

B. L. D. E Association's
S. B. Arts and K. C. P. Science College,
Vijayapur



Department of PG Studies in Chemistry

**SKILL BASED VALUE ADDED COURSE
FOR
PG STUDENTS OF CHEMISTRY
(For the Academic Year 2016-17)**

**Course Name: "Training on Principles and
Handling of Major Instruments"**

(Course Code: SBKCP/PGCHEM-01)

REPORT

SYLLABUS

Course Name: "Training on Principles and Handling of Major Instruments"

Course Code: SBKCP/PGCHEM-01

Total Duration of Teaching: 30 Hours

Course Contents:

I. OBJECTIVE

II. SCOPE

III. SYLLABUS

IV. DURATION OF THE COURSE

V. EXAMINATION PATTERN

VI. REFERENCES

I. OBJECTIVE:

The main objective is make students employees of the university and affiliated colleges to understand the basic principles and handling of some major instruments found in the chemistry laboratory. Handling of these instruments will help the students to carry out some of the important projects during their M.Sc course. It will also help the students to join industries, once they complete their M.Sc programme.

II. SCOPE:

Students, teachers and employees of the affiliated colleges and university who are interested in this course will be benefitted. The course will be initially, would be offered in the university and affiliated colleges.

III. SYLLABUS:

1. Basic principle and application of Rotary Evaporator. **5 hrs**
Principle, Instrument parts and their functions-chiller, vacuum pump, condenser, water bath. Uses of the instrument for synthetic chemists and its advantages over other conventional techniques.
2. Principle and use of UV-VIS Spectrophotometer. **5 hrs**
Principle, fundamentals of UV-VIS spectroscopy and instrumentation.
3. Handling of FTIR Instrument. **5 hrs**
Introduction, instrumentation, identification of various functional groups-alkanes. Alkenes, aromatics, carboxylic acids, carbonyl compounds (aldehydes, ketones and esters).

4. Principle and use of Flame Photometer. 5 hrs
Theory, principle and applications of flame photometer.
5. Use of BOD and COD incubator. 5 hrs
Theory, uses and applications of the COD and BOD incubator.
6. Chromatography techniques like Thin Layer Chromatography and Column Chromatography. 5 hrs
Introduction, principles, stationary and mobile phase systems RF value calculation, techniques of development, visualization and applications. Selection of column width, length, stationary phase and mobile phase. Separation of various plant pigments and organic compounds.

PRACTICAL:

1. Separation of plant pigments and organic compounds using thin layer chromatography and column chromatography.
2. Recording of IR spectra of some important organic compounds and assigning their characteristics peaks.
3. Recording of UV-VIS spectra of some fluorescent compounds.
4. Determination of BOD and COD of different water samples.
5. Isolation of caffeine from Tea powder.

IV. DURATION OF THE COURSE:

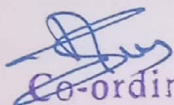
30 days and the course will be conducted on every Sunday.

V. EXAMINATION PATTERN:

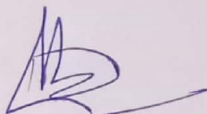
Theory	Practical		Total
Exam Marks	Exam Marks	Viva	
50	40	10	100

VI. REFERENCES:

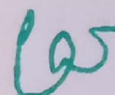
1. Introduction to chromatography-theory and practice-V.K. Srivastava and K.k. Srivastava, S. Chand Company Ltd., IV Ed (1991).
2. Basic Concepts of analytical chemistry- S.M. Khopkar, New Age International Publishers, II Ed (1998).
3. Analytical Chromatography-G.R. Chatwal, Himalaya Publishing House, VII Ed (1998).
4. Introduction to Spectroscopy. Pavia, Lampman and Kriz, 3rd edition, Thomson.
5. Spectroscopy, B.P. Straughan and S. Walker, John Wiley & Sons Inc., New York, Vol. 1 & 2, 1976.
6. Vibration Spectroscopy Theory and Applications, D. N. Satyanarayana, New Age International, New Delhi..



Co-ordinator,
P. G. Department of Chemistry, S.B.Arts & K.C.P.Science College,
SB Arts & KCP Science College
BIJAPUR - 586101



IQAC, Co-ordinator
Vijayapur.



Principal,
S. B. Arts & K. C. P. Sc. College,
Vijayapur - 586103.



**B. L. D. E. ASSOCIATION'S
S. B. ARTS AND K. C. P. SCIENCE COLLEGE,**

SHRI B. M. PATIL ROAD (Solapur Road), VIJAYAPUR

ACCREDITED at 'A' Grade in 3rd Cycle by NAAC

Phone: (08352) – 261766, (08352) 262770 Extn. 2223, 2224

Fax: 08352 – 261766 E-mail: bldeasbkcp@gmail.com

Web: www.bldeasbkcp.org



REF./ ಕ್ರಮಾಂಕ : _____

Date / ದಿನಾಂಕ: 01-Aug-2016

Department of PG Studies in Chemistry

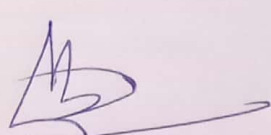
Value Added Course: 2016-2017

NOTICE

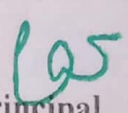
The PG Department of Chemistry is conducting value added course on “Training and handling major equipments”. All the students are hereby inform to enroll your names in the PG department of chemistry before 6th of August 2016 classes will commence on 7th of August 2016.


**Coordinator
Co-ordinator,**

**P. G. Department of Chemistry,
PG Studies in Chemistry,
S.B. Arts & K.C.P. Science College,
VIJAYAPUR - 586101**


LOAC, Co-ordinator


**S.B.Arts & K.C.P.Science College,
Vijayapur.**



Principal

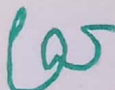
**Principal,
S. B. Arts & K. C. P. Sc. College,
Vijayapur - 586103.**

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S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry
Time Table for value added course 2016-17

Time (Theory)	SUNDAY	Remarks
10.00 to 11.00	SDL	
11.00 to 12.00	SNU	
Time (Practical)		
2.00 to 6.00	MBK	Batch-1
	MSY	Batch-2


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BIJAPUR - 586101


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Vijayapur - 586103.

B.L.D.E. Association's
S.B. Arts and K.C.P. Science College Vijayapur

P.G. Dept of Chemistry
List of Students for value added course 2016-17

Sl. No	RCU No.	Name of the Student	Signature
01	CH162001	Akshata S. Nandagaon	
02	CH162002	Ameen G. Bagalkot	
03	CH162003	Anand P Dhale	
04	CH162004	Annapurna S. Ullagadi	
05	CH162005	Anupam M. Boramma	
06	CH162007	Basavaraj N. Dabale	
07	CH162008	Basavaraj S. Mulage	
08	CH162009	Indirabai B. Shirashyad	
09	CH162010	Ishwar S Patne	
10	CH152001	Abdul.QadarGogi	
11	CH152002	Akash.S.J	
12	CH152003	Keerati.C.Vastrad	
13	CH152004	Laxmi.I.Hunnur	
14	CH152005	Laxmi.S.Saboji	
15	CH152006	Mammad Haneep.M.T	
16	CH152007	Mammad .Irfhan.	
17	CH152008	Jyoti.P.Chavan	
18	CH152009	Pratibha.S.Dhavalgi	
19	CH152010	Preeti.S.Biradar	
20	CH152011	Rakesh.R.Joshi	
21	CH152012	Ranjitha.K.D	
22	CH152013	Sakkubai.S.Gani	
23	CH152014	Sandhya.B.Keshetti	
24	CH152015	Sangmesh.B.P	
25	CH152016	Saniya.Bagayat	
26	CH152017	Savitri.K.Huded	
27	CH152018	Shivkumar.S.G	
28	CH152019	Shreya.B	
29	CH152020	Shruti.H.Bhandarkar	
30	CH152021	Umesh.Basappa.	

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S.B.Arts & K.C.P. Science College,
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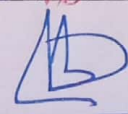
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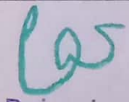
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S.B. Arts and K.C.P. Science College Vijayapur
 P.G. Dept of Chemistry

List of Students for value added course 2016-17 (attendance)

Sl. No	RCU No.	Name of the Student	7/8/16	14/8/16	21/8/16	28/8/16	11/9/16	18/9/16	25/9/16	9/10/16	16/10/16	30/10/16	6/11/16	13/11/16	20/11/16	27/11/16	4/12/16	11/12/16
01	CH162001	Akshata S. Nandagaon	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
02	CH162002	Ameen G. Bagalkot	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
03	CH162003	Anand P Dhale	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD	AD
04	CH162004	Annapurna S. Ullagadi	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
05	CH162005	Anupam M. Boramma	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
06	CH162007	Basavaraj N. Dabale	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD
07	CH162008	Basavaraj S. Mulage	BM	BM	BM	BM	BM	BM	BM	BM	BM	BM	BM	BM	BM	BM	BM	BM
08	CH162009	Indirabai B. Shirashyad	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS
09	CH162010	Ishwar S Patne	IP	IP	IP	IP	IP	IP	IP	IP	IP	IP	IP	IP	IP	IP	IP	IP
10	CH152001	Abdul.QadarGogi	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ	AQ
11	CH152002	Akash.S.J	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
12	CH152003	Keerati.C.Vastrad	KV	KV	KV	KV	KV	KV	KV	KV	KV	KV	KV	KV	KV	KV	KV	KV
13	CH152004	Laxmi.I.Hunnur	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH
14	CH152005	Laxmi.S.Saboji	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
15	CH152006	Mammad Haneep.M.T	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH	MH
16	CH152007	Mammad .Irfhan.	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI	MI
17	CH152008	Jyoti.P.Chavan	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC	JPC
18	CH152009	Pratibha.S.Dhavalgi	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD	PD
19	CH152010	Preeti.S.Biradar	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
20	CH152011	Rakesh.R.Joshi	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ	RJ
21	CH152012	Ranjitha.K.D	RK	RK	RK	RK	RK	RK	RK	RK	RK	RK	RK	RK	RK	RK	RK	RK
22	CH152013	Sakkubai.S.Gani	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG
23	CH152014	Sandhya.B.Keshetti	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK
24	CH152015	Sangmesh.B.P	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
25	CH152016	Saniya.Bagayat	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
26	CH152017	Savitri.K.Huded	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK	SK
27	CH152018	Shivkumar.S.G	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG	SG
28	CH152019	Shreya.B	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
29	CH152020	Shruti.H.Bhandarkar	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH	SH
30	CH152021	Umesh.Basappa.	UB	UB	UB	UB	UB	UB	UB	UB	UB	UB	UB	UB	UB	UB	UB	UB


Co-ordinator
 P.G.Department of Chemistry
 S.B.Arts & K.C.P. Science College,
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 S.B. Arts and KCP Science College
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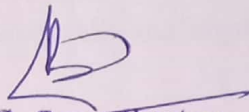
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S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry
Notice for value added course 2016-17

NOTICE

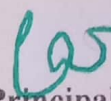
The PG Department of Chemistry is conducting exam (Theory and Practical) for value added course "Training on Principles and Handling of Major Instruments" On 26 March 2017. All the students are hereby informed to attend the exam.



**Coordinator
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S.B.Arts & K.C.P.Science College,
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Principal
Principal,
S. B. Arts & K. C. P. Sc. College,
Vijayapur - 586103.

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S.B. Arts and K.C.P. Science College Vijayapur

P.G. Dept of Chemistry

Theory Test for value added course 2016-17

Date: 26-03-2017

Time: 9.00 to 11.00

Duration: 2 hrs

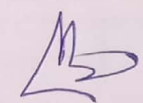
I. Answer the following questions

10×5=50 Marks

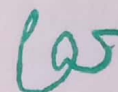
1. Discuss the basic principle and application of rotary evaporator.
2. Explain the instrumentation of UV-VIS spectrophotometry with neat diagram.
3. Discuss the theory, uses and applications of flame photometer.
4. Briefly explain the principle of TLC.
5. Write a short note on : a) Stationary phase
b) Mobile phase
c) Column width and length


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S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry

Practical Test for value added course 2016-17

Date: 26-03-2017

Time: 2.00 to 6.00

Duration: 4 hrs

1. Determine the amount of DO in given water sample
by BOD method

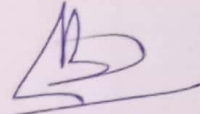
40 Marks

Viva: 10 Marks

Total=50 Marks

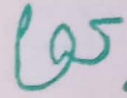


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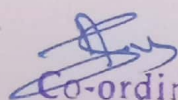
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P.G. Dept of Chemistry

Marks list for value added course 2016-17

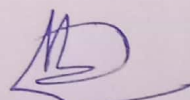
Maximum Marks: 100

Sl. No	RCU No.	Name of the Student	Marks		
			Theory(50)	Practical(50)	Total
01	CH162001	Akshata S. Nandagaon	41	45	86
02	CH162002	Ameen G. Bagalkot	35	44	79
03	CH162003	Anand P Dhale	33	41	74
04	CH162004	Annapurna S. Ullagadi	37	46	83
05	CH162005	Anupam M. Boramma	43	44	87
06	CH162007	Basavaraj N. Dabale	40	45	85
07	CH162008	Basavaraj S. Mulage	41	47	88
08	CH162009	Indirabai B. Shirashyad	39	41	80
09	CH162010	Ishwar S Patne	39	45	84
10	CH152001	Abdul.QadarGogi	43	42	85
11	CH152002	Akash.S.J	48	39	87
12	CH152003	Keerati.C.Vastrad	38	46	84
13	CH152004	Laxmi.I.Hunnur	42	39	81
14	CH152005	Laxmi.S.Saboji	46	42	88
15	CH152006	Mammad Haneep.M.T	39	45	84
16	CH152007	Mammad .Irfhan.	39	44	83
17	CH152008	Jyoti.P.Chavan	43	41	84
18	CH152009	Pratibha.S.Dhavalgi	48	46	94
19	CH152010	Preeti.S.Biradar	38	44	82
20	CH152011	Rakesh.R.Joshi	42	45	87
21	CH152012	Ranjitha.K.D	46	47	93
22	CH152013	Sakkubai.S.Gani	39	41	80
23	CH152014	Sandhya.B.Keshetti	39	45	84
24	CH152015	Sangmesh.B.P	43	42	85
25	CH152016	Saniya.Bagayat	48	39	87
26	CH152017	Savitri.K.Huded	38	46	84
27	CH152018	Shivkumar.S.G	42	39	81
28	CH152019	Shreya.B	46	42	88
29	CH152020	Shruti.H.Bhandarkar	39	43	82
30	CH152021	Umesh.Basappa.	43	43	86



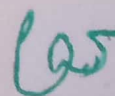
Co-ordinator,

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Value added course 2016-17

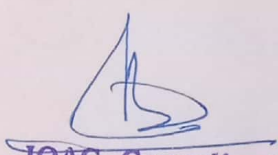
COURSE OUTCOME

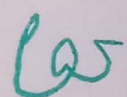
Skill based value added course on "Training on Principles and Handling of major Instruments" for PG Students of Chemistry for the Academic Year 2016-17.

In this course students were able to handle major instruments like Rotary Evaporator, UV-VIS Spectrophotometer, FTIR, Flame Photometer and they were also able to test the water by BOD and COD method.

These instruments helped to the students to carry out some of the important projects during their M.Sc course. It also helped the students to join in various industries.


Co-ordinator
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S.B.Arts & K.C.P. Science College,
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B. L. D. E. Association's

S.B. ARTS & K.C.P. SCIENCE COLLEGE, VIJAYAPUR

(Re-Accredited by NACC at 'A' Level in 3rd Cycle)

Internal Quality Assurance Cell Initiative

VALUE ADDED COURSE

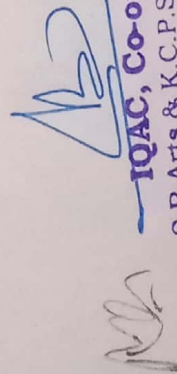
Certificate

This is to certify that Mr./Ms. Akshata. S. Nadagaon

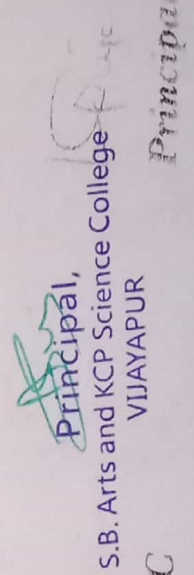
has Completed the Value Added Course on Training on Principals and handling

Conducted by the Department of P.G. Department of Chemistry during the

Year 2016-17


— **IQAC, Co-ordinator**
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Vijayapur.

Head of the Department **Co-Ordinator, IQAC**


Principal,
S.B. Arts and KCP Science College
VIJAYAPUR
Principal





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Certificate

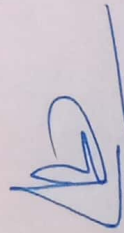


This is to certify that Mr./Ms. Ameen . G. Bagalkot

has Completed the Value Added Course on Training on Principles & handling of Major

Conducted by the Department of P. G. Chemistry Instruments during the

Year 2016-17



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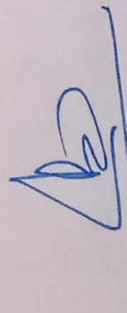
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This is to certify that Mr./Ms. Anand .P. Dhale

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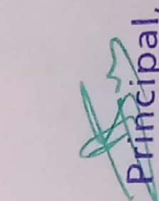
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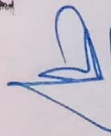
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This is to certify that Mr./Ms. Annapurna . S. Ulagadi

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This is to certify that Mr./Ms. Anupam . M. Boramma

has Completed the Value Added Course on Training on Principles & Handling of Major Instruments during the

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Year 2016-17

[Signature]

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