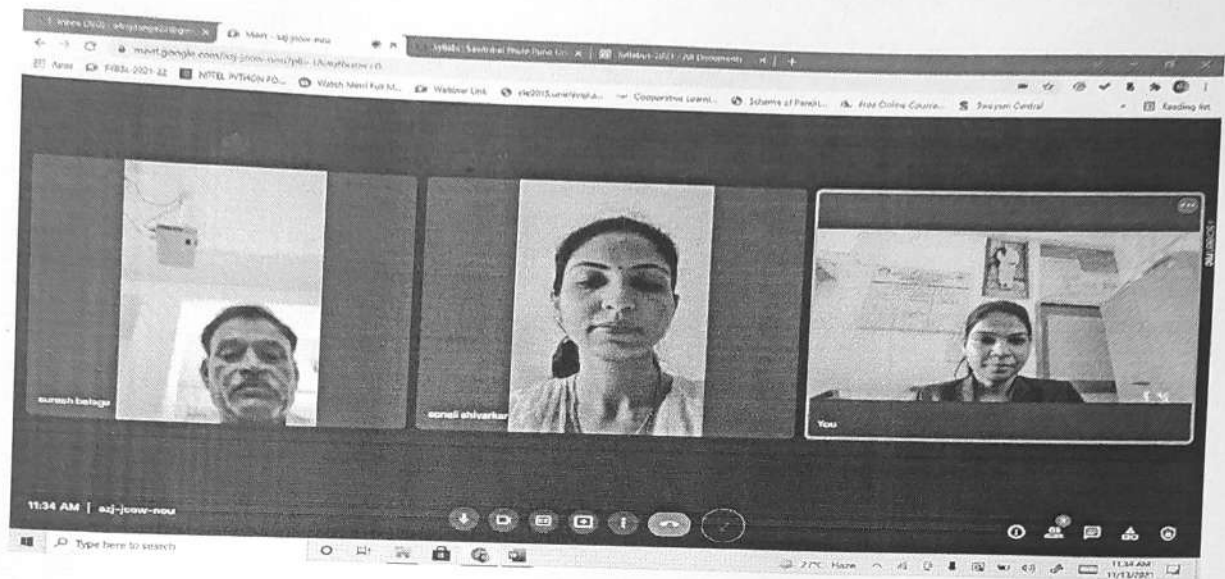
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Head

Dept. of Electronic Science
A. A. College, Manchar



[Signature]
Head
 Dept. of Electronic & Telecommunication Engineering
 A. A. College, Manchal

Estd.1966



* PRINCIPAL *
Dr. Kanade K. G.,
M.Sc., M.Phil., Ph.D.

"Education through self help is our Motto." KARMAVEER

Rayat Shikshan Sanstha's

**ANNASAHAB AWATE ARTS, COMMERCE &
HUTATMA BABU GENU SCIENCE COLLEGE**

Manchar, Tal. Ambegaon, Distt. Pune, Maharashtra - 410 503.

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ID. No. - PU/PN/ASC/017/1966 A.I.S.H.E. - C - 41221



* FOUNDER *
Padmabhushan
Dr. Karmaveer
Bhaurao Patil, D. Litt.

Ref. No. 703/2021-22

Date : 12/11/21

To,

Mrs. S. S. Patil,

Assistant Professor,

BJS ASC College, Wagholi

Pune

Subject: Invitation as a member of Board of Studies in the subject of short term course in Artificial Intelligence.

Respected Madam,

With reference to the subject mention above, we are happy to inform you that the department of Electronic Science of our college is going to start Short Term course in "Artificial Intelligence." The duration of course is one months. We cordially invite you as BOS member to design the syllabus for the course the meeting regarding the syllabus formation will be held on 13th November 2021 at 11.30a.m. We here by humbly request you spare the time at attend the meeting we also look forward to the positive response and co-operation from you.

Thanking you and with kind regards.

Yours Sincerely,



(Signature)
Principal

Annasaheb Awate College,
Manchar, Distt. Pune

Estd.1966



* PRINCIPAL *
Dr. Kanade K. G.
M.Sc., M.Phil., Ph.D.

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* FOUNDER *
Padmabhushan
Dr. Karmaveer
Bhaurao Patil, D. Litt.

Ref. No. 702/2021-22

Date: 12/11/21

To,

Ms. S. Y. Shivarkar,

Assistant Professor,

S M Joshi College, Hadapsar

Pune 411028

Subject: Invitation as a member of Board of Studies in the subject of short term course in Artificial Intelligence.

Respected Madam,

With reference to the subject mention above, we are happy to inform you that the department of Electronic Science of our college is going to start Short Term course in "Artificial Intelligence." The duration of course is one months. We cordially invite you as BOS member to design the syllabus for the course the meeting regarding the syllabus formation will be held on 13th November 2021 at 11.30a.m. We here by humbly request you spare the time at attend the meeting we also look forward to the positive response and co-operation from you.

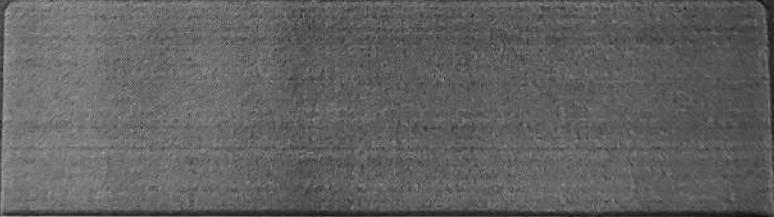
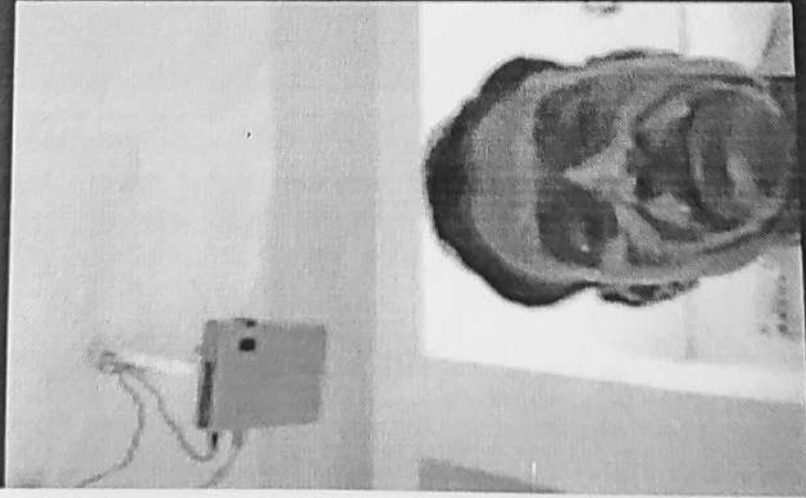
Thanking you and with kind regards.

Yours Sincerely,

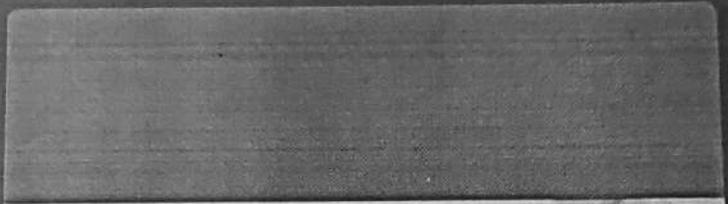


(Signature)
Principal

Annasaheb Awate College,
Manchar, Distt. Pune



sonali shivarkar



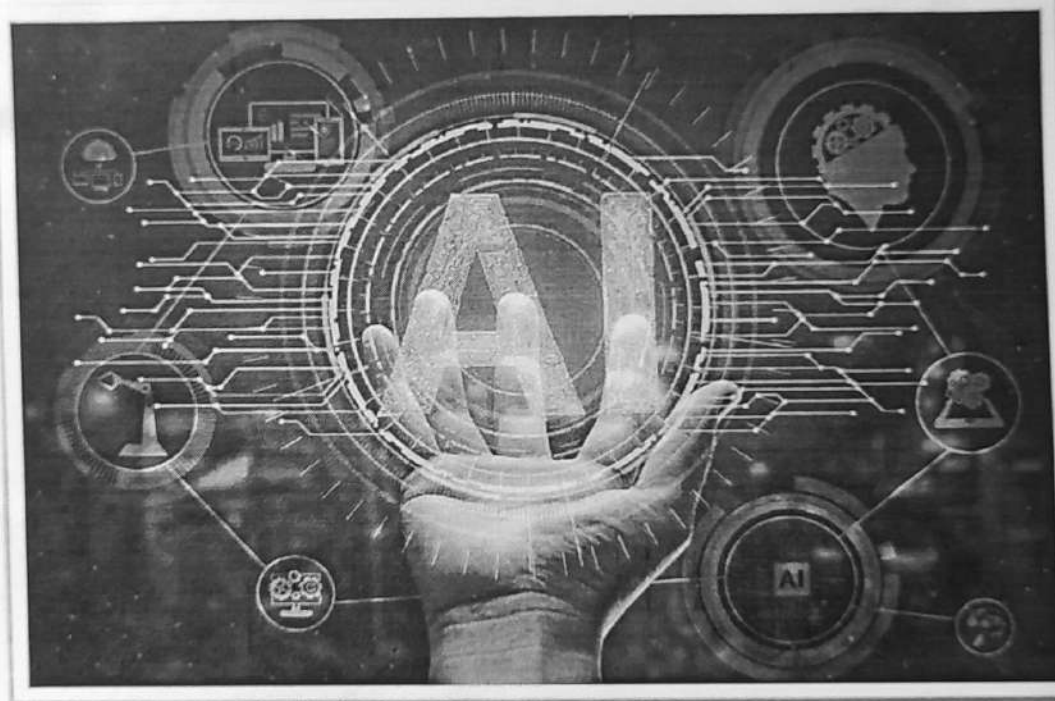
You



Rayat Shikshan Sanstha's

**Annasaheb Awate Arts, Commerce &
Hutatma Babu Genu Science College
Manchar, Pune**

**Short Term Course
on
Artificial Intelligence**



Conducted by

Department of Electronic Science

Rayat Shikshan Sanstha's
Annasaheb Awate Arts, Commerce &
Hutatma Babu Genu Science College
Manchar, Pune

Short Term Course for
F.Y.B.Sc. Students
In Electronic Science

Academic Year 2021-22

Conducted by
Department of Electronic Science

Total Duration Hrs: 30

Rayat Shikshan Sanstha's
**Annasaheb Awate Arts, Commerce &
Hutatma Babu Genu Science College**
Manchar, Pune

Syllabus

For
Short Term Course on Artificial Intelligence
in
Electronic Science

Prepared by

Board of Studies in Electronic Science

Members

- 1) *Miss. Sonali Shivarkar***
HOD, & Assistant Professor
S M Joshi College, Hadapsar-28
- 2) *Mrs. S S Patil***
Assistant Professor,
BJS ASC College, Wagholi Pune
- 3) *Mr. S.A Belage***
HOD & Associate Professor,
AAC Manchar
- 4) *Miss. A.M. Dange***
Assistant Professor,
AAC Manchar

Artificial Intelligence		Total Lectures: 30
Credits: 2		
Course Objectives: <ul style="list-style-type: none"> • To learn various types of algorithms useful in Artificial Intelligence (AI). • To convey the ideas in AI research related to emerging technology. • To introduce ideas and techniques underlying the design of intelligent computer systems 		
Course Outcomes: After successful completion of this course, learner will be able to: <ul style="list-style-type: none"> • Apply the suitable algorithms to solve AI problems • Identify and apply suitable Intelligent agents for various AI applications • Build smart system using different informed search / uninformed search or heuristic approaches • Represent complex problems with expressive language of representation 		
	Course Contents	
Unit I	Introduction to Artificial Intelligence	6 Hrs
	1.1 Introduction to AI 1.2 Comparison of AI, Machine Learning, Deep Learning 1.3 Applications of AI 1.4 AI Techniques 1.5 Intelligent Agents, Agents and Environments, Structure of Agents	
Unit II	Problems, Problem Spaces and search	8 Hrs
	2.1 Defining problem as a State Space Search 2.2 Production System 2.3 Problem Characteristics 2.4 Search & Control Strategies 2.5 Problems – Water Jug problem, Missionary Cannibal Problem, Block words Problem, Monkey & Banana problem	
Unit III	Searching Algorithms	8 Hrs
	3.1 Uninformed Search Algorithms/Blind Search Techniques 3.1.1 Breadth-first Search 3.1.2 Depth-first Search 3.2 Informed (Heuristic) search Techniques 3.2.1 Generate-and-test 3.2.2 Simple Hill Climbing 3.2.3 Best First Search 3.2.4 Constraint Satisfaction 3.2.5 Means End Analysis	


Unit IV	Knowledge Representation	8 Hrs
	4.1 Definition of Knowledge	
	4.2 Types of knowledge (Procedural and Declarative knowledge)	
	4.3 Approaches to Knowledge Representation	
	4.4 Knowledge representation using Propositional and Predicate	
	4.5 Conversion to clause form	
	4.6 Resolution in Propositional logic	

Reference Books:

- 1) Artificial Intelligence, Tata McGraw Hill, Elaine Rich and Kevin Knight
- 2) Computational Intelligence, Eberhart, Elsevier, ISBN 9788131217832
- 3) Artificial Intelligence: A New Synthesis, Nilsson, Elsevier, ISBN 9788181471901
- 4) Introduction to Artificial Intelligence and Expert System, Dan Patterson, Prentice Hall of India Pvt. Ltd., New Delhi, 1997
- 5) Artificial Intelligence: A Modern Approach, Russel & Norvig, Pearson Education
- 6) Introduction to Machine Learning, Ethem Alpaydin, PHI

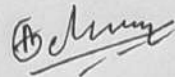
E-References:

- 1) <https://www.oracle.com/in/chatbots/what-is-a-chatbot/>
- 2) <https://www.dataversity.net/case-study-predictive-analytics-and-data-science-keep-an-eye-on-the-weather/>
- 3) <https://www.senseforth.ai/conversational-ai-case-studies/SBI-Cards/>

for 
Head
 Dept. of Electronics Science
 A. A. College, Manchur

Rayat Shikshan Sanstha's
Annasaheb Awate Arts, Commerce & Hutatma Babu Genu Science College
Manchar, Pune
Department of Electronic Science
FYBSc Short Term Course 2021-22
Artificial Intelligence
List of Students

Sr. No	Roll No	Student Name	Gender	Phone No.
1	3001	AGARKAR PALLAVI BHAGAWAT	Female	9975065446
2	3002	BAGAD APEKSHA SOPAN	Female	7058634551
3	3003	CHASKAR SAURABH TANAJI	Male	7410710211
4	3004	CHAVAN PRIYA VIJAY	Female	9665631077
5	3005	DAMSE PRIYANKA DEEPAK	Female	9172430045
6	3006	DAUND HARSHADA DNYANESHWAR	Female	7057203183
7	3007	ERANDE DNYANESHWARI VITTHAL	Female	9623620123
8	3008	GAIKWAD SUSHANT SUNIL	Male	8010268011
9	3009	JADHAV ADITYA BHARAT	Male	9172224650
10	3010	KASABE RUTUJA GAUTAM	Female	8767628235
11	3011	KHARADE MANISHA MANJERAM	Female	8530663854
12	3012	LANDE RUSHIKESH ARJUN	Male	7498607726



 for Head
 Dept. of Electronic Science
 A. A. College, Manchar


Rayat Shikshan Sanstha's
Annasaheb Awate Arts, Commerce & Hutatma Babu Genu Science College
Manchar, Pune
Department of Electronic Science

NOTICE

Date – 01/ 12 /2021

All students of F.Y.B.Sc. are hereby informed that the Short-Term Course on **“Artificial Intelligence”** will commence from 15/12/2021. All the students of this course should remain present for the classes and practical as per time-table. It is mandatory for all enrolled students.



Coordinator


Principal,
Principal
A A C Manchar, Pune
Annasaheb Awate College,
Manchar, Dist. Pune

Rayat Shikshan Sanstha's
Annasaheb Awate Arts, Commerce & Hutatma Babu Genu Science
College Manchar, Pune
Short Term Course on Artificial Intelligence
For
First Year B.Sc. Electronic Science

Time-Table

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.30 am to 10.15 am			Theory	Theory	Practical	


for **Head**
Dept. of Electronics Science
A. A. College, Manchar

Estd. 1966



※ PRINCIPAL ※
Dr. Kanade K. G.
M.Sc., M.Phil., Ph.D.

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※ FOUNDER ※
Padmabhushan
Dr. Karmaveer
Bhaurao Patil, D. Litt.

Ref. No. 820/2021-22

Date : 10/12/2021

To,

Prof. S. Y Shivarkar

Assistant Professor,

S M Joshi College Hadapsar,

Pune 411028

Subject: Invitation for guest lecture

Dear Madam,


With reference to the subject mention above, we are happy to inform you that the department of Electronic Science of our college is going to start Short Term course in "**Artificial Intelligence.**" The duration of course is One months.

We take immense pleasure in having you as a guest lecturer for the Artificial Intelligence from **15 December 2021** at **4.30PM** via **online mode**.

Please consider this letter as a humble invitation and kindly revert back with a positive response. It would be deeply appreciated.

Thanking you and with kind regards.

Yours Sincerely,


Principal

Annasaheb Awate College,
Manchar, Dist. Pune

Artificial Intelligence

Sr. No	Roll No	Student Name	Gender	Phone No.
1	3001	AGARKAR PALLAVI BHAGAWAT	Female	9975065446
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5	3005	DAMSE PRITYANKA DEEPAK	Female	9172430045
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11	3011	KHARADE MANISHA MANJERAM	Female	8530663854
12	3012	LANDE RUSHIKESH ARJUN	Male	7498607726
13		HINGE SHEWTA		
14		POTA CHAVAN		
15		MORE HARSH		
16		THORAT JAYDEEP		
17		RAKSHE OMKAR		



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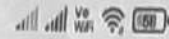
In call

- Shweta Hinge (You)
- sonali shivarkar
Meeting host
- sonali shivarkar (Presenta...
Meeting host
- Dnyaneshwari Erande
- Manisha kharade Manishak
- Priya Chavan
- Sushant Gaikwad



AAC_DOES_Short Term 2021-22_Artificial Intelligence

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← About this call

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In call

A AAC DOES (You)
Meeting host

D Dnyaneshwari Erande

J Jaydeep Thorat

j jayshree khilari

L Lande Rushikesh

M Manisha kharade Manishak

O Omkar Rakshe

P Pallavi Agarkar

P Pooja Chavan

P Priya Chavan

Shweta Hinge

S Sushant Gaikwad

Shweta Hinge (You)

S sonali shivarkar
Meeting host

S sonali shivarkar (Presenta...
Meeting host

D Dnyaneshwari Erande

L Lande Rushikesh

M Manisha kharade Manishak

S Sushant Gaikwad



Rayat Shikshan Sanstha's

Annasaheb Awate Arts, Commerce & Hutatma Babu Genu Science College Manchar Pune

Department of Electronic Science
Short Term Course 2021-22
Certificate Course in Artificial Intelligence
Class: F.Y.B.Sc.
Exam Result
Date: 25 July 2022

Sr. No	Roll No	Student Name	Marks out of 60	Grades
1	3001	AGARKAR PALLAVI BHAGAWAT	36	B
2	3004	CHAVAN PRIYA VIJAY	54	A
3	3006	DAUND HARSHADA DNYANESHWAR	52	A
4	3007	ERANDE DNYANESHWARI VITTHAL	60	O
5	3008	GAIKWAD SUSHANT SUNIL	48	A
6	3009	JADHAV ADITYA BHARAT	36	B
7	3011	KHARADE MANISHA MANJERAM	50	A
8	3012	LANDE RUSHIKESH ARJUN	38	B
9	3073	HINGE SHWETA NARAYAN	60	O
10	3047	MORE HARSH	50	A
11	3054	RAKSHE OMKAR	56	O



Course Coordinator


Head
Dept. of Electronic Science
A. A. College, Manchar