

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 2017-18)**

**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. Recoding 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..



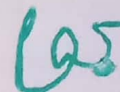
Co-ordinator,

P. G. Department of Chemistry
SB Arts & KCP Science College
BIJAPUR - 586101



IQAC, Co-ordinator

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



Principal,

SB 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-2017

Department of PG Studies in Chemistry

Value Added Course: 2017-2018

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 12th of August 2017 classes will commence on 13th of August 2017.

Coordinator,

P. G. Department of Chemistry,
PG Studies in Chemistry College
VIJAYAPUR - 586101

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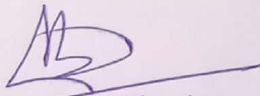
Principal

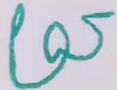
Principal,
S. B. Arts & K. C. P. Sc. College,
Vijayapur - 586103.

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S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry
Time Table for value added course 2017-18

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


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BIJAPUR - 586101


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S.B.Arts & K.C.P.Science College,
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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 Vijayapur
P.G. Dept of Chemistry
List of Students for value added course 2017-18

Sl. No	RCU No.	Name of the Student	Signature
01	CH172001	Akshay Wadageri	
02	CH172003	Basavaraj A Patil	
03	CH172004	Bhavan B Kulkarni	
04	CH172005	Geeta Kuntoji	
05	CH172006	Geeta Tuppada	
06	CH172007	Hajimastan Mujawar	
07	CH172008	Katyayani S Sirur	
08	CH172009	Kavita Angadi	
09	CH172010	Malashri S Rokadi	
10	CH172012	Manjunath B Patil	
11	CH172013	Neha Taslim	
12	CH172014	Pooja Kengal	
13	CH172015	Pooja Pujari	
14	CH172016	Praveenkumar Danganavar	
15	CH172017	Rakshata R Yandolli	
16	CH172018	Sheshidhar Mamane	
17	CH172019	Shweta Pande	
18	CH172020	Siddayya Pujari	
19	CH172021	Sneha B Bagalkot	
20	CH172022	Sulegavi Jayalaxmi	
21	CH172023	Vinuta Khened	
22	CH162001	Akshata S. Nandagaon	
23	CH162002	Ameen G. Bagalkot	
24	CH162003	Anand P Dhale	
25	CH162004	Annapurna S. Ullagadi	
26	CH162005	Anupam M. Boramma	
27	CH162007	Basavaraj N. Dabale	
28	CH162008	Basavaraj S. Mulage	
29	CH162009	Indirabai B. Shirashyad	
30	CH162010	Ishwar S Patne	

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

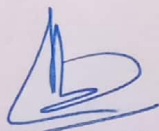
UGC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur.

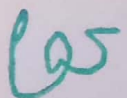
Principal,
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S.B. Arts and K.C.P. Science College Vijayapur
 P.G. Dept of Chemistry
 List of Students for value added course 2017-18 (attendance)

Sl. No	RCU No.	Name of the Student	13/8/17	17/8/17	18/8/17	30/8/17	10/9/17	24/9/17	8/10/17	15/10/17	22/10/17	5/11/17	12/11/17	19/11/17	26/11/17	3/12/17	10/12/17
01	CH172001	Akshay Wadageri	A	A	A	A	A	AB	A	A	A	A	A	A	A	A	A
02	CH172003	Basavaraj A Patil	BP	BP	BP	BP	BP	BP	BP	BP	BP	BP	BP	BP	BP	BP	BP
03	CH172004	Bhavan B Kulkarni	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK
04	CH172005	Geeta Kuntoji	GK	GK	GK	GK	GK	GK	GK	GK	GK	GK	GK	GK	GK	GK	GK
05	CH172006	Geeta Tuppad	GT	GT	GT	GT	GT	GT	GT	GT	GT	GT	GT	GT	GT	GT	GT
06	CH172007	Hajimastan Mujawar	HJ	HJ	HJ	HJ	HJ	HJ	HJ	HJ	HJ	HJ	HJ	HJ	HJ	HJ	AB
07	CH172008	Katyayani S Sirur	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS	KS
08	CH172009	Kavita Angadi	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA
09	CH172010	Malashri S Rokadi	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR	MSR
10	CH172012	Manjunath B Patil	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP	MBP
11	CH172013	Neha Taslim	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
12	CH172014	Pooja Kengal	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	CH172015	Pooja Pujari	P	P	P	P	P	P	P	P	P	P	AB	P	P	P	P
14	CH172016	Praveenkumar Danganavar	P	P	P	P	P	P	P	P	AB	P	P	P	P	P	P
15	CH172017	Rakshata R Yandolli	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
16	CH172018	Sheshidhar Mamane	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM
17	CH172019	Shweta Pande	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP
18	CH172020	Siddayya Pujari	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP
19	CH172021	Sneha B Bagalkot	AB	B	B	B	B	B	B	B	B	B	B	B	B	B	B
20	CH172022	Sulegavi Jayalaxmi	AB	B	B	B	B	B	B	B	B	B	B	B	B	B	B
21	CH172023	Vinuta Khened	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
22	CH162001	Akshata S. Nandagaon	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN
23	CH162002	Ameen G. Bagalkot	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG	AG
24	CH162003	Anand P Dhale	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP
25	CH162004	Annapurna S. Ullagadi	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU	ASU
26	CH162005	Anupam M. Boramma	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB	AMB
27	CH162007	Basavaraj N. Dabale	B	B	B	B	B	B	B	B	B	B	B	B	B	AB	B
28	CH162008	Basavaraj S. Mulage	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
29	CH162009	Indirabai B. Shirashyad	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS
30	CH162010	Ishwar S Patne	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS	IS

Co-ordinator
 P.G. Department of Chemistry
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Principal,
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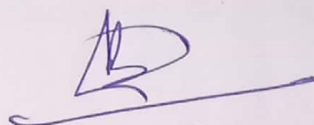
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Notice for value added course 2017-18

NOTICE

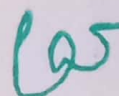
The PG Department of Chemistry is conducting exam (Theory and Practical) for value added course "Training on Principles and Handling of Major Instruments" On 25 March 2018. All the students are hereby informed to attend the exam.



Coordinator,
P. G. Department of Chemistry,
PG Studies in Chemistry
BIJAPUR - 586101



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Principal

Principal,
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P.G. Dept of Chemistry

Theory Test for value added course 2017-18


Date: 25-03-2018

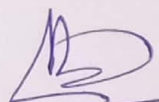
Time: 9.00 to 11.00


Duration: 2 hrs

I. Answer the following questions 10×5=50 Marks

1. Write a short note on vacuum pump, condenser and water bath.
2. Explain the instrumentation of UV-VIS spectrophotometry with neat diagram.
3. Discuss the theory, uses and applications of flame photometer.
4. Write a short note on stationary phase and Mobile phase.
5. Briefly explain the principle of column chromatography.


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P.G. Dept of Chemistry

Practical Test for value added course 2017-18

Date: 25-03-2018

Time: 2.00 to 6.00

Duration: 4 hrs

1. Assign the IR spectra of given organic compounds

40 Marks


Viva: 10 Marks

Total=50 Marks



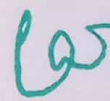
Co-ordinator,

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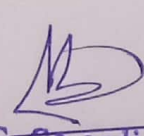
P.G. Dept of Chemistry

Marks list for value added course 2017-18

Maximum Marks: 100

Sl. No	RCU No.	Name of the Student	Marks		
			Theory(50)	Practical(50)	Total
01	CH172001	Akshay Wadageri	39	41	80
02	CH172003	Basavaraj A Patil	39	45	84
03	CH172004	Bhavan B Kulkarni	43	42	85
04	CH172005	Geeta Kuntoji	48	39	87
05	CH172006	Geeta Tuppada	38	46	84
06	CH172007	Hajimastan Mujawar	40	45	85
07	CH172008	Katyayani S Sirur	41	47	88
08	CH172009	Kavita Angadi	39	41	80
09	CH172010	Malashri S Rokadi	39	45	84
10	CH172012	Manjunath B Patil	43	42	85
11	CH172013	Neha Taslim	40	39	79
12	CH172014	Pooja Kengal	41	46	87
13	CH172015	Pooja Pujari	39	39	78
14	CH172016	Praveenkumar Danganavar	39	42	81
15	CH172017	Rakshata R Yandolli	39	45	84
16	CH172018	Sheshidhar Mamane	39	46	85
17	CH172019	Shweta Pande	43	39	82
18	CH172020	Siddayya Pujari	39	42	81
19	CH172021	Sneha B Bagalkot	43	43	86
20	CH172022	Sulegavi Jayalaxmi	48	43	91
21	CH172023	Vinuta Khened	38	47	85
22	CH162001	Akshata S. Nandagaon	39	41	80
23	CH162002	Ameen G. Bagalkot	39	45	84
24	CH162003	Anand P Dhale	43	42	85
25	CH162004	Annapurna S. Ullagadi	48	39	87
26	CH162005	Anupam M. Boramma	38	41	79
27	CH162007	Basavaraj N. Dabale	40	45	85
28	CH162008	Basavaraj S. Mulage	41	42	83
29	CH162009	Indirabai B. Shirashyad	39	39	78
30	CH162010	Ishwar S Patne	39	46	85


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P.G. Dept of Chemistry
Value added course 2017-18

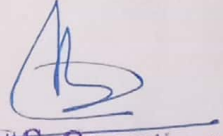
COURSE OUTCOME

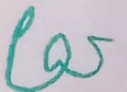
Skill based value added course on "Training on Principles and Handling of major Instruments" for PG Students of Chemistry for the Academic Year 2017-18.

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
P.G. Department of Chemistry
S.B.Arts & K.C.P. Science College,
Vijayapur-586101.


IQAC, Co-ordinator
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Principal,
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B. L. D. E. Association's

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

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

Internal Quality Assurance Cell Initiative



VALUE ADDED COURSE

Certificate


This is to certify that Mr./Ms. AKshay Wadageri

has Completed the Value Added Course on Training on principles and Handling of major

Instruments

Conducted by the Department of Pg Chemistry during the

Year 2017-18


IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Department, Vijayapur.



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

Co-Ordinator, IQAC



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Internal Quality Assurance Cell Initiative



VALUE ADDED COURSE

Certificate

This is to certify that Mr./Ms. Basavaraj A Patil

has Completed the Value Added Course on Training on principles and Handling of Major instruments

Conducted by the Department of PG Chemistry during the

Year 2017-18

Head of the Department

IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur. Co-Ordinator, IQAC

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



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

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Internal Quality Assurance Cell Initiative

VALUE ADDED COURSE

Certificate

This is to certify that Mr./Ms. Bhavan B Kulkarni

has Completed the Value Added Course on Training on principles and Handling of major

Conducted by the Department of Pg chemistry during the

Year 2017-18

IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur.

Head of the Department

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

Principal



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VALUE ADDED COURSE

Certificate

This is to certify that Mr./Ms. Geta Kuntoji

has Completed the Value Added Course on Training on principles and Handling of major instruments

Conducted by the Department of PY chemistry during the

Year 2017-2018

IQAC, Co-ordinator
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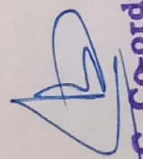
Certificate

This is to certify that Mr./Ms. Gita Tuppad

has Completed the Value Added Course on Training on principles and Handling of major instruments.

Conducted by the Department of Pg chemistry during the

Year 2017-18


IQAC, Co-ordinator

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Vijayapur. **Co-Ordinator, IQAC**



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

Head of the Department