



S. G. V. C. Vidya Prasarak Trust's,

**Matoshri Gangamma Veerappa Chiniwar  
Arts, Commerce & Science College,**

**MUDDEBIHAL-586212.** Dist. Vijayapur (Karnataka)

(Accredited with CGPA of 3.31 on seven point scale at 'A+' Grade)

☎ : 08356220329

FAX : 08356220329

\* email : princmgvc@gmail.com \* www.mgvcmbi.in \*

Ref. No. : .....

Date : 2022-23

### Certificate

This is to certify that following are the list of Experiential Learning  
through Project work/ Field Work/ Internship during the year 2022-23

**Co-ordinator,**

Internal Quality Assurance Cell

S.G.V.C. Arts, Commerce & Science College

MUDDEBIHAL-586212. Dist: Vijayapur

**PRINCIPAL,**

M.G.V.C. Arts, Commerce & Science College  
MUDDEBIHAL-586212. Dist: Vijayapur.





# RANI CHANNAMMA UNIVERSITY BELAGAVI

THE COURSE STRUCTURE & SYLLABUS OF UNDER GRADUATE

BACHELOR OF SCIENCE

CHEMISTRY

1<sup>ST</sup> TO 6<sup>TH</sup> Semesters

w.e.f.

Academic Year 2020-21 and Onwards  
Under

CHOICE BASED CREDIT SYSTEM (CBCS)

PRINCIPAL,

M. G. V. C. Arts, Com. & Science College  
MUDDEBIHAL - 586212.



### 3. CHEMISTRY (OPTIONAL)

#### SIXTH SEMESTER B.Sc. COURSE

Chemistry

Paper-I

Code : 14BSCCHET61

Teaching Hours : 50 Hours

#### **Inorganic Chemistry:**

##### **UNIT-I**

##### **Coordination compounds -II**

09 hours

Crystal field theory(CFT) with reference to octahedral, distorted octahedral(Jahn-Teller distortion), tetrahedral and square planar complexes, calculation of crystal field stabilization energy, factors affecting  $10Dq$ , consequences of crystal field splitting on ionic radii of  $M^{+2}$  ions, enthalpy of hydration of  $M^{+2}$  ions, explanation of colour and magnetic properties of magnetic complexes, limitations of crystal field theory, calculation of magnetic moment using Gouy's method,

##### **UNIT-II**

##### **Metal-ligand Equilibria:**

05 hours

Stability constant, stepwise and overall formation constants, trends in step wise constants, factors affecting the stability of the metal complexes with reference to the nature of metal ion and ligand.

**Chelates** - definition, characteristics, factors influencing the stability of metal chelates and importance of chelates.

##### **UNIT-III**

##### **Organometallic Chemistry**

03 hours

Introduction, classification of organotransition metal complexes, 18 electron rule with respect to  $[Fe(CO)_5]$ ,  $[Ni(CO)_5]$ ,  $[Mn(CO)_5]^+$ , ferrocene, structure and bonding in metal olefins (Zeise's Salt).

#### **Organic Chemistry:**

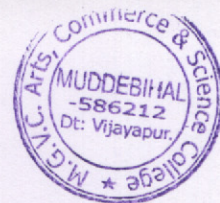
##### **UNIT-I**

##### **Carbohydrates**

05 hours

Haworth and conformational formulae of glucose and fructose, mutarotation and its mechanism, osazone formation, Killani's synthesis, Ruff's degradation, epimers and epimerisation with respect to monosaccharides, interconversions of glucose and fructose.





04. Determination and saponification value of groundnut/coconut oil.
05. Determination of Iodine value of groundnut/coconut oil.
06. Estimation of glucose by Benedict's reagent.

**B. Physical Chemistry Experiments**

01. Determination of concentration of given acids mixture ( $\text{HCl} + \text{CH}_3\text{COOH}$ ) conductometrically using standard  $\text{NaOH}$ .
02. Verification of Beer-Lambert's Law by colorimetric method and calculation of molar extension coefficient of  $\text{FeCl}_3$ .
03. Verification of Beer-Lamberts Law by colorimetric method and calculation of molar extension coefficient of copper sulphate.
04. Determination of concentration of strong acid  $\text{HCl}$  by potentiometric titration against strong solution of  $\text{NaOH}$ .
05. Potentiometric titration of  $\text{FeSO}_4$  against  $\text{K}_2\text{Cr}_2\text{O}_7$ .
06. Determination of the solubility and solubility product of sparingly soluble salts (Silver halides) by potentiometrically.
07. Determination of heat of neutralization of strong acid by strong base by water equivalent calorimetric method.
08. Determination of dissociation constant of weak acid (acetic acid) Potentiometrically.

**Note: For examination:**

50% students will perform organic estimation and 50% students will perform Physical.

**CHEMISTRY PRACTICALS**  
**SIXTH SEMESTER B.Sc. COURSE**  
Chemistry Practical  
Paper-II  
Code : 14BSCCHEP62

Total number of hours per week: 04  
Internal Assessment=10 Marks  
Total No. of hours per Semester: 52  
Practicals: 40 Marks

- A. Gravimetric experiments: Internal assessment-10 Marks  
and Experiment-30 Marks**





01. Estimation of barium as Barium sulphate.
02. Estimation of aluminium as aluminium oxide.
03. Estimation of Iron as ferric oxide.
04. Estimation of lead as lead sulphate.

**B. Dissertation/Tour report: 10 marks**

The Dissertation/Tour report should be submitted at the time of **Chemistry Practical-VIb**.

Student shall be assigned either dissertation or Tour report. The topics for dissertation shall be selected either from the V and VI semester theory syllabi or general topics related to chemistry. For Tour report, student shall visit an Industry or Academic/Research institutions like BARC, IISc etc.

**Note: For examination:**

Gravimetric experiments and Dissertation/Tour report are Compulsory.

#### **4. ELECTRONICS (OPTIONAL)**

B. Sc. SEMESTER – VI

Electronics (Optional) PAPER – I

Total Teaching hours: 50, Teaching hours per week: 4 hours

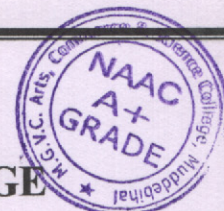
**ELE- 6.1: DIGITAL COMMUNICATION, SATELLITE COMMUNICATION & TELEVISION**

##### **UNIT - I : PULSE AND DIGITAL COMMUNICATION:**

Introduction – sampling theorem, types- PAM, PWM, PPM, PCM – quantization. Digital communication systems – introduction, Digital modulations (FSK, PSK, and ASK). Advantage and disadvantages of digital transmission, Applications. Characteristics of data transmission circuits – Shannon limit for information capacity, Bandwidth requirements, Data transmission speed, Noise, Cross talk, Echo Suppressors, Distortion and Equalizer.

8Hrs.+2Hrs.Problems =10hrs





**M.G.V.C ARTS, COMMERCE AND SCIENCE COLLEGE**  
**MUDDEBIHAL**  
**Department of Chemistry**

**STUDENTS PROJECT WORK 2022-23**

**Topic: Sterilization of Water by using Bleaching Powder**

**CLASS: B.Sc VI SEM**

**BATCH-1**

Sl. No	Reg. No	Name Of The Student
1	S2031601	Abhishek Nanagoud Patil
2	S2031602	Aisha Dawal Tumbagi
3	S2031603	Aishwarya Sanganagouda Patil
4	S2031605	Akshayakumar B Patil
5	S2031606	Ambika R Shankinamath
6	S2031610	Anusha B Dodamani
7	S2031614	Bhagyalakshmi K Kashetti
8	S2031618	Danamma Malingayya Hiremath

**Staff Member In-Charge**

**HOD**

**Head, Dept. of Chemistry,**  
**M.G.V.C. Arts, Com. & Science College,**  
**MUDDEBIHAL - 586212.**

**Co-ordinator,**

**Internal Quality Assurance Cell**  
**M.G.V.C. Arts, Commerce & Science College**  
**MUDDEBIHAL-586212. Dist: Vijayapur.**

**PRINCIPAL,**

**M. G. V. C. Arts, Com. & Science College**  
**MUDDEBIHAL - 586212.**





**M.G.V.C ARTS, COMMERCE AND SCIENCE COLLEGE  
MUDDEBIHAL**

**Department of Chemistry**

**STUDENTS PROJECT WORK 2022-23**

**Topic: To Study the Presence of Insecticides and Pesticides in  
Various Fruits and Vegetables**

**CLASS: B.Sc VI SEM**

**BATCH-2**

Sl. No	Reg. No	Name Of The Student
1	S2031619	Druvakumar Nayak
2	S2031623	Kavya Nalatawad
3	S2031627	Lalita Kareppa Beli
4	S2031629	Mahmad Arif Haveli ✓
5	S2031639	Ningamma Ningappa Kalari
6	S2031642	Nisarga Vishwanath Patil
7	S2031647	Pooja Sharanappa Kumbar
8	S2031649	Prajwal Prakash Madiwalar

**Staff Member In-Charge**

**HOD**

*Head, Dept. of Chemistry,*  
**M.G.V.C. Arts, Com. & Science College,**  
**MUDDEBIHAL - 586212.**

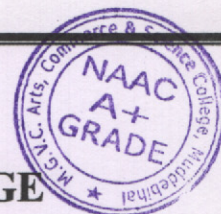
**Co-ordinator,**

**Internal Quality Assurance Cell**  
**M.G.V.C. Arts, Commerce & Science College**  
**MUDDEBIHAL-586212. Dist: Vijayapur.**

**PRINCIPAL**

**M. G. V. C. Arts, Com. & Science College**  
**MUDDEBIHAL - 586212.**





**M.G.V.C ARTS, COMMERCE AND SCIENCE COLLEGE  
MUDDEBIHAL**

**Department of Chemistry**

**STUDENTS PROJECT WORK 2022-23**

**Topic: Study of the Effect of Acids and Bases on the  
Tensile Strength of Fibers**

**CLASS: B.Sc VI SEM**

**BATCH-4**

Sl. No	Reg. No	Name Of The Student
1	S2031675	Siddanagouda Biradar
2	S2031683	Sunita
3	S2031688	Tayyabamuskan Soudagar
4	S2031691	Ummebarira N Shabhai
5	S2031692	Vandana Venkappa Rathod
6	S2031694	Vinayaka A Pujari ✓
7	S2031695	Yalaguradappa S Kodaganoor
8	S2031696	Yasmin H B

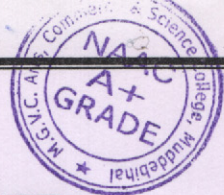
**Staff Member In-Charge**

**HOD**  
Head, Dept. of Chemistry,  
M.G.V.C. Arts, Com. & Science College,  
MUDDEBIHAL - 586212.

**Co-ordinator,**  
Internal Quality Assurance Cell  
M.G.V.C. Arts, Commerce & Science College  
MUDDEBIHAL-586212. Dist: Vijayapur.

**PRINCIPAL**  
M. G. V. C. Arts, Com. & Science College  
MUDDEBIHAL - 586212





**M.G.V.C ARTS, COMMERCE AND SCIENCE COLLEGE**  
**MUDDEBIHAL**  
**Department of Chemistry**

**STUDENTS PROJECT WORK 2022-23**

**Topic: Amount of Casein Present In Different Samples of Milk**

**CLASS: B.Sc VI SEM**

**BATCH-3**

Sl. No	Reg. No	Name Of The Student
1	S2031653	Rafeek Bannetti
2	S2031656	Ramanagouda
3	S2031657	Ramesh Amarappa Hampanagoudar ✓
4	S2031658	Rohan Kashinath Sulibhavi
5	S2031659	Sabaalam Nazceerahmad Dakhani
6	S2031661	Samarth Prabhuraj Patil
7	S2031671	Shivaraj Prabhugoud Meti
8	S2031674	Shreekanth Vachappa Lamani

**Staff Member In-Charge**

**HOD**  
Head, Dept. of Chemistry,  
M.G.V.C. Arts, Com. & Science College,  
MUDDEBIHAL - 586212.

**Co-ordinator,**

Internal Quality Assurance Cell  
M.G.V.C. Arts, Commerce & Science College  
MUDDEBIHAL-586212.

**PRINCIPAL**

M. G. V. C. Arts, Com. & Science College  
MUDDEBIHAL - 586212