


S.S.E.S.A's
Science College
Congress Nagar, Nagpur

Certificate course in Groundwater Exploration
Session 2017-2018

Notice

It is hereby notified to all the students of Certificate course in Groundwater Exploration that their classes will be commenced from 3rd April 2018 regularly. Therefore, they are asked to attend the classes on regular basis. All the classes will be running simultaneously with the UC regular classes as mentioned in the timetable.


Course Coordinator

Shri Shivaji Education Society Amravati's

Science College

Congress Nagar, Nagpur

Department of Geology

Certificate and Diploma course in Groundwater Exploration (Hydrogeology)

Session 2017-2018

During the session classes and practical's were carried out. In this session field visit to college campus were done. Nearby wells were taken for the well inventory. The field tour was taken under the guidance of Dr. Khadse and Mr. Paunikar.

A well inventory is a comprehensive record of all wells within a particular area, typically maintained for purposes of water management, resource assessment, and environmental monitoring. This inventory includes detailed information about each well, such as its location, depth, construction details, and usage. Key components often recorded include:

1. **Location Data:** Geographic coordinates and physical addresses, ensuring accurate mapping and accessibility.
2. **Construction Details:** Information on well diameter, depth, casing, and the materials used, which is crucial for understanding the well's capacity and durability.
3. **Water Quality:** Data on the quality of water, including contamination levels and other chemical or physical properties, vital for assessing water safety and usability.
4. **Usage Information:** Records of how the well is used, such as for agricultural, industrial, or domestic purposes, which helps in managing water resources effectively.
5. **Historical Data:** Records of historical data on water levels, flow rates, and any maintenance or repairs conducted.

Maintaining a well inventory is essential for managing water resources, planning infrastructure, and ensuring sustainable use of groundwater. It helps in

monitoring trends, assessing resource availability, and addressing issues related to water quality and well maintenance.

Action Taken:

In this session 22 students were enrolled for the certificate course in Groundwater Exploration, All the students were qualified with good grades. Eight students were present in the certificate course in the session 2016-2017. For the diploma course same students were carried out and in the session 2017 - 2018, 8 Eight students successfully qualified Diploma course in Groundwater Exploration.



Photograph taken during the class.

CERTIFICATE COURSE IN
GROUNDWATER EXPLORATION (HYDROGEOLOGY)

- Definition of Precipitation, percolation, runoff, evaporation and transpiration Hydrologic cycle.
- Occurrence and distribution of groundwater. zones of aeration and saturation, water table, cone of depression and recharge.
- Influent and effluent seepages and springs.
- Elementary ideas about groundwater flow.
- Hydrologic characteristics of different types of rocks.
- Aquifers and their classification.
- Groundwater management : Artificial and natural groundwater recharge
- Groundwater provinces of India. Groundwater conditions in different parts of Maharashtra.
- Concept of watershed management.
- Preparation of hydrogeological maps, statistical analysis of hydrogeological data and use of computer based technique for data analysis and interpretation.

Practical: 1. Problems on aquifer properties of groundwater.

2. Well inventory

3. water table contour map.

Teaching Plan
Certificate Course (15 weeks)
Groundwater Exploration (Hydrogeology)

Weeks	Theory/ Practical	Hours	Content
Week I	Theory I	I	Definition of Precipitation, Percolation.
	Theory II	II	Brief idea about Precipitation, Percolation (Continued)
	Theory III	III	Definition of runoff, evaporation and transpiration
Week II	Theory I	IV	Brief idea about Runoff
	Theory II	V	Brief idea about evaporation
	Theory III	VI	Brief idea about transpiration.
Week III	Theory I	VII	Introduction to hydrological cycle
	Theory II	VIII	Hydrogeology cycle.
	Theory III	IX	Hydrogeology cycle.(Continued)
Week IV	Theory I	X	Zone of aeration and saturation.
	Theory II	XI	Zone of aeration and saturation,
	Theory III	XII	Zone of aeration and saturation.
Week V	Theory I	XIII	Zone of aeration and saturation,(Continued)
	Theory II	XIV	Water table
	Theory III	XV	Cone of depression
Week VI	Theory I	XVI	Recharge of groundwater
	Theory II	XVII	Elementary idea about groundwater flow.
	Theory III	XVIII	Elementary idea about groundwater flow.(Continued)
Week VII	Theory I	XIX	Hydro geologic characteristics of different types of rock
	Theory II	XX	Hydro geologic characteristics of different types of rock.(Continued)
	Theory III	XXI	Aquifer and their classification.
Week VIII	Theory I	XXII	Aquifer and their classification.(Continued)
	Theory II	XXIII	Groundwater management: Artificial recharge.
	Theory III	XXIV	Groundwater management: Artificial recharge.(Continued)
Week IX	Theory I	XXV	Groundwater management: natural groundwater recharge.
	Theory II	XXVI	Groundwater management: natural groundwater recharge.(Continued)
	Theory III	XXVII	Groundwater province of India.

Week X	Theory I	XXVIII	Groundwater province of India.(Continued)
	Theory II	XXIX	Groundwater conditions in different parts of Maharashtra.
	Theory III	XXX	Groundwater conditions in different parts of Maharashtra.(Continued)
Week XI	Theory I	XXXI	Concept of watershed management.
	Theory II	XXXII	Concept of watershed management.(continued)
	Theory III	XXXIII	Preparation of hydrogeological maps
Week XII	Theory I	XXXIV	Preparation of hydrogeological maps (continued)
	Theory II	XXXV	statistical analysis of hydrogeological data
	Theory III	XXXVI	Detail information about Aqua meter/ Resistivity meter
Week XIII	Practical I	XXXVII	Problems on aquifer properties of groundwater
	Practical I	XXXVIII	Problems on aquifer properties of groundwater
	Practical III	XXXIX	Well inventory
Week XIV	Practical I	XXXX	Well inventory
	Practical II	XXXXI	Water table contour map
	Practical III	XXXXII	Water table contour map
Week XV	Practical I	XXXXIII	Aqua meter
	Practical II	XXXXIV	Resistivity meter
	Practical III	XXXXV	Resistivity meter

SSESAMt's Science College Nagpur

Skill Base Course (2017-2018)

Department of Geology

Certificate Course in Groundwater Exploration (Hydrology)

Time table

10 am – 11 am	Thursday	Theory
	Friday	Theory
	Saturday	Practical

Shri Shivaji Education Society Amravati's
Science College,
Congress Nagar, Nagpur-12
CERTIFICATE COURSE (THEORY)

Time: 1Hours

Max. Marks-100

1. What is Hydrologic Cycle and describe its components. 20 Marks.
2. Describe the Aquifer Types and name them. 20 Marks.
3. Describe the Deccan trap Ground Water Provinces. 20 Marks.
4. Describe the Morphometric analysis and give its importance. 20 Marks.
5. Describe the Hydrologic Properties of rocks. 20 Marks.

S.S.E.S AMTI'S SCIENCE COLLEGE, CONGRESS NAGAR,
NAGPUR-440 012

ADD-ON COURSE IN HYDROGEOLOGY
Certificate and Diploma course in Groundwater Exploration

Results 2017-18

Certificate course in Groundwater Exploration		
Sr. No	Name	Grade
1	A.D.Katore	A+ <i>Akatorre</i>
2	B.P.Bharme	A+ <i>Bharmes</i>
3	D.R.Umredkar	A+ <i>Dikar</i>
4	Ku.A.B.Ghormade	A <i>Aghormade</i>
5	Ku.L.P.Patle	A+ <i>Patle</i>
6	Ku.P.P.Chopker	A <i>Chopker</i>
7	Ku.R.R.Meshram	A <i>Rmeshram</i>
8	Ku.S.I.Shelke	A <i>Shelke</i>
9	Ku.S.P.Raut	A+ <i>Raut</i>
10	Ku.S.S.Thakur	B <i>Shakur</i>
11	Ku.S.U. Gedam	A+ <i>Gedam</i>
12	Ku.V.P.Barde	A <i>Barde</i>
13	M.A.Sakharwade	A+ <i>Sakharwade</i>
14	M.D.Joshi	A+ <i>Joshi</i>
15	P.D.Dalal	A+ <i>Dalal</i>
16	P.P.Sarise	A <i>Sarise</i>
17	P.V.Khadatkar	B <i>Khadatkar</i>
18	R.J.Abraham	A+ <i>Abraham</i>
19	R.J.Thakare	A+ <i>Thakare</i>
20	R.K.Bansod	A+ <i>Bansod</i>
21	R.T.Lokhande	A+ <i>Lokhande</i>
22	T.V.Yadav	A+ <i>Yadav</i>
Diploma course in Groundwater Exploration		
1	Ku. P.R.Somkuwar	A <i>Somkuwar</i>
2	Ku.A.R.Kamble	A <i>Kamble</i>
3	Ku.A.S.Patil	A+ <i>Patil</i>
4	Ku.M.Dongre	A <i>Dongre</i>
5	Ku.P.C.Gedam	A+ <i>Gedam</i>
6	Ku.S.N.Dandaker	A <i>Dandaker</i>
7	Ku.S.S.Jattalwar	A+ <i>Jattalwar</i>
8	M.C.Chakate	B <i>Chakate</i>

Note: - 1) Above successful students are requested take their certificate on 2/7/2018 and successful students in certificate course can take admission in diploma course for the next session of 2018-19.

Dr. S.P. Khadse
Dr. S.P. Khadse

Date: 30/06/2018

Place: Nagpur

Head of Department, Geology



Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur

[Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1st of August, 1923 & presently a State University governed by Maharashtra Public Universities Act, 2016(Mah. Act No. VI of 2017)]

University Skill Development Centre (under Board of Lifelong Learning and Extension)

Certificate

No.

Shri/Smt./Ku. *B. B. Shakur* is

awarded with Certificate on successful completion of the course titled

Groundwater Exploration in

session *2017-2018* under **Jeevan Shikshan Abhiyan** conducted for

45 hours from *1st July 2018* to *30th August 2018* by the **Board of Lifelong**

Learning & Extension in collaboration with Department of Botany,

S.S.E.S. Amt's Science College Congress Nagar, Nagpur, 440012.

He/She has passed the Examination with Grade

Total Credits Earned : 01

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Principal
SSES Amt's Science College
Congress Nagar, Nagpur-12

A. amtekar

Course Co-ordinator
SSES Amt's Science College
Congress Nagar, Nagpur-12

phatke

Director
Board of Lifelong Learning
and Extension, RTMNU, Nagpur

Shri Shivaji Education Society, Amravati's
SCIENCE COLLEGE
Congress Nagar, Nagpur-12 (M.S.)

India Accredited with CGPA of 3.51 at 'A+' grade by NAAC, Bangalore A
"College with Potential for Excellence" identified by UGC New Delhi.
Institutional Member of APQN Recognized Centre for Higher Learning and
Research Mentor College under 'PARAMARSH Scheme', UGC, New Delhi

SSES Amravati's Science College, Congress Nagar, Nagpur-12
DEPARTMENT OF GEOLOGY

Short Term Course under Jeevan Shikshan Abhiyan on No Grant
Basis (2017-18)

Course Title: Certificate Course in Groundwater Exploration
(Hydrogeology)
Feedback Form

Name of Volunteer.....

Please rate the following aspects of the program on a scale from 1 to 4, with 1 being "Poor" and 4 being "Excellent"

Q.1 Relevance of the event

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

Q.2 Clarity of Instructions

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

Q.3 Engagement of Instructor

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

Q.4 Interaction and Participation

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

Q.5 Benefits of Program

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4

